

# KA HUAKA'I

Native Hawaiian Educational Assessment **2021**

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Brandon C. Ledward

*with*

Sierra Malia Fox & Jenna T. Caparoso

Kamehameha Schools

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## Contents

Figures .....	vii
Tables .....	xvi
Message from the CEO .....	xvii
He Waiwai Nui ka Lōkahi .....	xviii
Executive Summary .....	xix

### INTRODUCTION

The Journey .....	1
Native Hawaiian Well-Being .....	6
Population Characteristics .....	17
Aloha ‘Āina and Collective Efficacy .....	32
Looking Ahead .....	37

### CHAPTER 1: **ADULTS, FAMILIES, AND COMMUNITIES**

Introduction .....	41
Population—Adults, Families, and Communities .....	46
Social Well-Being .....	50
Material and Economic Well-Being .....	88
Physical Well-Being .....	135
Spiritual and Emotional Well-Being .....	195
Educational Well-Being .....	207
Conclusion .....	263

**CHAPTER 2: EARLY CHILDHOOD**

Introduction ..... 269  
Population—Young Keiki ..... 273  
Social Well-Being ..... 276  
Material and Economic Well-Being ..... 290  
Educational Well-Being ..... 298  
Physical Well-Being ..... 312  
Conclusion ..... 327

**CHAPTER 3: SCHOOL-AGE CHILDREN**

Introduction ..... 333  
Population—School-Age Children ..... 339  
Social Well-Being ..... 341  
Material and Economic Well-Being ..... 362  
Spiritual and Emotional Well-Being ..... 374  
Physical Well-Being ..... 390  
Educational Well-Being ..... 423  
Conclusion ..... 500

Methods, Data Sources, and Definitions ..... 503  
References ..... 527  
Index ..... 585

## Figures

### INTRODUCTION

0.1	Trends in the Native Hawaiian population in Hawai'i	4
0.2	The Pua Model	7
0.3	Age distribution of the population in the United States	19
0.4	Age distribution of the population in Hawai'i	20
0.5	Trends in net population change in Hawai'i	22
0.6	Trends in births, deaths, and net migration in Hawai'i	23
0.7	Trends in net migration	25
0.8	Projected number of Native Hawaiians in the United States	27
0.9	Projected number of Native Hawaiians in Hawai'i	28
0.10	Projected number of Native Hawaiians in Hawai'i, by county	29

### CHAPTER 1: ADULTS, FAMILIES, AND COMMUNITIES

1.1	Projected number of working-age Native Hawaiian adults in Hawai'i	47
1.2	Projected number of retirement-age Native Hawaiian adults in Hawai'i	48
1.3	Family types of individuals	52
1.4	Trends in family types of individuals	53
1.5	Regional distribution of household types among Native Hawaiian households	54
1.6	Trends in the regional distribution of household types among Native Hawaiian households	55
1.7	Trends in family households with children	56
1.8	Trends in Native Hawaiian-headed family households with children—regional comparison	58
1.9	Average number of persons per household	59
1.10	Trends in households with more than one occupant per room	60
1.11	Native Hawaiian housing units with more than one occupant per room—regional comparison	61
1.12	Trends in Native Hawaiian housing units with more than one occupant per room—regional comparison	62
1.13	Single-mother families	64
1.14	Trends in single-mother families	65
1.15	Native Hawaiian family households headed by a single mother—regional comparison	66

1.16	Trends in Native Hawaiian family households headed by a single mother— regional comparison .....	67
1.17	Trends in households with children where a grandparent is present.....	69
1.18	Arrests for violent crime (juveniles and adults combined)— county comparison .....	81
1.19	Arrests for aggravated assault (juveniles and adults combined)— county comparison .....	82
1.20	Arrests for robbery (juveniles and adults combined)— county comparison .....	83
1.21	Arrests for drug manufacturing or sales (juveniles and adults combined)— county comparison .....	84
1.22	Ethnic distribution of the incarcerated population—regional comparison .....	86
1.23	Family income of family households .....	90
1.24	Trends in income categories of families .....	92
1.25	Income categories of families .....	93
1.26	Regional distribution of income of family households headed by a Native Hawaiian.....	95
1.27	Income categories among Native Hawaiian family households— regional comparison .....	96
1.28	Employment rates .....	97
1.29	Trends in employment rates.....	99
1.30	Native Hawaiian employment rates—regional comparison .....	101
1.31	Trends in Native Hawaiian employment rates—regional comparison.....	102
1.32	Average earnings, by educational attainment.....	104
1.33	Occupation categories of employed individuals .....	106
1.34	Individuals in poverty .....	109
1.35	Trends in individuals in poverty .....	110
1.36	Trends in family households in poverty.....	111
1.37	Native Hawaiians in poverty—regional comparison.....	113
1.38	Trends in Native Hawaiians in poverty—regional comparison.....	114
1.39	Trends in Native Hawaiian family households in poverty— regional comparison .....	116
1.40	Households with public assistance income.....	117
1.41	Trends in households with public assistance income.....	118
1.42	Households receiving food stamps.....	120
1.43	Trends in households receiving food stamps .....	121

1.44	Trends in Native Hawaiian-headed households with public assistance income— regional comparison .....	123
1.45	Trends in Native Hawaiian-headed households receiving food stamps— regional comparison .....	124
1.46	Owner-occupied households .....	126
1.47	Trends in owner-occupied households .....	127
1.48	College degree, employment, and homeownership status among Native Hawaiians in Hawai'i and on the US continent. ....	129
1.49	Owner-occupied Native Hawaiian households—regional comparison .....	130
1.50	Trends in Native Hawaiian owner-occupied households—regional comparison .....	131
1.51	Native Hawaiian households that spend 35 percent or more of income on rent— regional comparison .....	132
1.52	Trends in Native Hawaiian households that spend 35 percent or more of income on rent—regional comparison .....	133
1.53	Trends in individuals with health insurance coverage. ....	138
1.54	Trends in individuals with public health coverage. ....	139
1.55	Native Hawaiians with health insurance coverage—regional comparison .....	141
1.56	Adults who did not visit the doctor because of cost—county comparison .....	143
1.57	Adults who could not visit the doctor because of cost, by educational attainment. ....	144
1.58	Adults who eat five or more fruits and vegetables per day— county comparison .....	146
1.59	Adults who meet the federal guideline for physical activity— county comparison .....	148
1.60	Adults who meet the federal guideline for physical activity, by educational attainment. ....	149
1.61	Adults who are overweight or obese—county comparison. ....	151
1.62	Adults who are overweight or obese, by educational attainment. ....	152
1.63	Adults who smoke—county comparison. ....	155
1.64	Adults who smoke, by educational attainment .....	156
1.65	Prevalence of heavy drinking—county comparison .....	158
1.66	Prevalence of heavy drinking, by educational attainment .....	160
1.67	Adults with poor physical health for at least six days in the past month— county comparison .....	162
1.68	Adults with poor physical health for at least six days in the past month, by educational attainment. ....	163
1.69	Prevalence of diabetes—county comparison. ....	165
1.70	Prevalence of diabetes, by educational attainment .....	166

1.71	Prevalence of high blood pressure—county comparison . . . . .	167
1.72	Prevalence of high blood pressure, by educational attainment . . . . .	168
1.73	Prevalence of high cholesterol—county comparison . . . . .	169
1.74	Prevalence of angina or coronary heart disease—county comparison . . . . .	171
1.75	Prevalence of heart attack—county comparison . . . . .	173
1.76	Prevalence of stroke—county comparison . . . . .	174
1.77	Prevalence of heart attack, by educational attainment . . . . .	175
1.78	Prevalence of stroke, by educational attainment . . . . .	176
1.79	Selected cancer incidence and mortality rates among females . . . . .	178
1.80	Selected cancer incidence and mortality rates among males . . . . .	179
1.81	Adults with at least one disability—county comparison . . . . .	181
1.82	Adults with at least one disability, by educational attainment . . . . .	183
1.83	Native Hawaiians with a disability—regional comparison . . . . .	184
1.84	Adults with a cognitive disability—county comparison . . . . .	186
1.85	Adults with a cognitive disability, by educational attainment . . . . .	188
1.86	Adults who have difficulty doing errands alone—county comparison . . . . .	190
1.88	Adults with poor mental health for at least six days in the past month— county comparison . . . . .	200
1.89	Adults with poor mental health for at least six days in the past month, by educational attainment . . . . .	201
1.90	Adults with a depressive disorder—county comparison . . . . .	203
1.91	Adults with a depressive disorder, by educational attainment . . . . .	205
1.92	Projected numbers of Native Hawaiian youth ages 18–24 in Hawai'i . . . . .	210
1.93	Trends in college enrollment . . . . .	212
1.94	Regional distribution of college enrollment among Native Hawaiians . . . . .	214
1.95	Trends in attainment of a bachelor's degree or higher . . . . .	216
1.96	Attainment of a bachelor's degree or higher among Native Hawaiians— regional comparison . . . . .	217
1.97	Trends in attainment of a bachelor's degree or higher among Native Hawaiians—regional comparison . . . . .	218
1.98	Trends in attainment of a graduate or professional degree . . . . .	220
1.99	Trends in attainment of a graduate or professional degree among Native Hawaiians—regional comparison . . . . .	222
1.100	Trends in Native Hawaiian undergraduate enrollment as a percentage of total enrollment at the University of Hawai'i . . . . .	225

1.101	Trends in Native Hawaiian graduate enrollment as a percentage of total enrollment at the University of Hawai'i . . . . .	226
1.102	Trends in Native Hawaiian undergraduate enrollment at the University of Hawai'i . . . . .	228
1.103	Trends in Native Hawaiian graduate enrollment at the University of Hawai'i. . . . .	230
1.104	Retention and graduation rates of Native Hawaiian female students at UH community colleges. . . . .	235
1.105	Retention and graduation rates of Native Hawaiian male students at UH community colleges. . . . .	237
1.106	Retention and graduation rates of Native Hawaiian female students at UH-Mānoa . . . . .	239
1.107	Retention and graduation rates of Native Hawaiian female students at UH-Hilo . . . . .	240
1.108	Retention rates of Native Hawaiian female students at UH-West O'ahu. . . . .	242
1.109	Retention and graduation rates of Native Hawaiian male students at UH-Mānoa . . . . .	244
1.110	Retention and graduation rates of Native Hawaiian male students at UH-Hilo. . . . .	246
1.111	Retention rates of Native Hawaiian male students at UH-West O'ahu. . . . .	248
1.112	Trends in the proportion of degrees conferred by the University of Hawai'i to Native Hawaiians. . . . .	250
1.113	Work status of enrolled students . . . . .	252
1.114	Trends in work status of enrolled students. . . . .	253
1.115	Trends in Native Hawaiian Pell grant recipients at the University of Hawai'i . . . . .	255
1.116	Trends in Native Hawaiian instructional faculty at the University of Hawai'i . . . . .	257
1.117	Educational attainment of parents with children living at home . . . . .	259
1.118	Trends in educational attainment of Native Hawaiian parents with children living at home. . . . .	260

## CHAPTER 2: **EARLY CHILDHOOD**

2.1	Projected number of young Native Hawaiian children in Hawai'i . . . . .	274
2.2	Projected number of preschool-age Native Hawaiian children in Hawai'i. . . . .	275
2.4	Family types of young children . . . . .	280
2.5	Young children not living with a biological parent. . . . .	281
2.6	Trends in child abuse . . . . .	283
2.7	Educational attainment of parents with young children living at home . . . . .	285
2.8	Households with young children where a grandparent is present . . . . .	286
2.9	Native Hawaiian grandparents living with their grandchildren—regional comparison . . . . .	287

- 2.10 Trends in Native Hawaiian grandparents living with their grandchildren—  
regional comparison ..... 288
- 2.11 Young children with at least one working parent. .... 292
- 2.12 Trends in income categories of families with young children ..... 294
- 2.13 Income categories of families with young children ..... 296
- 2.14 Young children in poverty. .... 297
- 2.15 Preschool enrollment ..... 304
- 2.16 Trends in preschool enrollment ..... 306
- 2.17 Ethnicity of preschoolers ..... 307
- 2.18 Ethnic distribution of childcare and preschool subsidy recipients—  
county comparison ..... 310
- 2.20 Trends in the age of mothers at childbirth ..... 315
- 2.21 Women who received prenatal care as early as they wanted—  
county comparison ..... 318
- 2.22 Birthweight of newborns. .... 320
- 2.23 Trends in Native Hawaiian newborns with low birthweight—  
county comparison ..... 322
- 2.24 Ethnicity of infants who have died—county comparison ..... 325

**CHAPTER 3: SCHOOL-AGE CHILDREN**

- 3.1 Projected number of school-age Native Hawaiian children in Hawai'i. .... 340
- 3.2 Trends in family households with children ages 5–17 ..... 344
- 3.3 Family types of school-age children ..... 345
- 3.4 Single-mother families with school-age children. .... 348
- 3.5 Households with school-age children where a grandparent is present. .... 349
- 3.6 Trends in children not living with their biological parents. .... 351
- 3.7 School-age children not living with a biological parent ..... 352
- 3.8 Trends in juvenile delinquency ..... 360
- 3.9 Educational attainment of parents with school-age children living at home. .... 364
- 3.10 Trends in children with at least one working parent. .... 365
- 3.11 School-age children with at least one working parent ..... 366
- 3.12 Native Hawaiian children with at least one parent in the labor force—  
regional comparison ..... 367
- 3.13 Trends in Native Hawaiian children with at least one parent  
in the labor force—regional comparison ..... 368

3.14	School-age children in poverty .....	370
3.15	Income categories of families with school-age children.....	371
3.16	Trends in income categories of families with school-age children .....	372
3.17	High schoolers who were depressed in the past year—county comparison .....	377
3.18	High schoolers who had seriously considered suicide in the past year— county comparison .....	379
3.19	High schoolers who attempted suicide in the past year—county comparison .....	381
3.20	High schoolers who made a suicide attempt requiring medical attention— county comparison .....	382
3.21	Students who were purposely controlled or emotionally hurt by someone they were dating—county comparison.....	384
3.22	Students who were physically abused by someone they were dating— county comparison .....	385
3.23	High schoolers who were forced to have sexual intercourse when they did not want to—county comparison .....	386
3.24	Students who were forced to do sexual things with their date— county comparison .....	388
3.25	High schoolers who were hungry because of a lack of food at home— county comparison .....	394
3.26	High schoolers who eat five or more fruits and vegetables per day— county comparison .....	396
3.27	High schoolers who are active for sixty or more minutes at least five days per week—county comparison.....	398
3.28	High schoolers who do muscle strengthening exercises at least three times weekly—county comparison.....	399
3.29	Asthma prevalence among children ages 0 to 17 .....	401
3.30	High schoolers at or above the 85th percentile for body mass index (BMI)— county comparison .....	403
3.31	High schoolers who have used marijuana—county comparison .....	405
3.32	High schoolers who had their first alcoholic drink before age 13— county comparison .....	406
3.33	High schoolers who attended school under the influence of alcohol, marijuana, or other drugs—county comparison.....	408
3.34	High schoolers who talked to a parent or adult about the dangers of alcohol, tobacco, or drug use—county comparison.....	409
3.35	High schoolers who tried smoking cigarettes—county comparison .....	411
3.36	High schoolers who smoked a cigarette in the past month— county comparison .....	413
3.37	High schoolers who tried vaping—county comparison .....	414

3.38	Students whose parents talked to them about not using tobacco products. . . . .	416
3.39	High schoolers who are sexually active—county comparison . . . . .	420
3.40	High schoolers whose parents or other adult talked to them about expectations around sex—county comparison . . . . .	421
3.41	Student enrollment in Hawai'i public schools . . . . .	428
3.42	Native Hawaiian students in public schools—regional comparison . . . . .	431
3.43	Trends in economic disadvantage among public school students . . . . .	432
3.44	Economic disadvantage among Native Hawaiian students in public schools— regional comparison . . . . .	434
3.45	Trends in special education enrollment among students in public schools. . . . .	436
3.46	Special education enrollment among Native Hawaiian students in public schools—regional comparison. . . . .	437
3.47	Trends in public schools' average number of principals over a five-year period, by Native Hawaiian school concentration . . . . .	440
3.48	Trends in public schools' student-to-teacher ratios for regular instruction, by Native Hawaiian school concentration . . . . .	442
3.49	Trends in public schools' teachers who have five or more years of teaching experience at that school, by Native Hawaiian school concentration . . . . .	444
3.50	Trends in public schools' teachers' average amount of teaching experience, by Native Hawaiian school concentration . . . . .	445
3.51	Trends in public schools' teachers with advanced degrees, by Native Hawaiian school concentration. . . . .	447
3.52	Trends in teachers with emergency credentials, by Native Hawaiian school concentration. . . . .	448
3.53	Trends in standardized test proficiency among students in public schools . . . . .	452
3.54	Trends in language arts proficiency among students in public schools. . . . .	454
3.55	Language arts proficiency among elementary, middle, and high school students in public schools . . . . .	455
3.56	Trends in language arts proficiency, by Native Hawaiian school concentration . . . . .	456
3.57	Language arts proficiency among Native Hawaiian students in public schools— regional comparison . . . . .	458
3.58	Trends in mathematics proficiency among students in public schools . . . . .	459
3.59	Mathematics proficiency among elementary, middle, and high school students in public schools . . . . .	460
3.60	Trends in mathematics proficiency, by Native Hawaiian school concentration . . . . .	462
3.61	Mathematics proficiency among Native Hawaiian students in public schools— regional comparison . . . . .	463
3.62	Trends in science proficiency among students in public schools . . . . .	464

3.63 Science proficiency among elementary, middle, and high school students in public schools ..... 466

3.64 Science proficiency among Native Hawaiian students in public schools— regional comparison ..... 467

3.65 Trends in chronic absenteeism among students in public schools ..... 469

3.66 Trends in chronic absenteeism, by Native Hawaiian school concentration..... 471

3.67 Chronic absenteeism among Native Hawaiian students in public schools— regional comparison ..... 472

3.68 Trends in grade retention among public school students ..... 474

3.69 Trends in grade retention, by Native Hawaiian school concentration ..... 475

3.70 Grade retention among Native Hawaiian students in public schools— regional comparison ..... 476

3.71 Trends in the dropout rate among cohorts of public high school students ..... 478

3.72 Dropout rates among Native Hawaiian public high school students— regional comparison ..... 479

3.73 Trends in cohorts of public high school students graduating on time..... 481

3.74 Native Hawaiian public high school students graduating on time— regional comparison ..... 482

3.75 Trends in cohorts of public high school students taking at least one AP course..... 485

3.76 Native Hawaiian public high school students taking at least one AP course— regional comparison ..... 487

3.77 Trends in cohorts of public high school students taking at least one dual credit course ..... 489

3.78 Native Hawaiian public high school students taking at least one dual credit course—regional comparison ..... 490

3.79 Trends in college completion rates at two-year colleges ..... 492

3.80 Native Hawaiian college completion rates at two-year colleges— regional comparison ..... 493

3.81 College completion rates at four-year colleges ..... 494

3.82 Native Hawaiian college completion rates at four-year colleges— regional comparison ..... 496

# Tables

## INTRODUCTION

- 0.1 Growth of the Native Hawaiian population in Hawai'i and the United States . . . . . 18
- 0.2 Projected number of Native Hawaiians in Hawai'i, by age . . . . . 30

## CHAPTER 1: ADULTS, FAMILIES, AND COMMUNITIES

- 1.1 How do higher education and higher income relate to health outcomes among Native Hawaiian adults? . . . . . 193
- 1.2 Native Hawaiian retention and completion rates across the University of Hawai'i system, 2008 to 2015\* . . . . . 233

## CHAPTER 2: EARLY CHILDHOOD

- 2.1 Growth of the Native Hawaiian population in Hawai'i and the United States . . . . . 273
- 2.2 Regional distribution of young Native Hawaiian children and preschool enrollment . . . . . 308

## CHAPTER 3: SCHOOL-AGE CHILDREN

- 3.1 Juvenile arrests for index offenses—county comparison . . . . . 356
- 3.2 Juvenile arrests for part II offenses—county comparison . . . . . 358
- 3.3 Native Hawaiian middle and high school students who have used drugs . . . . . 418
- 3.4 Alignment of Kamehameha Schools regions, Hawai'i DOE regions, and Hawai'i DOE complex areas . . . . . 426
- 3.5 Public charter school and private school enrollment in Hawai'i, 2014 to 2018 . . . . . 430
- 3.6 Summary of educational outcomes by school concentration of Native Hawaiian students, 2018–2019 . . . . . 498

## Message from the CEO

Our history is one of resilience, stemming from the brilliance and aloha of our kūpuna. The COVID-19 global pandemic offers a present-day reminder of the painful context of our beloved Ke Ali'i Pauahi Bishop, who witnessed her people stricken by disease in her lifetime. And yet, during that same time, Native Hawaiians achieved the highest literacy rates in the world. It makes perfect sense that Ke Ali'i Pauahi, despite the difficulties of her time, would envision education as the kahua for a thriving lāhui. As devastating as the current pandemic is for our generation, our founder's vision remains at the core of our recovery and resilience.

In support of this ali'i legacy and the decades-long tradition of serving the broader lāhui through research, Kamehameha Schools is proud to publish *Ka Huaka'i 2021*. This volume is our fifth installment since its inception in 1983. In the age of automation, big data, and artificial intelligence, it is more important than ever to provide credible information to elevate and inform the success and challenges of Native Hawaiian well-being.

In *Ka Huaka'i 2021*, we continue the journey to explore Native Hawaiian well-being at the dawn of a new decade marked by prominent displays of Native Hawaiian advancement. From the intergenerational voices chanting on the slopes of Mauna Kea, to the reading of the ocean waves during Hōkūle'a's worldwide voyage, Native Hawaiians remain steadfast in restoring and perpetuating our values, worldview, and stories through our culture in a rapidly changing world.

As evidenced by this latest edition, Native Hawaiians continue to deepen connections to 'āina, 'ohana, and kaiāulu. Findings in *Ka Huaka'i 2021* reflect decades of demonstrated commitment and innovation that have led to a growing number of 'ōlelo Hawai'i speakers, cultural practitioners, educators, legislators, and social change agents, both locally and globally. We anticipate that these trends set by past and present 'Ōiwi leaders will continue our systemic efforts to provide culture-based, personalized learning and working environments for all Native Hawaiians well into our future.

In this spirit, we are excited to provide this latest volume as a continued foundational resource to understand and champion Native Hawaiian well-being in the twenty-first century. Guided by the ancestral 'ike of our kūpuna and led by the bright stars of the next generation of 'Ōiwi leaders—together—we can reach our destination of a thriving lāhui. Mahalo for being a part of this next leg of our *Ka Huaka'i* journey.

E lauhoe kākou—let's paddle together!

Me ka ha'aha'a,

Jack Wong  
*Chief Executive Officer*  
 Kamehameha Schools

## He Waiwai Nui ka Lōkahi

Mahalo mākou i nā alaka'i o Nā Kula o Kamehameha. We appreciate the support of our organizational leaders, in particular our trustees, CEO, and executive leadership who provided crucial leadership and resources to bring this publication to completion.

This expansive, multiyear project was made possible through the dedication of Sierra Malia Fox and Jenna T. Caparoso, who provided invaluable content development, project management, data analysis, and review of this publication. Their contributions advanced key data and research themes as well as the overall creation of this publication.

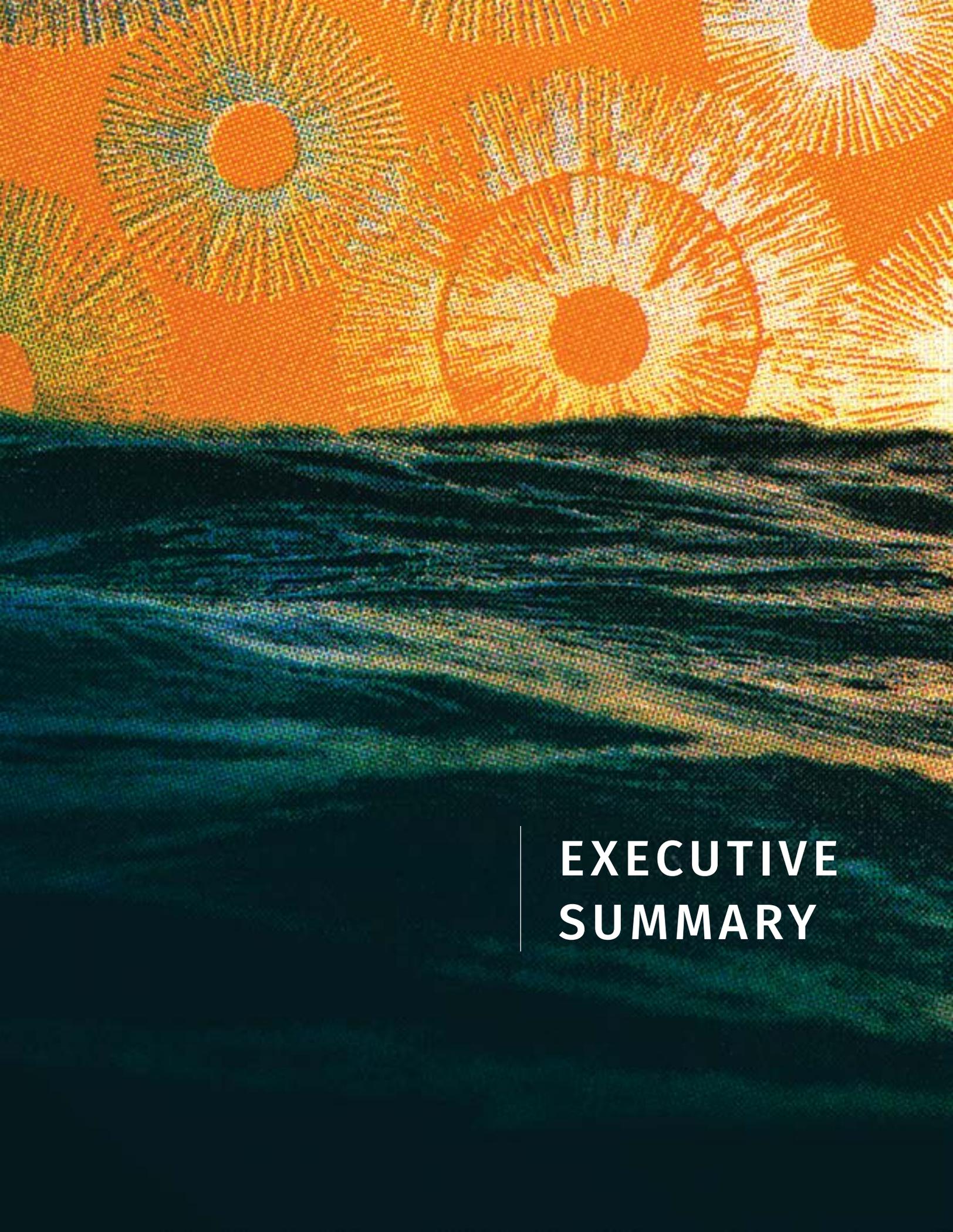
Matthew Corry, Justin Hong, Kristina-Marie Kornegay, and Catherine Lee Brockway provided vital contributions to all aspects of this publication including data analysis, research assistance, chart production, and editorial review.

Mahalo mākou i nā hoa hana ma ka wā ma mua. This publication of *Ka Huaka'i* represents the fifth volume of data and information relating to Native Hawaiian well-being. We wish to acknowledge the ambitious and innovative work of the 1983, 1993, 2005, and 2014 volumes, which allowed us to "... kaupe aku no i ka hoe a kō māi—*Put forward the paddle and draw it back; go on with the task that is started and finish it*" (Pukui 1983, 39). We also acknowledge the growing body of knowledge published by Kanaka 'Ōiwi scholars and allies, which provides important insights to contextualize the data presented in this volume. Mahalo mākou i nā hoa hana ma kēia wā. This volume would not have been possible without the support of many organizations and individuals. We especially mahalo the Hawai'i Department of Education, Hawai'i Data eXchange Partnership, University of Hawai'i, and Hawai'i Department of Health.

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Mahalo mākou i nā hoa hana ma ka wā ma hope. We appreciate the work of all those who use this volume to improve the well-being of the lāhui and the people of Hawai'i. We look forward with hope to the innovative contributions of future generations of Native Hawaiians, as the 'ōpio of today become the alaka'i of tomorrow.

Me ka ha'aha'a,  
Shawn Malia Kana'iaupuni  
Wendy M. Kekahio  
Kā'eo Duarte  
Brandon C. Ledward



**EXECUTIVE  
SUMMARY**

## Mo'okū'auhau—Origins

Our title, *Ka Huaka'i*, refers to the journey of resistance, resilience, and resurgence among Native Hawaiians toward a brighter future for the lāhui (nation, people). This story of Native Hawaiian well-being is woven from a wellspring of diverse perspectives informed by literature and research, community 'ike (knowledge), and a wide array of national and local data sources.

This volume of *Ka Huaka'i* builds on a mo'okū'auhau, a genealogy of people and mana (spirit) across time and space, from which evolved foundational understandings of Native Hawaiian education and well-being. As with earlier editions produced by Kamehameha Schools in 1983, 1993, 2005, and 2014, *Ka Huaka'i 2021* draws from multidisciplinary approaches and perspectives to understand the interrelated factors that advance a thriving future.

This volume extends the work of previous editions by providing county and region-specific insights to highlight the unique conditions of Native Hawaiians in different communities. Furthermore, *Ka Huaka'i 2021*, which was largely written during the first year of the coronavirus (COVID-19) pandemic, provides initial perspectives around potential impacts of this global health and economic crisis on Native Hawaiian well-being.

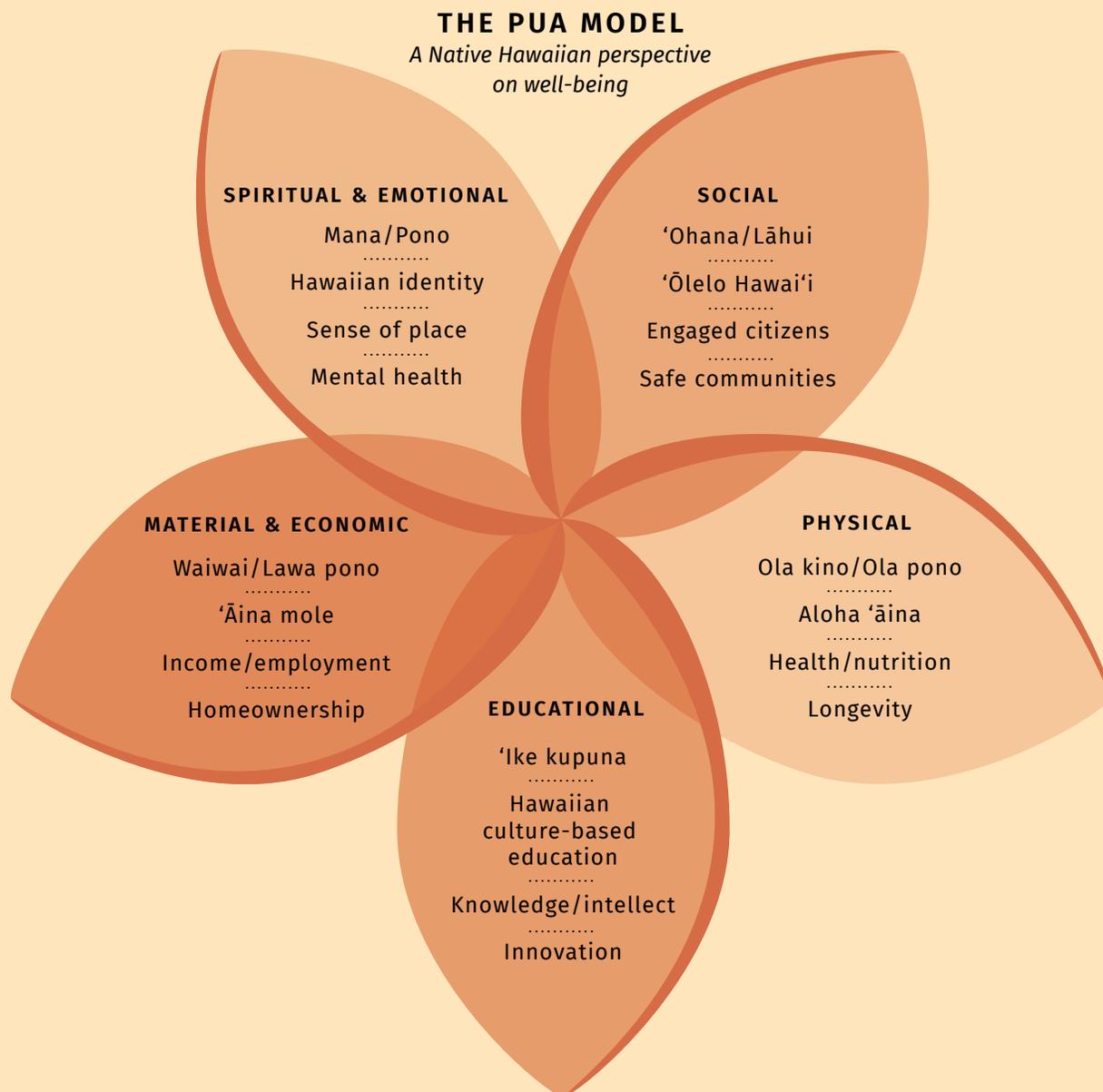


## Kumuhana—Purpose

*“Mōhala i ka wai ka maka o ka pua—Flowers thrive where there is water, as thriving people are found where living conditions are good.”* PUKUI 1983, 237

*Ka Huaka'i 2021* is intended to be a trusted resource for educators, administrators, advocates, policymakers, and scholars to assess strengths, needs, and opportunities to improve the educational experiences and well-being of Native Hawaiians. Educational outcomes are a major focus throughout the volume, with the belief that education is a lifelong journey of wide-ranging experiences and opportunities that feed individual and collective well-being.

As in the 2005 edition, *Ka Huaka'i 2021* presents a conceptual model of well-being from a Native Hawaiian perspective. This “Pua Model” depicts five interconnected dimensions of well-being: Social, Physical, Educational, Material and Economic, and Spiritual and Emotional. These five dimensions provide a holistic framework for assessing the well-being of adults, families, and communities (Chapter 1), young children (Chapter 2), and school-age children (Chapter 3).





# Kilo—Reflections on Native Hawaiian Well-Being

By using the Pua Model to examine well-being holistically, *Ka Huaka'i 2021* illuminates the shifting waters and winds experienced by Native Hawaiians. Looking broadly, our analysis of statistics, trends, and community 'ike reveals areas of momentum that show notable gains and signs of progress. We also observe stubborn and persistent concerns and barriers to well-being that require revisiting, reassessing, and redirecting. The reflections that follow summarize these broad observations.



## Areas of Momentum

In many areas, momentum is *increasing* and reinforcing progress in 'Ōiwi (Native) collective efficacy.

One of the most encouraging trends is the sea change in understanding the **role of culture in education**. This wave of change has been led by courageous immersion and charter school communities over the past four decades, which set the course for today's learners and leaders to create a thriving **Hawaiian culture-based education** system. The kūpuna (elders), 'ohana (families), kumu (teachers), and haumāna (students) of this movement are now harnessing the potential of this learning system to create **intergenerational change**, to reverse historical trauma, and to generate positive and sustained outcomes. This legacy of teaching and learning, based on Native Hawaiian values and practices, is starting to be **normalized** across Hawai'i's educational landscape. Today, Hawaiian culture-based education is **increasingly common** across our educational systems, and mounting research shows its positive effects for Indigenous youth. The **collective energy** around Hawaiian culture-based

education serves to counterbalance system vulnerabilities and disparities facing the lāhui. Increasing momentum is also evident in progress toward **universal prekindergarten** and the rising prominence of **‘āina-based education**, which is steadily changing mindsets, landscapes, and systems, acknowledging that a degraded ‘āina (land) hurts us all.

Beyond education, we are witnessing momentum in the socialization of ‘ōlelo Hawai‘i (Hawaiian language), where the number of speakers has blossomed in recent decades, especially among children. The abundance of our **mo‘omeheu** (cultural resources) is becoming more obvious, linking our past, present, and future in deep and dynamic ways. **‘Ōiwi leadership** perspectives are increasingly evident in initiatives, policies, programs, and critical dialogues about island resiliency and earth justice. Signs of progress are also apparent as conventional health practices begin to shift toward **holistic and comprehensive frameworks** that reinforce the interrelated dimensions of well-being and affirm Indigenous perspectives on health.

A more prominent  
Indigenous voice,  
especially from  
younger generations,  
is influencing multiple  
segments of society.



New momentum demonstrates greater community capacity to mobilize and protect sacred places like **Mauna Kea**, and to link hands around the world in caring for our oceans, as championed by the **Mālama Honua** Worldwide Voyage. Heightened **community activism** is being fueled by ‘ike kupuna (ancestral knowledge and wisdom), strong values, greater access to historical and cultural information, and dissatisfaction with the status quo, especially among our young people. A more **prominent Indigenous voice**, especially from younger generations, is influencing multiple segments of society,

particularly regarding the use of ‘āina. Locally, **social entrepreneurship** and **innovation** have grown significantly as new Indigenous players and ideas design more equitable, triple-bottom-line futures. And within higher education, **Native Hawaiian faculty representation** and **scholarship** are on the rise across the University of Hawai‘i system.



# 2

## Areas of Concern

Even as cultural vibrancy and collective efficacy uplift our people, troubled waters are evident as Native Hawaiian families experience disparate economic and other challenges.

For example, about half of Native Hawaiian families with young keiki (children) do not earn a **livable wage**. Compared with the major ethnicities in Hawai'i, Native Hawaiians continue to have the highest rates of **poverty** and **unemployment**. Although the proportion of Native Hawaiian children with a working parent has increased, Native Hawaiian parents, as a whole, tend to have comparatively **lower levels of education and employment**. Native Hawaiians are disproportionately employed in **lower-wage jobs**, even among those with higher levels of education. Native Hawaiian **homeownership** rates in Hawai'i have stagnated since 2006, whereas home prices and rents have increased substantially, contributing to increased **homelessness**. In the face of these and other economic constraints, Native Hawaiians are the only ethnic group in Hawai'i with consistently **more people leaving** than entering the islands over the past fifteen years.

Native Hawaiians also face challenging health and social conditions that intersect with economic disparities. For example, although **cancer incidence** among Native Hawaiians is similar to that of other ethnicities, Native Hawaiians contract cancer at younger ages and have higher fatality rates. Moreover, about one in five Native Hawaiians suffers from **poor mental health**—a condition that is more pronounced among those with lower levels of education and income, mirroring trends for Indigenous peoples across the United States. Within the **foster care system**, Native Hawaiian keiki are overrepresented, though recent years have brought slightly lower rates and higher likelihood of keiki being placed with relatives. Among adults, increased arrests and **incarceration** rates for Native Hawaiians create major obstacles in the path toward a thriving lāhui.

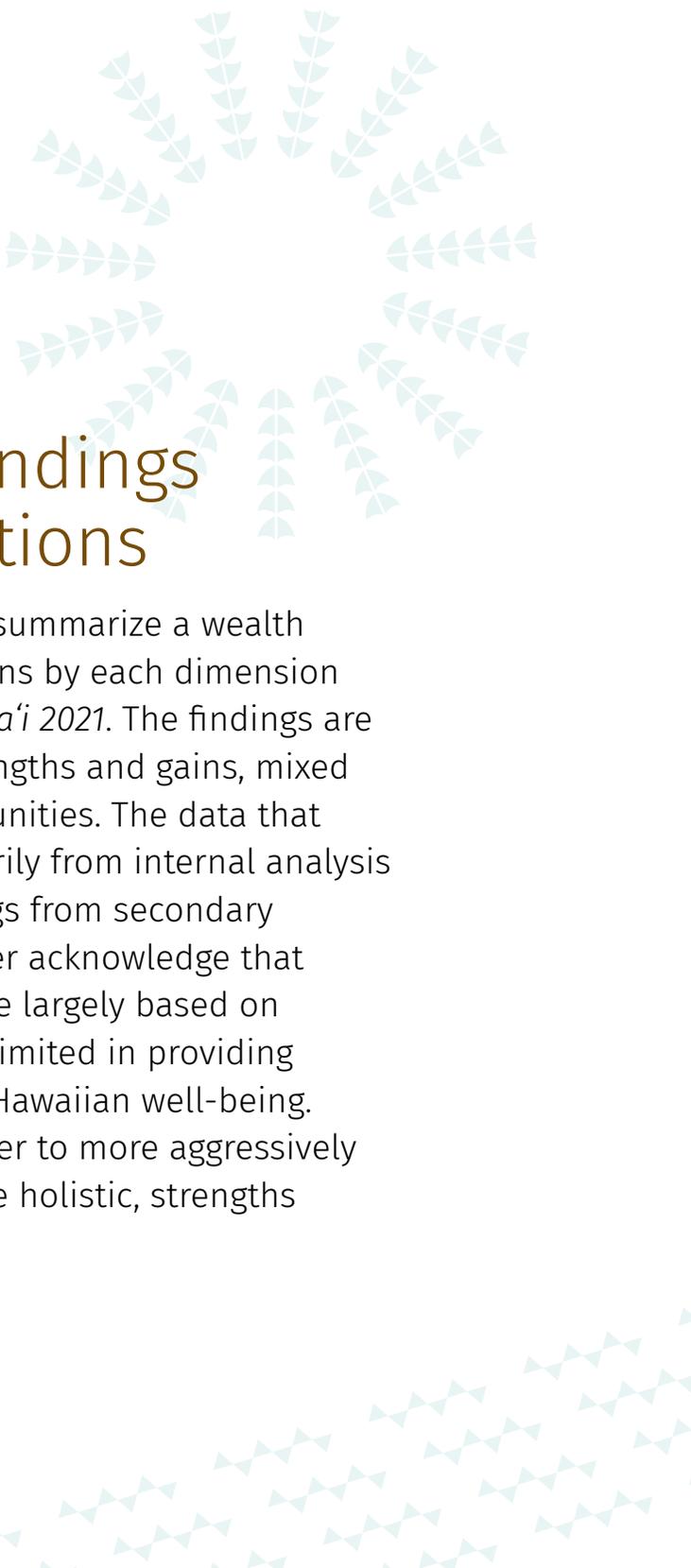
Stubborn health, social, and economic barriers have profound impacts on Native Hawaiian education progress and learning. Educational data show large **achievement gaps** between Native Hawaiian learners and their peers—a trend that has persisted for decades. Additionally, a “**school-to-prison pipeline**” in Hawai‘i disproportionately affects Native Hawaiian and other Pacific Islander children, which can impact in- and out-of-school **suspensions**. In fact, Hawai‘i has the longest school suspension periods in the nation, and Native Hawaiian and Pacific Islander students are more likely than their peers to be suspended, losing 75 days of instruction per 100 students. All these obstacles, in turn, influence educational outcomes such as **high school completion**—an accomplishment that one in five Native Hawaiians does not achieve.

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These areas of momentum and concern for Native Hawaiian well-being suggest that our current social and educational systems are in need of repair and reimagining. Solving systemic challenges calls for a reactivation of our superpower as a Native people: our strong roots in ‘**ohana, community, ‘āina, and spiritual connections**. This inherent strength among Kānaka Maoli (Native, Indigenous people) leads us to revive our Native practices and reignite ancestral knowledge to solve contemporary challenges. Within this broad context of strengths and values that guide our work of repairing and reimagining at the systems level, we now turn to specific findings and recommendations for Native Hawaiian well-being.







## ‘Ike waiwai—Key findings and recommendations

Consistent with the Pua model, we summarize a wealth of key findings and recommendations by each dimension of well-being presented in *Ka Huaka‘i 2021*. The findings are further categorized in terms of strengths and gains, mixed results, and challenges and opportunities. The data that inform our key findings draw primarily from internal analysis and research, augmented by findings from secondary data sources and studies. We further acknowledge that the data behind our key findings are largely based on Western models and are therefore limited in providing a comprehensive picture of Native Hawaiian well-being. These limitations serve as a reminder to more aggressively develop other types of data that are holistic, strengths based, and culturally appropriate.

# Educational Well-Being

## STRENGTHS AND GAINS

**Preschool enrollment** More than half (52 percent) of eligible Native Hawaiian keiki are enrolled in preschool, a rate that is higher than the statewide average.

**Student-to-teacher ratios** K-12 public schools with high concentrations of Native Hawaiian students have lower student-to-teacher ratios, compared with schools with fewer Native Hawaiians.

**College enrollment** Native Hawaiian students demonstrate the largest gains in college enrollment since 2005, relative to rates among Hawai'i's other major ethnicities.

## MIXED RESULTS

**Advanced placement (AP) enrollment** Cohorts of Native Hawaiian students in public schools saw an upward trend in AP enrollment, increasing from 12 to 17 percent between 2013 and 2017; however, rates among Native Hawaiians were the lowest of Hawai'i's major ethnicities. Regions with the highest proportion of Native Hawaiians taking AP courses are Leeward (22 percent), West Hawai'i (21 percent) and Windward (20 percent).

**Dual credit enrollment** The percentage of Native Hawaiian high schoolers enrolled in dual credit courses increased from 7 to 15 percent between 2013 and 2017; however, compared with their peers from other major ethnicities, Native Hawaiians were the least likely to earn six or more dual credits. Among regions, Leeward has the highest proportion of Native Hawaiians taking dual credit courses (21 percent).

**Degree attainment** The proportion of Native Hawaiians with a bachelor's degree or higher increased over a ten-year period, rising from 15 to 17 percent between 2008 and 2017. However, Native Hawaiians continue to be far less likely than other major ethnicities to attain a bachelor's degree.

Native Hawaiian students demonstrate the largest gains in college enrollment, relative to rates among Hawai'i's other major ethnicities.



## CHALLENGES AND OPPORTUNITIES

**Childcare availability** Based on findings from DeBaryshe (2017d), childcare is relatively inaccessible in rural areas such as Kauaʻi, Molokaʻi, and Lānaʻi.

**Chronic absenteeism** Compared with other major ethnicities in Hawaiʻi’s public schools, Native Hawaiian students continue to exhibit the highest rates of chronic absenteeism. At the regional level, Leeward schools have the highest rates of chronic absenteeism among Native Hawaiian students.

**Special education** Native Hawaiian students are more than twice as likely as their Chinese, Filipino, and Japanese peers to be enrolled in special education. The Windward region has the highest proportion of Native Hawaiians enrolled in special education, followed by East Hawaiʻi, Honolulu, and North Shore.

**Achievement** Compared with their peers from other major ethnicities, Native Hawaiian students have the lowest rates of proficiency on standardized tests for language arts, mathematics, and science, with no increases in language arts and mathematics from 2015 to 2017 and only slight increases in science. The Leeward region is seeing the lowest proficiency rates within these subject areas.

**High school completion** One in every five Native Hawaiian high schoolers does not graduate on time.

### RECOMMENDATIONS

Normalize **Hawaiian culture-based education** and make it available to all learners in Hawaiʻi (see “[Kāhea](#)”).

Establish a **universal early learning system** that integrates public prekindergarten, family-child interaction learning, and community-based preschools.

Tackle equity in **broadband access and technology**. More specifically:

- ▶ Ensure Native Hawaiian learners have reliable devices for distance learning.

- ▶ Advocate for high-quality distance learning programs and systems.

Replicate the successes of Hawaiian-focused charter and private schools in terms of **high school completion rates**.

Develop change-ready ʻŌiwi leaders by supporting **next-gen skills and certifications** through community-based, school-to-business partnerships focused on future economies.

# Physical Well-Being

## STRENGTHS AND GAINS

**Prenatal care and birthweight** More than eight in ten Native Hawaiian women receive prenatal care as early as they want. Further, the percentage of low-birthweight Native Hawaiian infants (8 percent) is lower than that of most other major ethnicities in Hawai'i.

**Health insurance** The insured rate among Native Hawaiian individuals increased to 97 percent in 2017, a rate on par with the Hawai'i total. Across regions, North Shore, Central, Honolulu, Windward, and Maui have the highest rates of health insurance coverage among Native Hawaiians.

**Cholesterol** Native Hawaiians have the second-lowest rate of high cholesterol among the major ethnicities in Hawai'i.

**Physical activity** The percentage of Native Hawaiian adults who meet the federal guideline for physical activity (28 percent) is among the highest across major ethnic groups. Native Hawaiian youth, compared with other major ethnicities, are more likely to be physically active.

**Secondhand smoke** The percentage of Native Hawaiian middle and high school students who breathed secondhand smoke in a public place (42 percent) is lower than the Hawai'i total (47 percent).

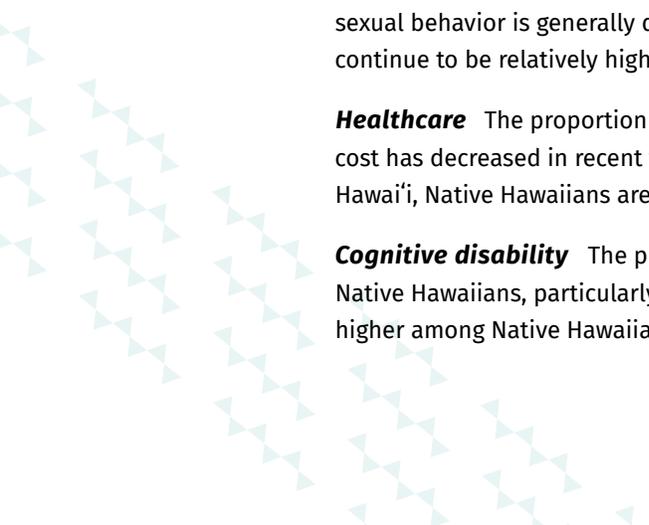
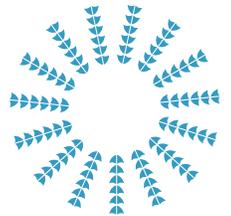
## MIXED RESULTS

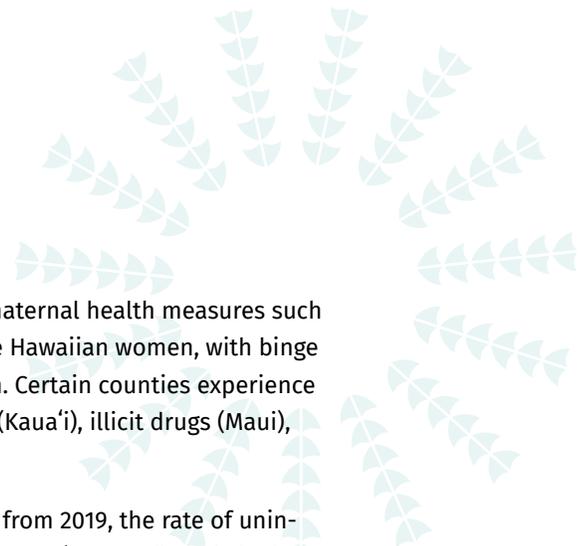
**Infant mortality** Infant deaths are declining among Native Hawaiians; however, rates remain higher than those of Hawai'i's other major ethnicities. At the county level, Hawai'i county has seen the greatest decline in the proportion of Native Hawaiian infant deaths, while Kaua'i county has seen an uptick.

**Risky behaviors** Engagement in risky behaviors such as marijuana use, smoking, and sexual behavior is generally declining among Native Hawaiian students, although rates continue to be relatively high.

**Healthcare** The proportion of Native Hawaiians who missed a doctor's visit because of cost has decreased in recent years; however, compared with other major ethnicities in Hawai'i, Native Hawaiians are among the most likely to miss a doctor's visit due to cost.

**Cognitive disability** The prevalence of cognitive disability is trending downward among Native Hawaiians, particularly in Hawai'i county; however, rates of cognitive disability remain higher among Native Hawaiians than among other major ethnic groups.





## CHALLENGES AND OPPORTUNITIES

**Maternal health** Hawai'i PRAMS data from 2019 show that maternal health measures such as obesity and substance use are relatively high among Native Hawaiian women, with binge drinking and smoking prior to pregnancy of particular concern. Certain counties experience heightened maternal health challenges including alcohol use (Kaua'i), illicit drugs (Maui), and smoking and unintended pregnancies (Hawai'i).

**Unintended pregnancies** Based on Hawai'i PRAMS findings from 2019, the rate of unintended pregnancies among all Native Hawaiian mothers (60 percent) is significantly higher than the Hawai'i average and is the third-highest relative to other major ethnicities.

**Health conditions** Compared with other major ethnicities, Native Hawaiians have higher rates of smoking, obesity, diabetes, high blood pressure, heart disease, heart attack, disability, and cancer mortality. Native Hawaiian youth face comparatively higher rates of asthma and obesity.

**Poor physical health** Native Hawaiians are more likely than other major ethnicities in Hawai'i to be in poor overall physical health, despite a slight decline between 2013 and 2015.

## RECOMMENDATIONS

Implement recommendations from the [Native Hawaiian Health Task Force](#), particularly:

- ▶ Establish an online database across state agencies to improve data sharing and quality.
- ▶ Include prekindergarten in public schools.
- ▶ Develop a state plan to incorporate the United Nations' [Declaration of Rights of Indigenous Peoples](#).
- ▶ Develop an undergraduate health sciences academy.

Eliminate **food deserts** in Hawai'i and increase access to **healthy, local food** by incentivizing the purchase of locally grown produce.

Adopt policies for state, city, and institutional **purchasing of local food** to support our local farmers and agriculture industry.

Increase **Native Hawaiian employment in healthcare**—especially the number of doctors, surgeons, and administrators.

Provide **insurance coverage** for traditional **Native Hawaiian health practices** such as lā'au lapa'au (herbal healing) and lomilomi (massage).



# Social Well-Being

## STRENGTHS AND GAINS

**Ties to ‘ohana and ‘āina** In a recent survey about decisions related to migration, Native Hawaiians were much more likely than other respondents to cite social connections to family, friends, community, and ‘āina as reasons to stay in the islands and to return to Hawai‘i after moving away.

**Community connectedness and safety** A 2018 statewide survey of Hawai‘i residents found that Native Hawaiians are more likely than their non-Native Hawaiian peers to feel connected to their community and to have positive perceptions of community safety.

**Family structure** In Hawai‘i, Native Hawaiian adults are the second-most likely to live in a family unit—a stable trend over the past decade. Among regions, Leeward has the highest percentage of Native Hawaiian households with children where grandparents are present.

## MIXED RESULTS

**Families with children** From 2008 to 2017, Native Hawaiians had the largest decrease in the percentage of family households with children, compared with Hawai‘i’s other major ethnicities.

**Single-parent families** In Hawai‘i, Native Hawaiian keiki are among the most likely to live in single-mother or single-father families. Looking at regional data, East Hawai‘i and Leeward have the highest percentage of Native Hawaiian family households led by a single mother.

**Living with a biological parent** Compared with children of other major ethnicities in Hawai‘i, young Native Hawaiian keiki are the least likely to live with a biological parent.

## CHALLENGES AND OPPORTUNITIES

**Household structure** Among Native Hawaiian households, 86 percent have one or more occupants per room. Looking at housing units of Native Hawaiian-headed households across regions, the most crowding occurs in Leeward (27 percent) and Maui (20 percent).

**Child abuse and neglect** Native Hawaiians are disproportionately represented among those who experience child abuse and neglect.

**Partner abuse** The Hawai‘i Health Data Warehouse (2015a) indicates that Native Hawaiians and Caucasians experience the highest rates of physical abuse by an intimate partner (13 percent)—twice the rate of other major ethnicities.

**Arrests and incarceration** The Hawai'i Concurrent Resolution 85 Task Force on Prison Reform (2019) shows that across Hawai'i, Native Hawaiian adults and juveniles constitute the largest proportion of arrests for violent crime, aggravated assault, robbery, and drug manufacturing and sales. Native Hawaiians also constitute the largest share of Hawai'i's adult incarcerated population.

## RECOMMENDATIONS

Increase access to and quality of **keiki and kupuna care** for a healthier social infrastructure.

- ▶ Streamline need-based financial assistance for childcare via the Department of Human Services' [Child Care Connection Hawai'i](#) and [Preschool Open Doors](#).
- ▶ Prioritize universal basic income and public funding for childcare and elder care services, which Jabola-Carolus (2020) has shown to be more effective in reducing public deficits and debt than austerity policies, boosting employment, earnings, economic growth, and gender equality.
- ▶ Support trauma-informed care assessments and services to strengthen schools and institutions that serve children and families, for example through initiatives based on [findings](#) of the Act 271 Trauma-informed Task Force.

Improve **broadband access and digital equity** to ensure families stay connected and have ample opportunities for learning, employment, and healthcare.

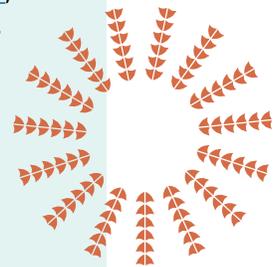
- ▶ Support recommendations of the [Hawai'i Broadband Initiative](#).

Implement recommendations from the [Hawai'i Concurrent Resolution 85 Task Force on Prison Reform](#).

- ▶ Develop a comprehensive strategy to address the overrepresentation of Native Hawaiians in the criminal justice and correctional systems.
- ▶ Set goals and a timetable for reducing Hawai'i's prison population, particularly the number and percentage of Native Hawaiians in the correctional system.

Train government agencies on the principles of [Evaluation with Aloha](#), and adopt **Indigenous approaches** to research, evaluation, and well-being indicators.

Strengthen **public-private partnerships** for collaborative, community-driven, and system-building efforts in early learning, culture- and 'āina-based education, social entrepreneurship, and food system transformation.





# Material and Economic Well-Being

## STRENGTHS AND GAINS

**Employment** Comparing Native Hawaiians across regions, Honolulu has the highest employment rates, followed by North Shore, Central, and Windward. On Hawai'i Island, employment has increased steadily among Native Hawaiians in East Hawai'i.

**Livable income** Livable income increased between 2008 and 2017 among Native Hawaiian families, including those with young keiki and school-age children.

**Homeownership** All regions, except Honolulu, have Native Hawaiian owner-occupancy rates that exceed 50 percent. Kaua'i has the highest owner-occupancy rate (66 percent) among Native Hawaiians.

## MIXED RESULTS

**Employment** Looking specifically at Native Hawaiian school-age keiki, 89 percent have at least one working parent—a rate that approaches that of the Hawai'i total (91 percent); however, this percentage is lower than that of other major ethnicities. From a regional perspective, West Hawai'i has the highest proportion (97 percent) of Native Hawaiian children with at least one parent in the labor force.

**Income** Despite gains in livable income, Native Hawaiian families remain the least likely among the major ethnic groups to have a livable income.

**Public assistance** Across all regions, the proportion of Native Hawaiian households receiving public assistance income decreased between 2000 and 2015; however, Native Hawaiian households are more likely than households of other major ethnicities to receive public assistance.

**Homeownership** The owner-occupancy rate among Native Hawaiian households is 57 percent—the same as the Hawai'i total; however, this percentage has not changed significantly since 2006.

## CHALLENGES AND OPPORTUNITIES

**Economic disadvantage** Of the five major ethnicities in Hawai'i, Native Hawaiians constitute the largest share of public school students with economic disadvantage, ranging from 36 to 34 percent between 2013 and 2017. The East Hawai'i region has the highest percentage of Native Hawaiian students with economic disadvantage (74 percent), followed by West Hawai'i (72 percent).

**Employment** The employment rate of Native Hawaiians (93 percent) is lower than the Hawai'i total (95 percent), and the 2008 recession had a disproportionately adverse effect on Native Hawaiian employment. Across regions, West Hawai'i, Maui, North Shore, and Kaua'i saw decreases in Native Hawaiian employment rates between 2000 and 2015. The lowest employment rate among Native Hawaiians is in Leeward (84 percent).

**Income** Relative to other major ethnicities in Hawai'i, Native Hawaiians have the lowest average family income (Kamehameha Schools 2019), the greatest proportion of households making \$49,999 or less per year, and are the least likely to have a livable income. In East Hawai'i and Leeward regions, the majority of Native Hawaiian family households do not have a livable income.

**Poverty** In Hawai'i, 14 percent of Native Hawaiian individuals live in poverty—the highest rate among all major ethnicities. The highest percentages of individuals living in poverty are in East Hawai'i (30 percent), Leeward (23 percent), and West Hawai'i (18 percent). Poverty among Native Hawaiian individuals is increasing in all regions except for Honolulu.

Native Hawaiian owner-occupancy rates exceed 50 percent in all regions, except Honolulu.





## RECOMMENDATIONS

Build an economy that focuses on meeting the **basic needs** of residents.

- ▶ Hawai'i residents note that key components of a strong, sustainable, future economy include livable wages and income, local food production and agriculture, and housing and healthcare that are affordable and accessible.

**Diversify the economy** by creating growth in agriculture and food systems and regenerative tourism and rebalancing growth in commercial use land development, government, and military development.

- ▶ Focus on increasing livable-wage jobs and circular economy solutions.
- ▶ Leverage goals from Hawai'i Green Growth and the [Aloha + Challenge](#).
- ▶ Take action through ['Āina Aloha Economic Futures](#).

Invest in **workforce transformations** to better align education, business, and community with future economic and employment opportunities.

- ▶ Pay early childhood educators what they are worth by strengthening career pathways and providing opportunities for higher education and quality training.

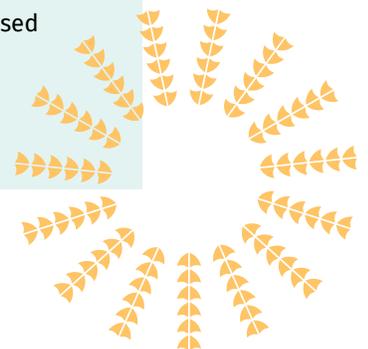
- ▶ Strengthen personalized learning and adult reskilling through student-centered approaches that extend dual credit, training/apprenticeships, and corporate certification opportunities to traditional and adult learners.

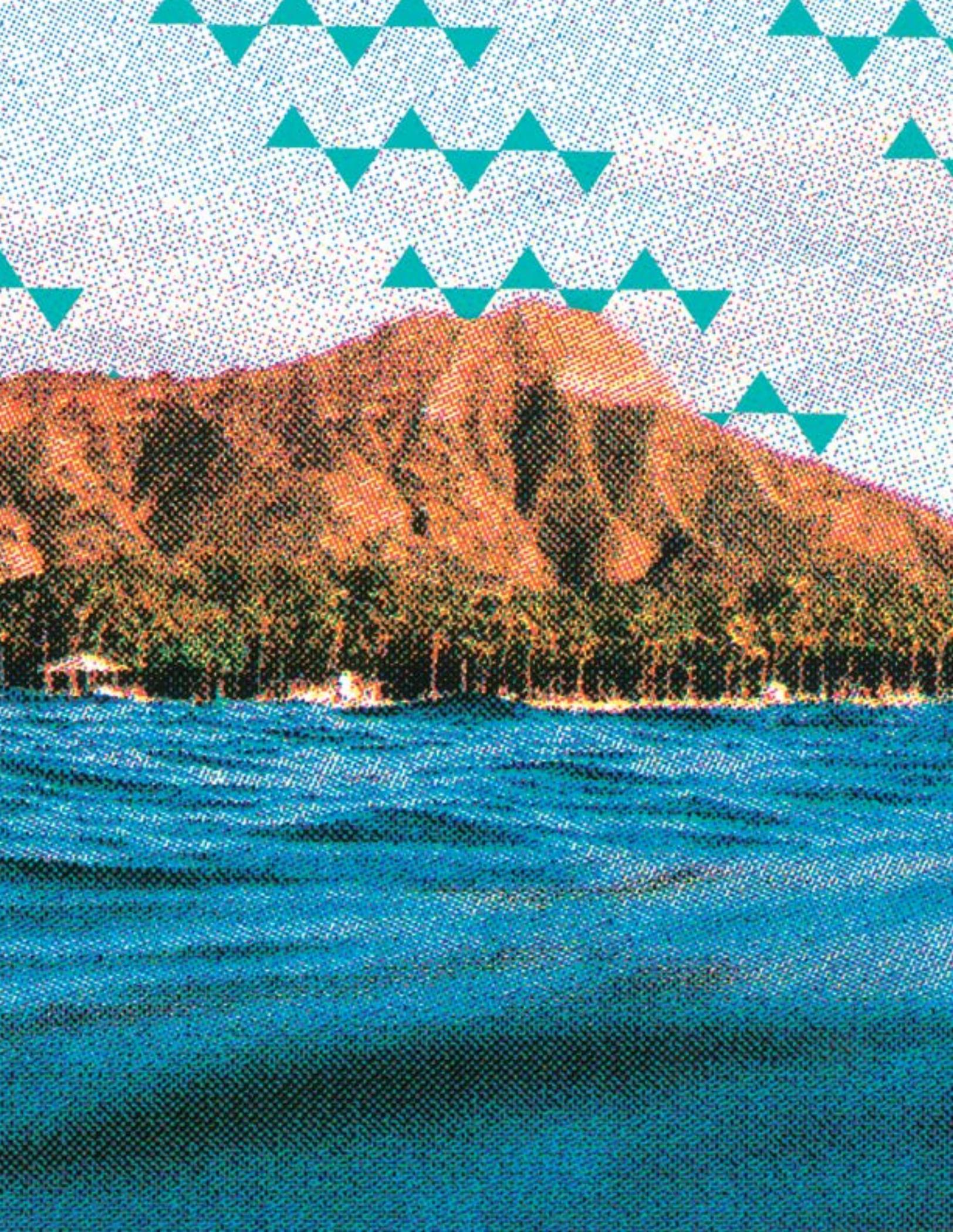
- ▶ Make career-connected learning a core component of public and private education so that k-12 schools and postsecondary institutions form strong, reciprocal relationships with businesses that ignite learners' passions and equip them with skills desired by employers.

Expand **innovation and entrepreneurship** networks to make Hawai'i more attractive and competitive for business.

- ▶ Leverage innovative ideas and networks to strengthen and reimagine Hawai'i's core sectors that impact well-being.
- ▶ Build competency and skills in data science to prepare learners and companies to compete effectively in a rapidly evolving knowledge economy.

Explore **social impact investing and social ventures** as a way of generating capital for community-based organizations.





# Spiritual and Emotional Well-Being

## STRENGTHS AND GAINS

**‘Āina** A 2018 statewide survey shows that the majority of Native Hawaiians (66 percent) report that ‘āina has important cultural, spiritual, and subsistence purposes. Furthermore, 38 percent of Native Hawaiians report interacting with the land for spiritual or religious reasons, compared with 21 percent among non-Native Hawaiians.

**Spirituality** Native Hawaiians are more likely than non-Native Hawaiians to draw inspiration from the lives of ancestors when faced with a challenging decision or task.

**Depression** The prevalence of depression decreased among Native Hawaiian adults in Hawai‘i county and among Native Hawaiian middle schoolers across Hawai‘i.

## CHALLENGES AND OPPORTUNITIES

**Abuse** Compared with students from other major ethnicities, Native Hawaiians are among the most likely to endure emotional, sexual, or physical abuse from someone they are dating.

**Depression** Native Hawaiians have some of the highest rates of depression in Hawai‘i; from 2013 to 2016, rates increased among Native Hawaiian adults in all counties except Hawai‘i county.

**Mental health** One-fifth (20 percent) of Native Hawaiian adults report having poor mental health—a rate that is significantly higher than the Hawai‘i total (14 percent).



## RECOMMENDATIONS

Train government agency workers in **trauma-informed care**, and raise expectations around **emotional support** delivered by government programs and services.

End **homelessness** of Native Hawaiian keiki and their families through coordinated community approaches, prioritizing permanent housing and support services.

Increase access to **mental health services** among Native Hawaiians, including in rural or remote areas, to support coping strategies for depression and suicide.

Strengthen **social and emotional learning** through educator professional development and school-wide curricula, instruction, and assessment.

Provide **mental health screening** in schools to identify and treat special needs at younger ages.

The prevalence of depression decreased among Native Hawaiian adults in Hawai'i county and among Native Hawaiian middle schoolers across Hawai'i.



# Kāhea—Our Call to Action

## Ho‘oikaika i ke kahua: Strengthen the foundation of Hawaiian culture-based education

“O ke kahua ma mua, ma hope ke kūkulu—*The site first, and then the building.*” PUKUI 1983, 268

The specific recommendations above acknowledge that Native Hawaiian ingenuity, wisdom, and science are needed to solve the challenges facing Hawai‘i, the nation, and the planet. Many aspects of our educational, social, and political systems perpetuate inequities and must be addressed—our kāhea (call) is to strengthen the foundation of Hawaiian culture-based education as a key driver to rebalance systems so that they are pono (proper, aligned). By so doing, we will nurture the leaders, healers, and guardians who will restore—and in some cases, transform—our systems to produce more equitable outcomes, where all students achieve at high levels.

As such, we conclude this executive summary with a kāhea to cultivate, improve, and expand Hawaiian culture-based education as a viable learning system for all Hawai‘i learners.

# 1

## Welcome and build diverse approaches

The array of educational programs and partners exploring, expanding, and encouraging Hawaiian culture-based education creates an opportunity not only to increase community access to and perpetuation of ‘āina and language, but also to experiment with various models and practices and systematically test for the conditions within those models and practices that are most effective. We expect, for example, that some culture-based instructional approaches that are highly effective within a small, Hawaiian-focused charter school may not translate well to conventional public or private schools that have large class sizes or highly diverse student populations. Thoughtfully designed experiments and learning networks are needed to test Hawaiian culture-based education approaches in different environments, which in turn will facilitate the development of robust, evidence-based strategies for scaling. Along with testing different approaches, support must be directed toward continued noi‘i (research) and the expansion of evidence-based methods in Hawaiian culture-based education.

# 2

## BUILD ACROSS ALL LEVELS

The learning system for Hawaiian culture-based education must be structured to inform multiple organizational levels and a range of stakeholders—including teachers, principals, executives, parents, and community members. The learning system must also reflect the various configurations through which Hawaiian

culture-based education is integrated and bundled into existing work and priorities. Developing the technical infrastructure to facilitate the sharing of knowledge is key to the success of a multilevel system of learning. Indeed, the COVID-19 pandemic has fueled a greater sense of urgency to create and share digital curricula and learning experiences.

Educational organizations like Kamehameha Schools, Hawaiian-focused charter schools,

and others need collaborative workspaces, processes, and forums to help ensure that all groups, including community partners, can share and benefit from the experiences and learnings of others within the system. Special focus should be placed on educational programs and policies to reconnect Native Hawaiian youth who have been underserved by our systems of care and education.

# 3

## Utilize on-the-ground expertise

Robust learning and evaluation systems are grounded in the experience and expertise of implementers who know the work, the context, and the questions that need to be answered. Consistent with best practices in culturally relevant evaluation, our questions and learning processes around Hawaiian culture-based education must be developed from a collaborative and participatory perspective (with and by Native Hawaiians). Including voices from a range of stakeholders will ensure that findings and application of knowledge are pono, meaningful, and relevant to our communities.

A critical component of this participatory evaluation strategy will be co-developing culturally grounded instruments for data collection. This requires tools that assess not only learner outcomes, but also the contexts where Hawaiian culture-based education is practiced, as well as the ripple effects across Kanaka Maoli families and communities. One promising pathway is to adopt and refine holistic assessments within existing Hawaiian-culture based curricular frameworks such as [Nā Hopena A’o \(HĀ\)](#), [E Ola!](#), and the [Vision of a Graduate](#), which extend definitions of student success beyond academic achievement.

# 4

## EMBRACE ADAPTATION

Organizational efforts must adapt to leverage Hawaiian culture-based education as a driver of broader systems change.

Such possibilities occasionally lead to veering “off road” into uncharted territory, with a roadmap that may be sketchy or imperfect. As a learning community, we will need to find our way through rapid data-action feedback loops, drawing on cutting-edge tools and methodologies to help our organizations continually adapt. Even more critical will be leaders at all levels who are bold, courageous, and flexible enough to change directions if we find ourselves headed down a wrong path. This means our learning systems will need to adapt and evolve over time to keep pace with emergent shifts.

An educational system rooted in Native Hawaiian values, language, and perspectives is vital to provide high-quality learning experiences that meet community needs now and into the future. Locally and globally, society is facing a public health crisis, financial instability, climate change, and social upheaval. The Western-industrial model of education has failed to provide the tools needed to bring harmony and balance to our world. Hawaiian culture-based education represents a bright spot for our people, for our education systems, and for lāhui well-being.

“Ua ao Hawai‘i ke ‘ōlino  
nei mālamalama—  
Hawai‘i is enlightened,  
for the brightness of  
day is here.”

PUKUI 1983, 305

Each chapter of *Ka Huaka‘i 2021* illuminates bright spots and stubborn challenges facing Native Hawaiians and Hawai‘i. Enlightened by this knowledge, and unified in purpose, we recognize that now is the time to bring transformative change to our families and communities. Mahalo.

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**The Hawaiian leader of Hawaiians must have a set of qualities and values peculiar to [their] Hawaiianness. We shall have little future to enjoy unless Hawaiians manage to lead themselves wisely. That is the greatest challenge we face today.**

—GEORGE KANAHELE, *KŪ KANAKA*, 1986, P. 398

# Introduction

*Me ‘oukou ka welina o ke aloha—warm greetings to you all.*

## THE JOURNEY

This publication continues a forty-year journey to gather and share data about Native Hawaiian education and well-being. Our Kānaka Maoli worldview encourages us to always nānā i ke kumu—look to the source, to learn from our past (Pukui 1983). The mo‘okū‘auhau (lineage, genealogy) of *Ka Huaka‘i 2021* began in 1983 with the first *Native Hawaiian Educational Assessment*.

Having data available to understand the conditions and needs of our people was crucial in guiding policy and programs designed to lift and support Native Hawaiian families and communities. Each decade since has marked a milestone revisiting of these data, with new systems and technology allowing more frequent updates. What remains unchanged, however, is our commitment to highlight the unique strengths and challenges of Kānaka Maoli and to identify opportunities to generate greater well-being. *Ka Huaka‘i*, which means “the journey,” documents this commitment and our ongoing march toward becoming a thriving lāhui (nation, people).

Within “huaka‘i” are two powerful Hawaiian words that underscore the purpose of this publication. One of the many meanings of “hua” is fruit or seed, which references the potential for growth and change. It is our hope that the data and findings within *Ka Huaka‘i 2021* germinate new ways of thinking and catalyze bold action to uplift our people. The word “ka‘i” also has several meanings, including to lead, to carry, and to walk in formation. Similarly, the information within this volume requires people who are willing to be “lifters” to carry forward ideas that inspire diverse and inclusive coalitions that improve education for Kānaka Maoli.

*Ka Huaka'i 2021* offers:

1. Multidisciplinary analysis of educational outcomes of Kānaka Maoli
2. Assessment of changes in Kanaka Maoli well-being
3. Identification of gaps in our knowledge
4. New areas of energy and promise that may not be captured in available data sources

A note on terms: Throughout *Ka Huaka'i 2021*, we use various references for Native Hawaiians, including “Kānaka Maoli,” “Kānaka 'Ōiwi,” or simply “Kānaka” and “'Ōiwi.” For our purposes, these terms are used interchangeably and describe any individual who can trace their genealogy to the original inhabitants (or their descendants) of the Hawaiian Islands, regardless of blood quantum or racial/ethnic identity. Data sources consulted for this volume use different definitions to identify and report on Native Hawaiians, resulting in occasional inconsistencies. For more information on data sources, terms, and definitions, see “[Methods, Data Sources, and Definitions](#)” at the end of this volume.

The story of Kanaka Maoli well-being is one of resistance, resilience, and resurgence. Every Native Hawaiian living today is a survivor, and our vibrancy as Kānaka Maoli still shines, despite systemic forces that attempt to silence or oppress. The energy inspired through growth and regrowth is palpable in the relentless pursuit of 'ike kupuna (ancestral knowledge and wisdom), aloha 'āina (patriotism, love for the land), and kūpono (uprightness), and in the call that many of our people answer to serve as leaders in their communities. The increase in cultural vibrancy and cultural practices among Native Hawaiians in recent generations is a promising indicator of well-being for our lāhui. Not all of these important markers are easily quantified, but the hō'ailona (signs) are there.



The Native Hawaiian population is growing and expanding its ability to pursue collective identity and self-determination.



We say, “He ‘onipa‘a ka ‘oia‘i‘o—*Truth is steadfast and not changeable*” (Pukui 1983, 94). This belief highlights our reverence for facts and, by extension, justice. Truth and justice are sometimes incomplete, misunderstood, or even purposely withheld. As aboriginal people whose nation was illegally overthrown and whose language and culture were forcibly oppressed, we know the agony of colonization and historical trauma. We understand the word extinction, as it occurs daily throughout our ‘āina (land). We know too well the destruction caused by pandemics and political divisiveness. And far too many continue to struggle to exist every day in our homeland. Nevertheless, we persist and remain ‘onipa‘a (steadfast), willing to ‘ai pōhaku (eat stones) to ensure the legacy of our people.

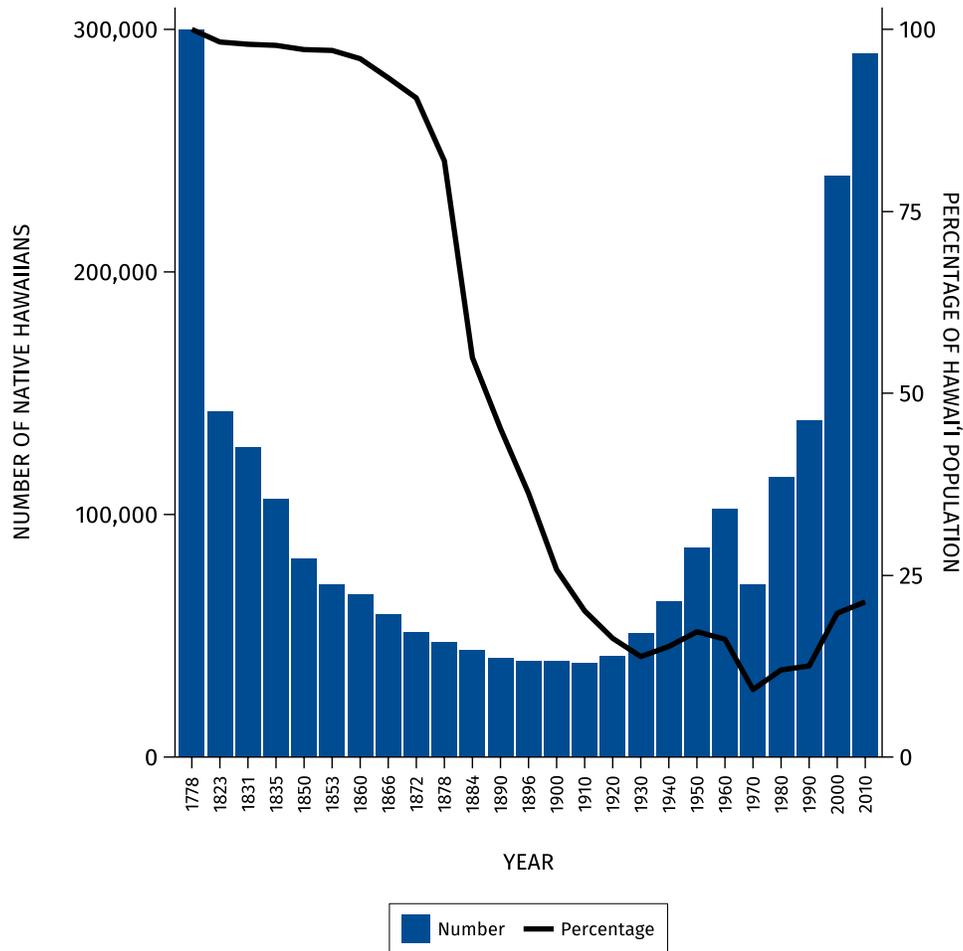
‘Onipa‘a was the motto of Queen Lili‘uokalani, the last reigning monarch of the Hawaiian Kingdom. Her love for her people led her to cede the throne temporarily to avoid bloodshed. Nearly 130 years later, we remain steadfast in our desire for justice to be restored through a more equitable and culturally revitalizing education and social system.

Data and trends play a critical role in understanding social change and community well-being. At the same time, models are inherently incomplete and partial. To examine educational outcomes of Native Hawaiians, it is not enough to disaggregate the data; we must contextualize it and scrutinize it for gaps and biases.

For example, figure 0.1 depicts population trends for Native Hawaiians in Hawai‘i from 1778 to 2010. It is well documented that Kānaka Maoli suffered a massive population decline that started with Western contact and extended into the early twentieth century. The bars represent the total number of Native Hawaiians in the islands over a period of two hundred-plus years. The curving line indicates Kānaka Maoli as a percentage of Hawai‘i’s total population.

Considerable disagreement exists among scholars about the size of the Native Hawaiian population at the time of Western contact. Approximations range from Nordyke’s (1989) conservative estimate of 300,000 to Swanson’s (2019) more recent estimate of 683,200 to Stannard’s (1989) figure of 800,000. According to the US Census Bureau, there were 289,970 Native Hawaiians living in Hawai‘i in 2010—a number that approaches Nordyke’s estimate of the Native Hawaiian population in 1778.

**FIGURE 0.1** Trends in the Native Hawaiian population in Hawai'i  
[1778 to 2010]



Data source: Nordyke 1989; 1990, 2000, 2010 Census

Note 1: Figures for 1970 are not directly comparable with those of other years due to changes in census definitions of race that year.

- Without immunity to foreign diseases, the Native Hawaiian population suffered tremendously from Western contact.
- The Native Hawaiian population increased steadily after 1910.
- By 2010, Native Hawaiians were similar in number to 1778 estimates but comprised less than a quarter of Hawai'i's total population.

There are many ways to interpret this chart. For example, the decline—or the resurgence—in overall numbers of Kānaka Maoli could be highlighted. Health and epidemiology inferences could be made, as could connections regarding the broader economic and political changes that occurred during this period. This figure could also call attention to the fact that Kānaka ‘Ōiwi, the descendants of the aboriginal population, are now less than a quarter (21.3 percent) of Hawai‘i’s total population. What cannot be seen in this chart, however, is the lived experience of Native Hawaiian people. This absence is a reminder that the perspectives and actual experiences of Indigenous peoples often exist outside conventional data structures.

Presently, data on Native Hawaiian well-being are drawn almost exclusively from sources funded by federal and state governments. As a result, the ways in which the data are collected, analyzed, and reported are often based on assumptions that (1) success defined from a White or Euro-American worldview represents the best outcome for all groups, and (2) if other racial and ethnic groups behaved more like Whites and Euro-Americans, they would experience better outcomes.

Given this backdrop, we caution against mistaking correlation for causality when interpreting findings in *Ka Huaka‘i 2021*. We also reject inferences that higher rates of negative outcomes experienced by Kānaka Maoli are attributable to intrinsic characteristics or cultural values and practices. Additionally, we advocate for known protective factors among Kānaka Maoli to be considered as pathways to reduce the disproportionality of negative outcomes for Native Hawaiians.

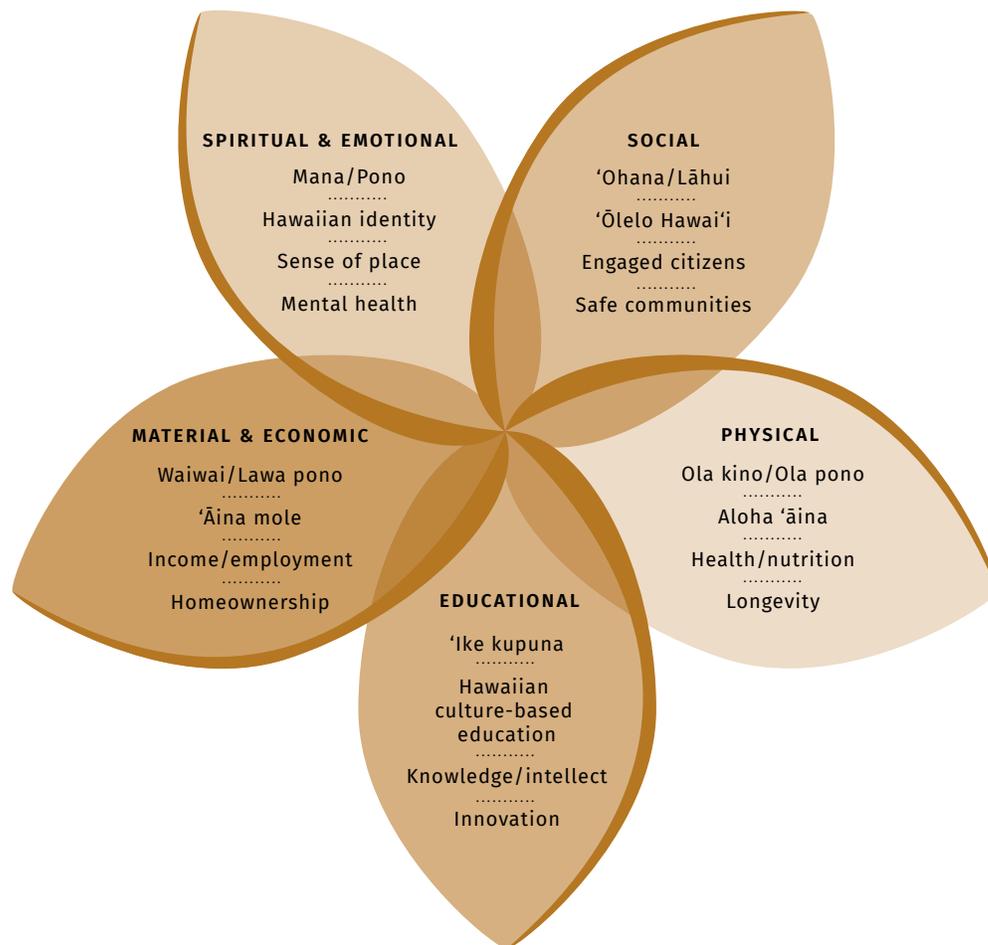
Available data clearly indicate that, as a group, Kānaka Maoli fare less well than most major ethnic groups on measures of well-being. While individual agency and responsibility for our choices are important, it is also critical to note that the effects of historical trauma, linked to legacies of colonization, imperialism, and dispossession of land, are important parts of the context in which we make choices. This legacy of historical injustice is amplified in the present by limited access to culturally based education, social services, medical and mental healthcare, and by persistent racialized structures of inequality.

## NATIVE HAWAIIAN WELL-BEING

Today, Kānaka Maoli face a world that is increasingly complex and uncertain. Our ability to survive—and indeed thrive in the future—rests on the collective well-being of our lāhui. For Native Hawaiians, well-being manifests when we find pono (balance) and lōkahi (harmony) among the many aspects of our lives. A holistic and reciprocal understanding of well-being is common among Indigenous peoples, where the health of people is tied closely to the health of the land (Barnhardt and Kawagley 2005; United Nations 2006; Vanuatu National Statistics Office 2012; Statistics New Zealand 2013).

Recent decades have seen a renewed interest in describing and understanding Kanaka Maoli well-being. As we did in 2005, *Ka Huaka'i 2021* uses a pua (flower) to illustrate Native Hawaiian well-being with five interconnected petals: Social, Physical, Educational, Material and Economic, and Spiritual and Emotional (fig. 0.2). Unlike *Ka Huaka'i 2005*, where social and cultural well-being were combined, cultural well-being is integral across all petals. This model resonates with mo'olelo (histories) and scholarship that emphasize dimensions of Indigenous well-being that are ecological (McGregor et al. 2003), epistemological ('Aha Pūnana Leo and Ka Haka 'Ula o Ke'elikōlani 2009; Lili'uokalani Trust, and Culturally Relevant Evaluation and Assessment Hawai'i 2019), and spiritual (Meyer 2004; Kūkulu Kumuhana Planning Committee 2017). As described by a hui (group) of 'Ōiwi researchers and allies, "The desire to improve Native Hawaiian well-being is our unifying force. It brings communities together, merges missions of organizations, and bridges professional fields" (Kūkulu Kumuhana Planning Committee 2017, 2).

**FIGURE 0.2** The Pua Model  
[a Native Hawaiian perspective on well-being]



In the following section, we introduce five dimensions of well-being couched within a Native Hawaiian historical and cultural context. Findings from each dimension clearly demonstrate that colonization and US occupation left no aspect of Kanaka Maoli well-being unaffected. In addition to foreign diseases that decimated our population, the imposition of Western education and land reforms played pivotal roles in the dispossession of Kānaka 'Ōiwi and the suppression of our identity. Native Hawaiians are the pulapula (descendants, offspring) of those who fought against foreign systems designed to subjugate our language, identity, and culture—a struggle that continues to this day.

## Social Well-Being

In a Kanaka Maoli world, social relationships are inseparable from individual health and well-being. Connections to 'ohana (families), kaiāulu (communities), 'āina, and pili 'uhane (spirituality) form the foundation on which an individual's identity is grounded. These connections are elevated by mana (life force, energy found in all things) and reinforce a deep kuleana (responsibility, obligation) to mālama (care for) others and our honua (world). For Native Hawaiians, individual identity is rooted in collective identity; personhood is peoplehood; and the health of the land is the health of the people. A rich social fabric—which weaves together ancestry and genealogy, traditions and culture, relationships and obligation—contributes to Kanaka Maoli social well-being.

### HISTORICAL AND CULTURAL CONTEXT

Religion and spirituality governed the social, political, and economic conditions of human relationships in ancient Hawai'i. Native Hawaiian epistemology and ontology underscore the interdependence of akua (gods), kānaka (humans), and 'āina. For kānaka, assignment into a social class was determined by genealogy, not wealth or gender. Each class carried kuleana that served society. Classes also determined the allocation, appropriation, and distribution of land and goods (Kame'eleihiwa 1992).

It was believed that akua entrusted their direct descendants, the ali'i (chiefs) and high-ranking nobles, with control over resources and social order. Ali'i were further stratified based on how much land they ruled, which could be parts of an island, an entire island, or several islands. Below the ali'i were kāhuna, the priests and experts in a field, including healers, builders, and seers. The largest class, the maka'āinana, were commoners who were fishermen, farmers, and laborers. At the bottom of the system were the kauā outcasts (war captives), who were not allowed to marry.

The social hierarchy was held together by 'Ai Kapu (a set of restrictions regarding food). 'Ai Kapu separated the mana of ali'i from that of others, as well as kāne (men) from wāhine (women). Under 'Ai Kapu, every person had a function and a duty to contribute to the collective good. The maka'āinana, for example, not only worked to feed their 'ohana but also paid taxes to the ali'i, who, in turn, ensured the rights and protection of the people and the land. Reciprocity embedded within the kapu system (strict rules and systems of social order) underscores the significance of balance in Kanaka Maoli society.

Soon after the kapu system was abandoned in 1819, American missionaries arrived in Hawai'i. Along with devastating diseases, settlers brought capitalist ideas that spurred unsustainable whaling and sandalwood industries. The rise of subsequent pineapple and sugar plantations caused an influx of immigration to Hawai'i. A Western-style government afforded foreigners greater legal and political power. In thirty short years (1820 to 1850), the social, political, and economic landscape of Hawai'i experienced radical change despite repeated attempts by Kānaka 'Ōiwi to push back (Sai 2013; Beamer 2014).

The social upheaval continued during the latter half of the nineteenth century and throughout the 1900s. Key events included the illegal overthrow of the Kingdom of Hawai'i (1893) and US "annexation" (1898), increased militarization and World War II in the 1940s, Hawai'i statehood (1959), and a booming tourism industry (1950s to present) that further transformed 'āina and commodified Native culture. These changes fermented frustration and resistance among Kānaka Maoli, but it was not until the 1970s that this energy materialized into a growing movement of cultural, social, and political resurgence called the Hawaiian Renaissance.

Forty years have passed since Dr. George Kanahahele, renowned Hawaiian historian, activist, and author, wrote that his great hope was for the "permanency of the Hawaiian Renaissance" (Kanahahele 1979). The perpetuity of the renaissance is evident in recent examples such as Hawai'i's proclamation of 2018 being the "Year of the Hawaiian," global protests over the Thirty-Meter Telescope on Mauna Kea, the first-ever Hawai'i Department of Education (DOE) Office of Hawaiian Education, and the epic Mālama Honua Worldwide Voyage. Such renewed cultural and political abundance exemplifies how, in the face of colossal change, Native Hawaiians continue to assert our identity, lineage, history, spirituality, land, and livelihood.

## Material and Economic Well-Being

As Kānaka Maoli, we see the health of our 'āina as a key indicator of material and economic well-being. But what is material and economic well-being? And what are the inherent differences and tensions between Indigenous economics—including that of Native Hawaiians—and the economic systems we primarily experience today?

Conventional economic theories attempt to explain how wealth is created and distributed in communities. In Western traditions, economics refers to the branch of knowledge concerned with the production, consumption, and transfer of wealth; or as the condition of a region or people regarding material prosperity. For much of the world, the idea of economics—and money—is rooted in scarcity, the drive to fulfill human wants, and the desire to produce satisfaction—even if our wants exceed what nature can provide.

Indigenous economic worldviews turn these concepts on their head. For Kānaka Maoli, sufficiency is the dominant idea, where our human needs and wants are generally finite, and the means to realize needs and wants are adequate. For example, a lawai'a (fisherman) living in a healthy natural environment, with strong social ties, may have wants that are scarce and abundant means to meet those wants. In such a system, the ability to achieve personal satisfaction does not jeopardize the system for others.

Native peoples, like all humans, also have additional "wants" for precious items. However, these are generally secondary to securing essential resources for our community, our family, and ourselves. Indigenous economist Rebecca Adamson (2013) refers to this idea as "enoughness;" Kānaka Maoli call it lawa pono (fully sufficient), where enough is plenty.

Thriving 'āina is essential to a thriving Indigenous economy—a truth that is often short-changed in the drive for commerce and capitalism. Sustainable economics and sustainable ecosystems are ultimately linked. Indigenomics (Uvila and Pasanen 2009; Hilton, forthcoming), circular (Stahel 2019), regenerative (del Marmol 2017), and other economic frameworks attempt to strike a balance closer to that of Indigenous societies (Kelly and Woods, forthcoming).

## HISTORICAL AND CULTURAL CONTEXT

Being the most isolated island chain on earth, Hawai'i's traditional economy was necessarily circular and regenerative. What Europeans witnessed when they arrived was a society fully meeting its basic needs (food, water, housing, clothing, transportation, places of worship) and also producing a variety of additional wants (for example, featherwork, stone and wood carvings, jewelry, surfboards, and hōlua, or sleds). I ka wā kahiko, in historical times, there were times of greater abundance than others, and the system of land management and population distribution responded accordingly. Conflict may have been as much, if not more, a matter of honor and politics (acquiring mana) as it was competition for natural resources.

Following Western contact, the confluence of war, foreign influence, and disease had a devastating effect on Native socioeconomic systems. Kamehameha's conquest to unite the Hawaiian Islands, though critically important to our history, also diverted human and other resources from society for a period of time spanning about twenty-five years. When the mō'i (king) died in 1819, his people were in the process of rebuilding strong agriculture, aquaculture, housing, maritime, and other critical pillars of the Kanaka economy.

The population collapse and dispossession of Kānaka Maoli that began in the 1800s resulted in diminished support systems and heightened economic barriers for Native Hawaiian families and communities. These historical realities persist into the present day and form the backdrop of Native Hawaiian material and economic well-being. Today, the legacy of US occupation and the dominance of Western capitalism mean that Kānaka Maoli are more likely to understand the culture of scarcity and personal satisfaction than the culture of sufficiency and lawa pono.

Current and future generations of Native Hawaiians are in a position to choose what path forward to take. What will economic and material well-being mean to our people? It is not *if* we tackle food security, housing, health, and provision of other material needs, it is *how* we tackle them. Finding a way to reignite the culture of lawa pono and restore 'āina and cultural practices that generate enoughness are immense challenges and opportunities.

## Spiritual and Emotional Well-Being

‘Ōiwi perspectives on spiritual and emotional well-being focus on living a balanced and productive life. In the same way that a person’s physical health or economic status plays an important role in shaping life experiences, so too does the degree to which they are able to draw strength and guidance from spiritual and emotional sources. Lōkahi is achieved by balancing the needs and contributions of akua, ‘āina, and kānaka. Understanding relationships across physical and metaphysical realms—at both the personal and the collective level—requires special attention when examining spiritual and emotional health of Native Hawaiians.

### HISTORICAL AND CULTURAL CONTEXT

The concept of mana is at the core of Kanaka Maoli beliefs about spirituality and emotion. Pukui (1979) writes about mana as the storehouse of the supernatural power, linking a person emotionally to the ancestors, to a place in time now, and to the future yet unborn. In our mo‘olelo and practice, mana can be thought of as good and bad, or somewhere along the spectrum. Actions, effects, and consequences may be considered hewa (wrong) or pono (Crabbe, Fox, and Coleman 2017). Acknowledging that power is derived from spiritual and natural forces and that emotions are inextricably linked with pilina (relationships) offers a critical lens to this topic. While mana can be used to exert influence over others, it also provides confidence and inner strength for individuals in times of stress or uncertainty. Mana helps us to discover insights, balance multiple obligations, and manage our behavior. In a reciprocal way, mana and spiritual and emotional well-being can increase—or decrease—each other.

Spirituality among Native Hawaiians has evolved over many generations and continues to be expressed in multiple forms. Today, many Native Hawaiians practice spirituality through major religions like Buddhism, Catholicism, and Christianity while continuing to respect and worship traditional gods such as Lono, Kāne, Kū, and Kanaloa. The remembrance of ancestors and the acknowledgement of ‘aumākua (family spirits) among ‘Ōiwi families are also common. For many, ceremony is often embraced as a means of focusing mana and maintaining pilina.

One example of how cultural beliefs around spirituality are inscribed within human anatomy is nā piko ‘ekolu (the three body points). The piko po‘o is a point at the top of the head—in infants it is the open space in the fontanel when the cranium is formed, which connects a person’s ‘uhane (spirit) with the spiritual realm. The piko waena refers to the navel and the umbilical connection we have with our mākua (parents) and the contemporary world. The piko ma‘i, located in the genital area, symbolizes our links to future descendants via offspring.

Similarly, for Kānaka Maoli, the body illustrates complex ideas about emotions and intellect. The na'au (literally, the intestines), or gut, is where wisdom and intense feelings reside. In this way, Native Hawaiians intuitively recognize the interdependence of our intellect and emotional intelligence. One admirable trait of ali'i was said to be their countenance and ability to manage their emotions. The 'ōlelo no'ēau "E 'ōpū ali'i—*Have the stomach (or heart) of a chief*" was a compliment (Pukui 1983, 45). The fact that the stomach (near the na'au) is believed to be the seat of one's emotional state is telling. Western scientists are only now catching up with Indigenous epistemology in understanding the relationships between the intestinal biome and mental health via a "gut-brain axis" (Clapp et al. 2017), and how the entire biosphere is enabling healthy life on earth (Blaser et al. 2016).

The increase in cultural protocol is one of many examples of how spiritual and emotional well-being are reflected in the lives of Native Hawaiians today. Although protocol can take many forms, most include an acknowledgment of akua through pule (prayer) or oli (chant), recognition of social relationships through ha'i 'ōlelo (oration) or ho'olauna (introductions), and hospitality expressed via mele (songs). Mending strained relationships with ho'oponopono is another example. Ho'oponopono is a cultural practice used to identify and resolve underlying conflict among 'ohana and now is being applied more broadly within organizations and communities.

Increasingly, scholars are calling attention to the sobering impacts of cultural trauma on the well-being of Indigenous and minority groups (McCubbin, Ishikawa, and McCubbin 2008; Fast and Collin-Vézina 2010; Brave Heart et al. 2011). Recent epigenetics research traces the genetic transmission of cultural and other forms of trauma in DNA (Colangeli 2020). As such, experiences with cultural trauma may impact up to 476 million Indigenous children and adults across the world.



More than two-thirds (69 percent) of Native Hawaiians draw inspiration from the lives of ancestors when dealing with difficult decisions or challenges, compared with 53 percent of non-Native Hawaiians.



Hawai'i's sociopolitical history underscores the far-reaching effects of Western colonization and US occupation on Native Hawaiian families and communities. Cultural and historical trauma result from the systematic oppression of a people over a prolonged period of time. While the direct trauma of an event such as the overthrow of Queen Lili'uokalani was experienced by Kānaka at a certain time, cultural trauma is passed down from one generation to the next as the trauma is normalized. For some Native Hawaiians, cultural trauma may be at the heart of significant and persistent challenges.

Cultural trauma has a particularly deep impact on spiritual and emotional well-being because it affects one's dignity and self-worth. For many groups, cultural trauma is often linked with mental health challenges (e.g., depression), antisocial behavior (e.g., domestic abuse), and suicide. The intensive stripping away of spiritual customs and beliefs, social structures, and political power from Kānaka Maoli since the 1800s is a source of cultural trauma that bleeds into the present day.

At the same time, we also see abundance within the lāhui and ancestral wealth that endures despite oppressive historical conditions (Kūkulu Kumuhana Planning Committee 2017; Beamer 2014). Strong examples are evident in 'āina stewardship, restoration, and education efforts across Hawai'i (Blaich 2003; Ledward 2013). Community leaders, many of whom are 'āina kia'i (protectors of the land), work to improve ecosystem health and reconnect people to the natural environment and, ultimately, to a Kanaka worldview. While these programs recognize the fragility of Hawai'i's ecological systems and raise awareness about global threats like climate change, they amplify 'ike kupuna, which has always maintained that caring for the 'āina is key to what we need to thrive.

## Physical Well-Being

Similar to other dimensions of Kanaka Maoli well-being, good health stems from harmonious relationships among the na'au, the kino (body), and the 'uhane. Ola pono (a healthy life) results from balanced relationships among the past, present, and future; among individuals, families and communities, between humans and 'āina; between spiritual and physical realms; and between traditional lifestyles and present-day contexts.

For Native Hawaiians, physical health is indistinguishable from natural ecosystems; healthy 'āina promotes healthy lives. I ka wā kahiko, kapu served as public health structures, ensuring equitable access to resources needed to maintain vitality and combat illness. Mana—both individual and collective—was considered an integral part of health and wellness. Healing techniques were administered by kāhuna, who addressed an individual's mana before tending to their physical body. 'Āina and plants, which also possess mana and medicinal properties, assisted in restoring balance and harmony.

## HISTORICAL AND CULTURAL CONTEXT

Starting in 1778, foreign-introduced diseases such as tuberculosis, Hansen's disease, measles, influenza, cholera, scarlet fever, and other serious illnesses killed tens of thousands of Kānaka Maoli. Traditional healing practices such as pule, lā'au lapa'au (Hawaiian medicinal plants) and lomilomi (massage), were unable to prevent widespread death. By 1896, the 'Ōiwi population was reduced to 31,019—a devastating 92 percent decrease from initial Western contact.

A vibrant Native health system, which sustained our people for generations, was steadily supplanted in the nineteenth and early-twentieth centuries. Population decline and the abolishment of 'Ai Kapu destabilized the power of kāhuna. But it was the arrival of Western missionaries who introduced new religions and medicine that pushed traditional healing practices to the side (Kaholokula et al. 2020). In 1865, the Hawaiian Kingdom began issuing general medical licenses but did not consider Native healers until three years later. Restrictions were such that only fourteen kāhuna across the islands passed tests required by the Hawaiian Board of Health and were granted licenses (Donlin 2010).

The second half of the twentieth century offered signs of recovery for Kanaka health. Hōkūle'a voyaged across the Pacific using traditional navigation techniques (1976), the Office of Hawaiian Affairs was established through a Constitutional Convention (1978), the Native Hawaiian Healthcare Improvement Act (1988) was passed, and organizations like Alu Like, the Native Hawaiian Health Consortium, and Papa Ola Lōkahi were established, complementing the work of long-standing Hawaiian-serving organizations such as Kamehameha Schools and the Queen's Medical Center. Strong 'Ōiwi leaders successfully lobbied for federal funding and community programs that provided much-needed healthcare. Still today, we see a great need for Native physicians, making programs such as the Native Hawaiian Center of Excellence critically important.

Social, political, cultural, and environmental factors cannot be disentangled from Native Hawaiian physical well-being. Where people stand on the social ladder is related to their chances of illness and length of life (Mirowsky and Ross 2003). Limited education, racial segregation, low social support, and poverty contribute to poor health outcomes. Access to and affordability of quality healthcare greatly impact individual and community health. Similarly, preservation, access, and practice of cultural traditions and values influence positive physical, mental, and spiritual health.

Despite historical and present-day challenges, holistic approaches are rebuilding physical wellness among Kānaka Maoli. We are rediscovering our traditional agricultural practices and ancestral diets. Aloha 'āina, practice of lā'au lapa'au, and the use of traditional gathering spaces and cultural associations (e.g., Hale Mua, or Men's House) are increasing and offering alternatives to Western medicine. Health training in higher education is becoming more transdisciplinary and welcoming of Native Hawaiian students. Initiatives are underway to address chronic disease among Kānaka Maoli by solving broader social and environmental issues.

The number of Kanaka Maoli physicians is growing, along with training programs that integrate Native approaches to health. This resurgence is occurring alongside the revitalization of Hawaiian culture, strengthening the foundation upon which our health can prosper. These collective efforts are showing that reclaiming optimal physical health for Native Hawaiians is achievable in contemporary contexts.

The history of Native Hawaiian health is not a simple accounting of illness and mortality; rather, it is a complex reaction to the obliteration of ‘Ōiwi cultural and medicinal practices, land occupation, spiritual devastation, introduced infections, and decline in social status. However, our history and experiences also demonstrate tremendous resilience in the face of foreign-imposed political, economic, and educational structures. It is through these multiple lenses that we understand the challenges, disparities, and evolution of Kanaka Maoli health.

## Educational Well-Being

Intellectual cunning, articulation, and mastery are highly prized skills among Native Hawaiians. Education and cognitive well-being are top priorities for Kanaka Maoli leaders seeking social change and betterment—a pursuit that continues the strong tradition of knowledge acquisition that our ali‘i started long ago.

Numerous sayings, stories, and songs are replete with references to wisdom and knowledge. The Hawaiian word for teaching (a‘o) is the same as the word for learning. The saying “a‘o aku, a‘o mai” signifies a nuanced understanding of the give-and-take of teaching and learning through mentoring relationships. In fact, from a Kanaka Maoli worldview, relationships are central to education—a process of learning, applying, and mastering knowledge, in which the highest level of mastery is teaching that knowledge to others.

Consummate learners and innovators, Native Hawaiians are known to travel far and wide to discover new places and new knowledge. As such, this publication refers not only to cognitive well-being as mental processes, but also to the wellspring from which that cognition derives—from the values, the experiences, and resiliency of a people who discovered and learned to thrive in the world’s most remote island chain.

## HISTORICAL AND CULTURAL CONTEXT

Native Hawaiians have a rich tradition of oral knowledge, storytelling, and heightened capacity to recall large quantities of information. For example, the *Kumulipo*, a cosmogonic genealogy, decoded the evolution of heavenly and earthly life long before Charles Darwin wrote *Origin of the Species* in 1859. It is 2,102 lines long and was passed through the generations by precise memorization. The *Kumulipo* is one example of the rigorous discipline of learning and observation that led Native Hawaiians to achieve deep sophistication in

navigation, meteorology, agriculture, aquaculture, fishing, healing modalities, kapa making, weaving, carving, featherwork, warfare, diplomacy, oratory, governance, and treaty making with other nations.

Hawaiian learning and ways of being have endured for centuries. However, many of these traditions eroded or were systematically destroyed with Western contact and occupation, which replaced carefully cultivated modes of education and mentorship with a universal Western system that prioritizes assimilation. Within this context, education continues to be an important determinant of lifetime satisfaction and quality of life for Native Hawaiians. For example, major milestones in early childhood and Grade 3, especially language acquisition and writing, are pivotal to success in later educational pathways and life outcomes. Middle school math and a smooth transition into Grade 9 pave the way for college readiness and on-time high school graduation. Enrolling in and completing higher education and training enhances life chances for individuals and groups, facilitating economic and societal advancement over time (Bowen and Bok 1998). Outcomes of college enrollment and completion result in gains of factual knowledge, moral reasoning, aesthetic and cultural understandings, better health, and psychological and personal growth and satisfaction.

Native Hawaiian learners are represented among high achievers at all levels of the education spectrum. However, data show that Native Hawaiians, as a whole, continue to score lower than national norms on standardized achievement tests and college completion and are overrepresented in special education programs and in the juvenile justice system. Native Hawaiians are comparatively more likely to experience the death of an infant, to face drug, alcohol, and child abuse, to have incarcerated parents, and to live below poverty thresholds. That said, our data show huge strides in Native Hawaiian enrollment at the University of Hawai'i. However, Native Hawaiian students still take longer and are less likely than their peers to graduate from college.

The history of Native Hawaiians reveals a unique perspective that counters such dismal figures. Prior to Western contact, Native Hawaiians had a complex social class structure that governed economic, political, religious, cultural, and educational systems. Learners were schooled through a philosophy of "learning by doing," which valued cultural knowledge in areas such as history, medicine, farming, navigation, fishing, hula, and genealogy. After the missionaries' arrival in Hawai'i, Hawaiians continued to excel in reading and writing. By 1846, nearly 100 percent of Native Hawaiians were literate, a figure that ranked among the highest in the known world at that time, and Hawaiian language newspapers were plentiful.

Ironically, while the ali'i valued education and placed a high priority on Western thought, the well-being of the Native Hawaiian people continued to diminish in the late 1800s. The involuntary colonization and missionary influence on Native Hawaiian education produced destructive historical forces similar to those inflicted on Native American Indians and Alaska Natives (Benham and Heck 1998). Today, the intergenerational effects of the loss of identity, the displacement from our land base, and the upheaval of religious beliefs are evidenced in ongoing disparities in the educational attainment and well-being of Native Hawaiians as a whole.

## POPULATION CHARACTERISTICS

Native Hawaiians have persisted through dramatic population changes. This section highlights characteristics and trends of the Native Hawaiian population based on US census data, which rely on self-reported categories of race and ethnicity. We also examine migration trends and population projections to better understand changes within our lāhui and how they affect Kanaka Maoli well-being.

The number of Native Hawaiians is growing. From 1980 to 2010, the Native Hawaiian population more than doubled, reaching 527,077 by 2010. Some of that growth—particularly from 1990 to 2000—can be attributed to changes in race-reporting options offered by the US Census Bureau. As of this writing, results from the 2020 census were not available, though we expect to see continued growth in the Native Hawaiian population over the last decade.

Current population trends highlight an increasing number of Kānaka Maoli in Hawai'i and a growing diaspora residing elsewhere. In 2010, there were roughly as many Native Hawaiians living residing in Hawai'i as in the continental United States—a difference of about 50,000 in favor of the former (table 0.1). The existence of an expanding diaspora points to the importance of access to homeland, traditional practices, and community resources that nurture the well-being of Native Hawaiians (Browne and Braun 2017; Aikau 2010; Kauanui 2007; Kana'iaupuni and Malone 2006).

**TABLE 0.1** Growth of the Native Hawaiian population in Hawai'i and the United States  
[1980 to 2010]

US census year	Hawai'i total	United States total
1980	115,500	166,814
1990	138,742	211,014
2000	239,655	401,162
2010	289,970	527,077

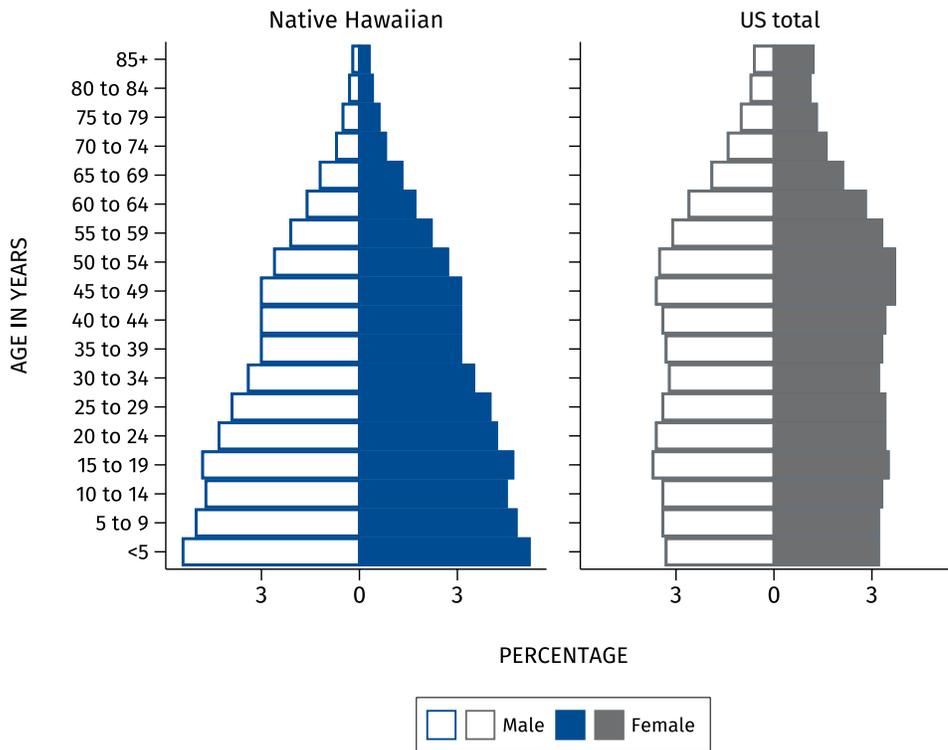
*Data source:* Gibson and Jung 2002; US Census Bureau 2010, Summary File 2

## Population Pyramids

To illustrate the age structure of Native Hawaiians, we use a population pyramid. A pyramid with a wide base signifies a growing population, with more young people than old. A rectangular shape denotes a stable population size, whereas an inverted pyramid would indicate a shrinking population.

Figure 0.3 shows the age and gender distribution of Native Hawaiians compared with the total US population. The US total population is relatively stable, with slight bulges for the baby boomer and millennial generations. By contrast, the Native Hawaiian population, with its wide base, depicts a growing population. The narrow top of the pyramid suggests high mortality and low life expectancy among Native Hawaiians.

**FIGURE 0.3** Age distribution of the population in the United States  
[by age band for Native Hawaiian and US total, United States, 2010]

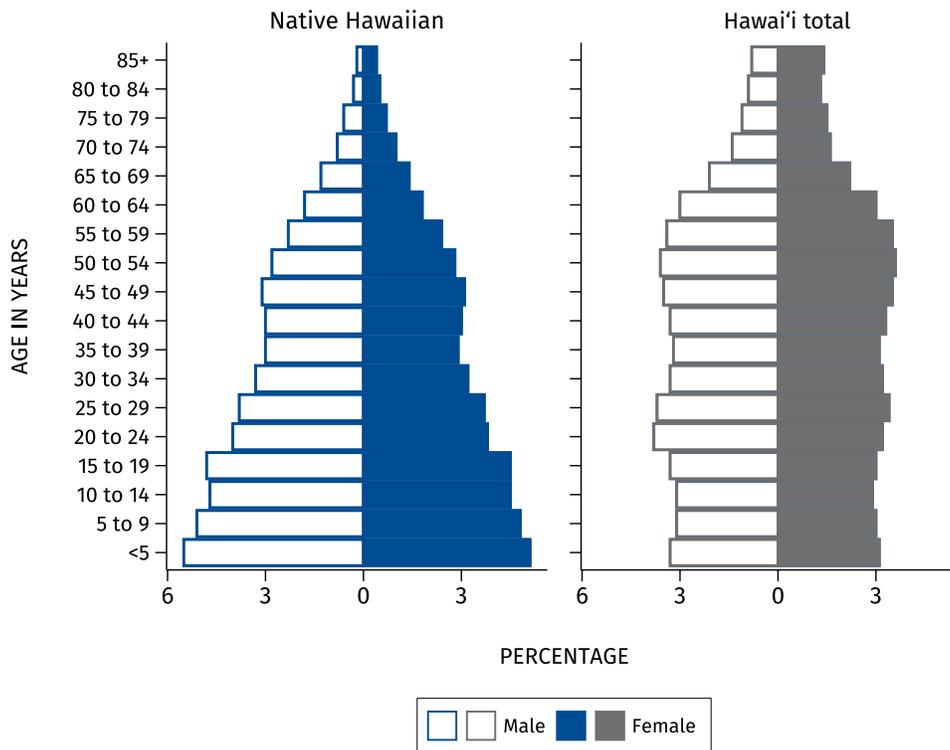


Data source: US Census Bureau 2010, Summary File 2

- The Native Hawaiian population is growing, while the US total population remains stable.
- The proportion of younger Native Hawaiians (i.e., ages nineteen and younger) is greater than the proportion of older Native Hawaiians—a sign of a growing population.
- There is a precipitous decline in the percentage of Native Hawaiians ages seventy and older—a sign of a disproportionately shorter-than-average life span.

Similar to the national population, the total population in Hawai'i is relatively stable. However, among Native Hawaiians in Hawai'i, we see a comparatively young population that continues to grow more rapidly (fig. 0.4), reflected in the relatively wider base of the Native Hawaiian pyramid. The top of the Native Hawaiian pyramid, which is much narrower than the Hawai'i total, indicates higher mortality rates for kūpuna 'Ōiwi (Native Hawaiian elders).

**FIGURE 0.4** Age distribution of the population in Hawai'i  
[by age band for Native Hawaiian and Hawai'i total, 2010]



Data source: US Census Bureau 2010, Summary File 2

- Compared with the Hawai'i total population, which is mostly stable, the Native Hawaiian population is younger and growing in size.
- In Hawai'i, the proportion of Native Hawaiians ages nineteen and younger is much greater than that of the Hawai'i total population.
- The percentage of middle- and retirement-age Native Hawaiians is smaller than that of the Hawai'i total population.

In Hawai'i, 10.6 percent of Native Hawaiians are ages four and younger, compared with 6.4 percent of the Hawai'i total population. Furthermore, 25.0 percent of Native Hawaiians are ages five to seventeen, compared with 15.9 percent across Hawai'i (not shown). The relatively larger proportion of preschool- and school-age Native Hawaiians, combined with the growing Native Hawaiian population, indicates an increasing need for educational supports.

Within the Native Hawaiian population, the proportion of college-age individuals (ages eighteen to twenty-four) exceeds that of college-age individuals within Hawai'i as a whole. However, this trend reverses during the working ages. This may be explained by the fast growth of the younger population, out-migration, and higher mortality rates among Native Hawaiians.

In general, population loss among Native Hawaiians accelerates around the ages of forty-five to forty-nine, which contributes to the narrowing peak of the pyramid. This loss is more pronounced among Native Hawaiians than it is among the total population in both the United States and in Hawai'i. As is typical with most populations, life expectancy of Native Hawaiian females exceeds that of males. This is evidenced in the larger proportion of females, compared with males, near the top of the population pyramids.

## Geographic Distribution

Looking more closely at where Native Hawaiians are in Hawai'i, we examine both the distribution and the concentration of the population. Distribution refers to the spread of a population and often mirrors access to resources such as jobs, housing, and public services. Accordingly, in Hawai'i, we find the largest proportion of Native Hawaiians living in urban Honolulu county, where jobs and amenities are plentiful. Looking at the distribution of the Native Hawaiian population across Hawai'i, nearly two-thirds (63 percent) reside on O'ahu, with nearly one-fourth (23 percent) residing in the 'Ewa-Waialua area (not shown).

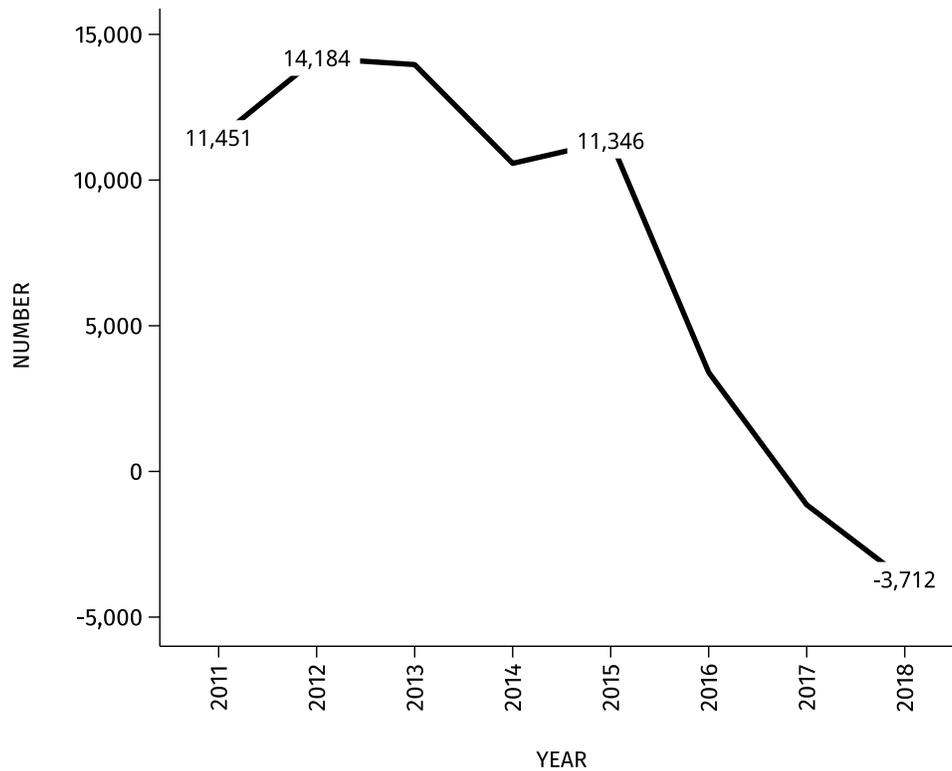
Concentration, on the other hand, refers to the percentage of a population within a single community or population center, relative to others. For example, most rural communities have higher concentrations of Native Hawaiians relative to urban places. Rural communities often maintain cultural practices and ties to the land and sea, providing social and spiritual benefits that can outweigh advantages typically associated with urban areas, like employment opportunities and access to healthcare. While some Native Hawaiians may choose to live in rural areas for cultural lifestyle choices, others may do so out of necessity.

Across the islands, Wai'anae has a high concentration of Native Hawaiians, constituting 59 percent of the area's population. In terms of distribution, about 10 percent of Hawai'i's total population of Native Hawaiians live in Wai'anae. Other areas also are home to high concentrations of Native Hawaiians despite small absolute numbers, such as Ni'ihau (88 percent), Moloka'i (59 percent), and Hāna (57 percent) (not shown).

## Population Size

Hawai'i had roughly 1.3 million residents in 2010. Since 2012, growth in Hawai'i's total population has been slowing, even dipping into negative figures in 2017 and 2018. In 2012, Hawai'i's net population increased by 14,184. However, by 2018 the net population growth was -3,712 (fig. 0.5). Studies show that the population of Hawai'i has declined in recent years, while net out-migration has increased (Economic Research Organization at the University of Hawai'i, n.d.; Hawai'i Department of Business, Economic Development, and Tourism, n.d.).

**FIGURE 0.5** Trends in net population change in Hawai'i  
 [number of persons, Hawai'i, 2011 to 2018]



*Data source:* US Census Bureau, Population Division. Estimates of the Components of Resident Population Change 2011 to 2018.

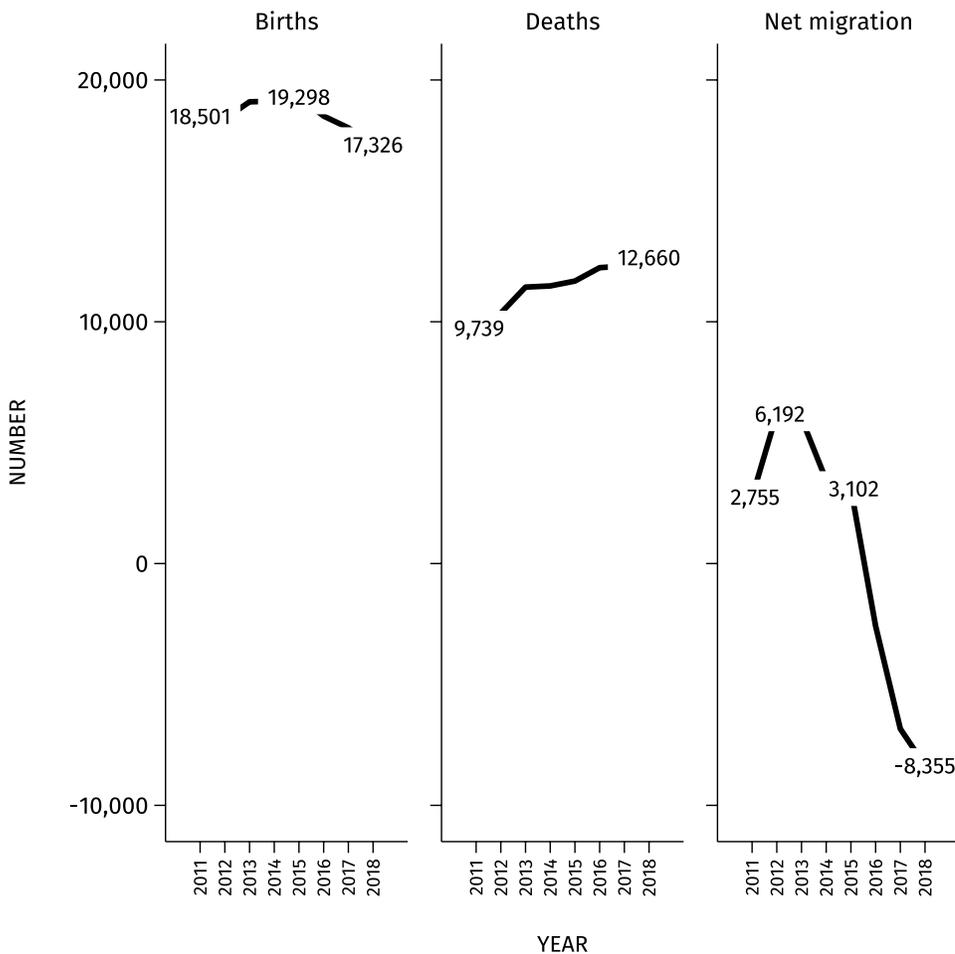
Note 1: Population change accounts for births, deaths, and net migration.

Note 2: Data labels are presented for the first and last points, the maximum and minimum points, and some inflection points where the trend changes.

- Between 2011 and 2015, Hawai'i's population increased by more than 11,000 each year.
- In 2016, the population in Hawai'i was increasing, but much less so than in previous years.
- Hawai'i's population experienced a decrease in 2017 and 2018.

Population change is the result of birth rates, mortality, and migration. The slowing pace, and eventual decline, in Hawai'i's population growth is explained by all three factors. Figure 0.6 shows that the number of births in Hawai'i has fallen since 2015, while the number of deaths has increased slowly since at least 2011. When examined annually, net migration numbers show a decline in the years following 2012, reflecting a narrowing of the gap between the number of people leaving Hawai'i and the number of people entering. In 2017 and 2018, annual net migration rates were negative, meaning that more individuals were leaving Hawai'i than were entering.

**FIGURE 0.6** Trends in births, deaths, and net migration in Hawai'i  
[number of persons, Hawai'i, 2011 to 2018]



*Data source:* US Census Bureau, Population Division. Estimates of the Components of Resident Population Change 2011 to 2018.

Note 1: Net migration represents the number of persons moving to a place in the previous year minus the number of persons moving away from that place in the previous year. These calculations account for domestic and international in-migrants and out-migrants, and exclude persons under one year of age who have not had a full year to potentially move.

Note 2: Data labels are presented for the first and last points, the maximum and minimum points, and some inflection points where the trend changes.

- The number of annual births in Hawai'i decreased by nearly 2,000 between 2015 and 2018.
- In 2018, the number of annual deaths was 12,660—nearly 3,000 more than the number of deaths in 2011.
- With regard to net migration, the gap between the number of people entering Hawai'i and the number of people leaving began to narrow after 2012.
- In 2018, Hawai'i's net migration resulted in 8,355 more individuals leaving Hawai'i than entering.

## Migration Trends

Migration is the largest contributor to the slowing growth of and decline in Hawai'i's population. For example, between 2015 and 2016, about 5,700 more people left Hawai'i than entered, compared with about 1,300 fewer people as a result of births and deaths. Domestic migration is responsible for the negative net migration numbers; changes from international migration are negligible.

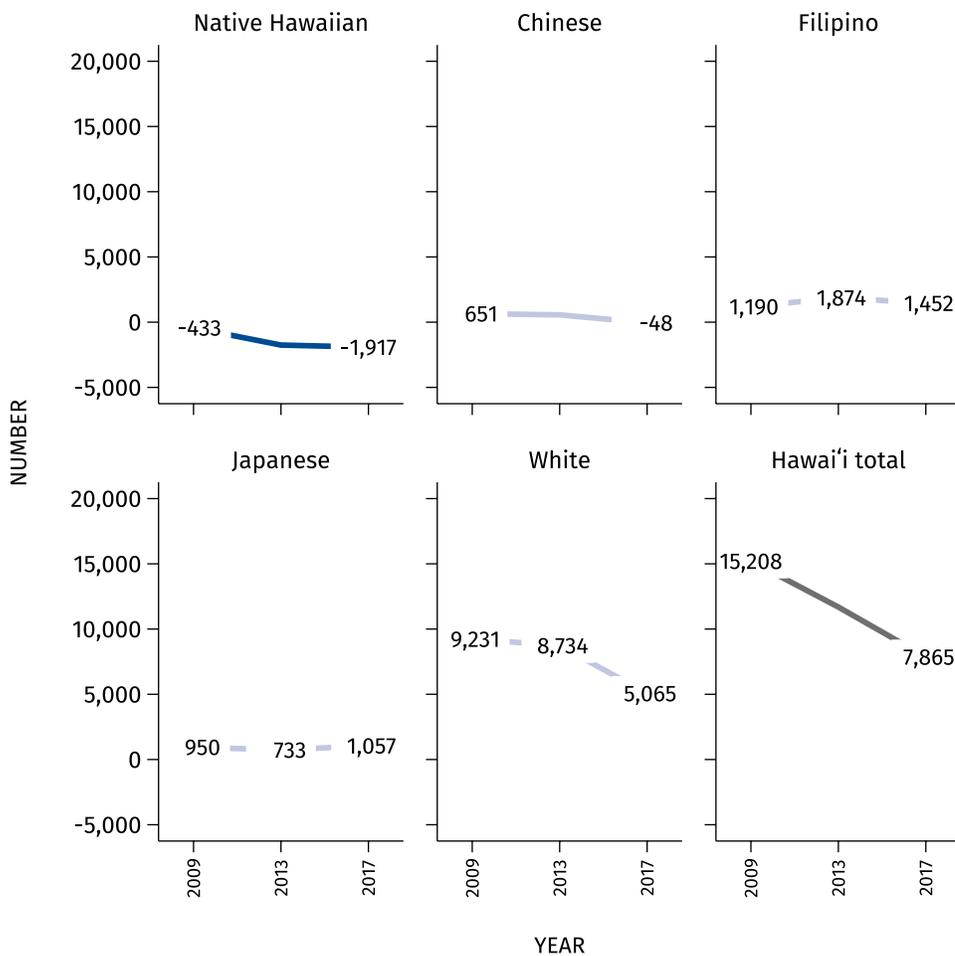
Recent research explores migration trends for Native Hawaiians and other major ethnicities, given the increasing numbers of people leaving Hawai'i (Kekahio, Kana'iaupuni, and Hong, forthcoming). For this study, data from the American Community Survey Public Use Microdata Sample were aggregated into three five-year time periods: 2005 to 2009, 2009 to 2013, and 2013 to 2017. The study calculated migration rates of domestic and international in-migrants and domestic out-migrants. In-migrants were defined as individuals who entered Hawai'i during the prior year, and out-migrants were individuals who left Hawai'i during the prior year. Disaggregated ethnicity data on international out-migrants were not available and were not included in the calculation.

When looking at annual migration rates, recent years show more people leaving Hawai'i than entering. However, when looking at the most recent five years together, more people entered than left. Whites comprise the largest volume of migration in and out of Hawai'i, accounting for more than 50 percent (35,000 individuals) of out-migrants and in-migrants. Whites also have the most variation between the number of people entering and leaving—a difference that narrows over time. Chinese, Filipino, and Japanese populations generally have more people entering Hawai'i than leaving (fig. 0.7). While examining migration rates among the civilian population only (i.e., excluding the military population), the reverse was found, meaning that more civilians are leaving than entering Hawai'i.

The study also finds that Native Hawaiians are the only major ethnicity in Hawai'i with a consistent negative net migration—that is, more individuals are consistently leaving Hawai'i than entering, across aggregated five-year time periods. The migration data suggest a loss of roughly two thousand Native Hawaiians per year in Hawai'i (fig. 0.7). In ten years, this results

in nearly twenty thousand more people leaving than entering. When excluding military and students who move for school, there are one thousand fewer Native Hawaiians each year in Hawai'i, amounting to a net loss of approximately ten thousand Native Hawaiians in ten years (not shown). Although these numbers are not huge, the cumulative out-migration of Native Hawaiians affects the entire lāhui. Most frequently, Kānaka Maoli report economic reasons as a key motivation to leave Hawai'i.

**FIGURE 0.7** Trends in net migration  
[number of persons, by ethnicity and year, Hawai'i; 2009, 2013, and 2017]



*Data source:* US Census Bureau, 2005–2009, 2009–2013, 2013–2017 American Community Survey Public Use Microdata Sample 5-Year Files.

**Note 1:** Net migration represents the number of persons moving to a place in the previous year, minus the number of persons moving away from that place in the previous year. These calculations account for domestic and international in-migrants and domestic out-migrants; disaggregated ethnicity data on international out-migrants were not available. Infants younger than one year old are excluded from the calculation.

**Note 2:** Years displayed represent the ending year in an aggregated five-year time period: 2005 to 2009, 2009 to 2013, and 2013 to 2017. Data labels are presented for the first and last points, the maximum and minimum points, and some inflection points where the trend changes.

**Note 3:** The designation “White” in this chart refers to non-Hispanic Whites, alone or in combination with other ethnicities, as defined by the American Community Survey.

- Among Hawai'i's total population, more individuals entered Hawai'i than left during each of the five-year time periods.
- Whites have the highest net migration for each of the five-year time periods.
- Native Hawaiians are the only major ethnic group to have more individuals leave Hawai'i than enter in each of the five-year time periods.

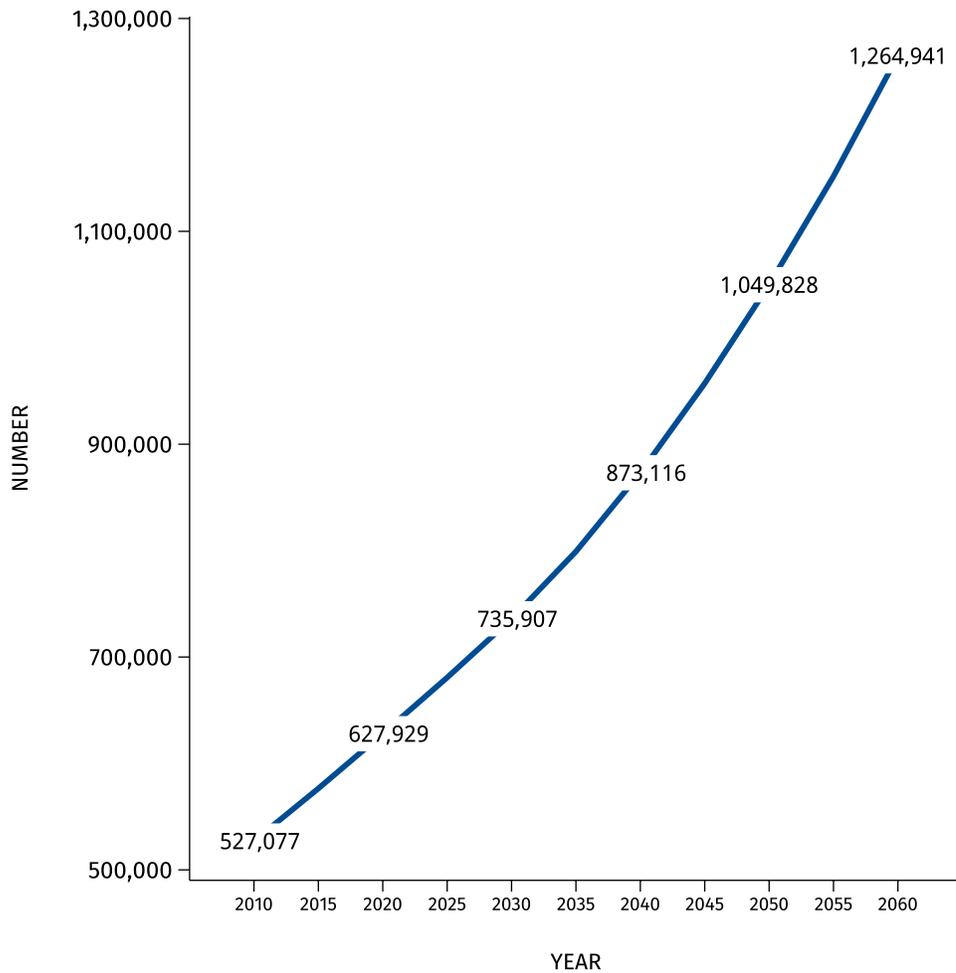
Native Hawaiians who leave Hawai'i tend to be younger, single, and slightly more educated but with lower earnings than those who stay or enter. Native Hawaiians who choose to stay in Hawai'i have a mean age of 33.4 years, compared with a mean age of 29.6 years among those coming and going in 2013–2017. Native Hawaiians who leave Hawai'i are relatively more likely to have never married (64 percent, compared with 44 percent of non-migrants and 54 percent of in-migrants). In terms of education, Native Hawaiian out-migrants have the highest proportion (24 percent) of individuals with a bachelor's degree or higher, followed by in-migrants (21 percent) and non-migrants (18 percent). This is consistent with what other research has described as a “brain drain” (Kekahio, Kana'iaupuni, and Hong, forthcoming; Dodani and LaPorte 2005).

## Population Projections

The population projections in this section are based on a model of stability and constancy, which assumes that current fertility, mortality, and migration rates will hold steady from 2010 to 2060. These projections serve as a baseline for understanding and predicting the growth of the Native Hawaiian population. Numerous factors—such as education, the economy, government policy, healthcare, and natural events—influence the growth and structure of a population but are not included in the statistical model.

Figure 0.8 estimates the total Native Hawaiian population across the United States in 2010, projected through 2060. Based on available data, the population of Native Hawaiians in the United States is estimated to exceed 1 million by 2050 and surpass 1.25 million by 2060.

**FIGURE 0.8** Projected number of Native Hawaiians in the United States  
[number of persons, United States, 2010 to 2060]

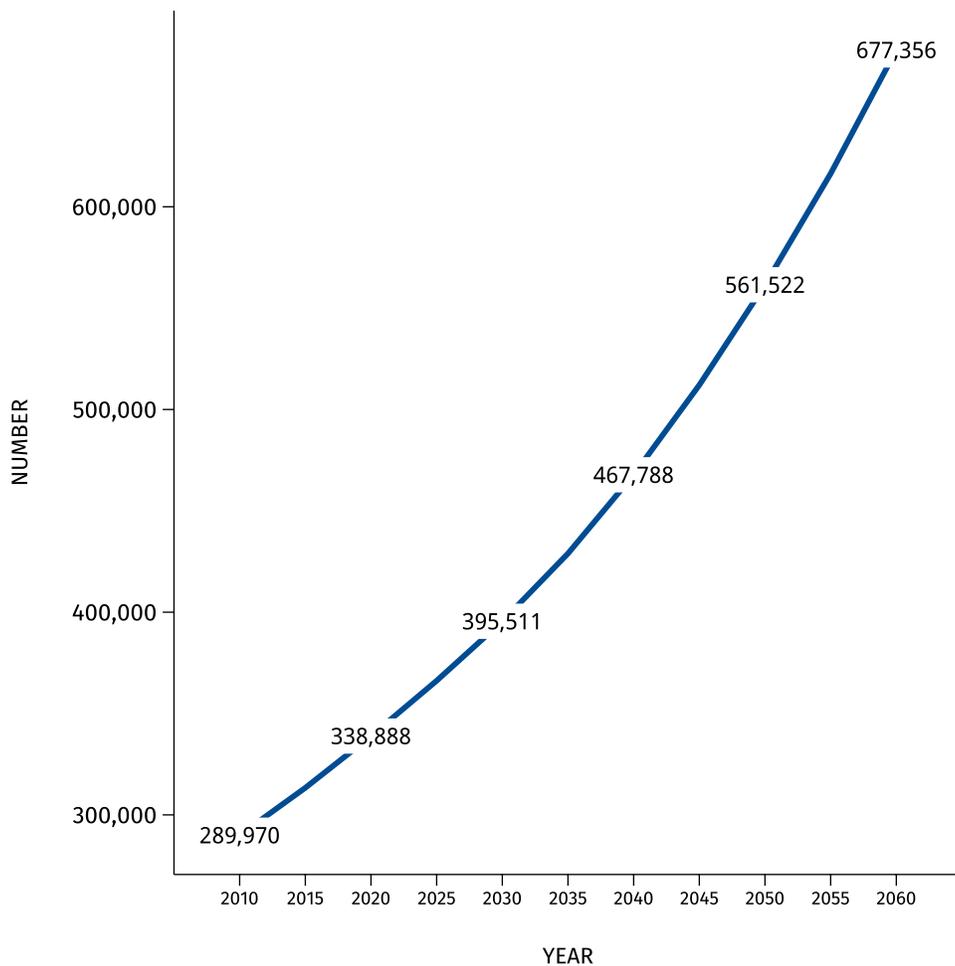


Data source: Hong 2012

- The Native Hawaiian population is projected to grow 2.4 times between 2010 and 2060, from about 530,000 to 1.2 million.
- Projections show around 630,000 Native Hawaiians in the United States in 2020.
- Over the next decade, the Native Hawaiian population is expected to grow by 108,000 people.

Within Hawai'i, the estimated population of Native Hawaiians for 2020 is 338,888. The Native Hawaiian population in Hawai'i is estimated to grow at an average rate of 1.71 percent annually and reach 677,356 by 2060 (fig. 0.9). These projections are in line with historical growth trends of Native Hawaiians in Hawai'i (not shown).

**FIGURE 0.9** Projected number of Native Hawaiians in Hawai'i  
 [number of persons, Hawai'i, 2010 to 2060]

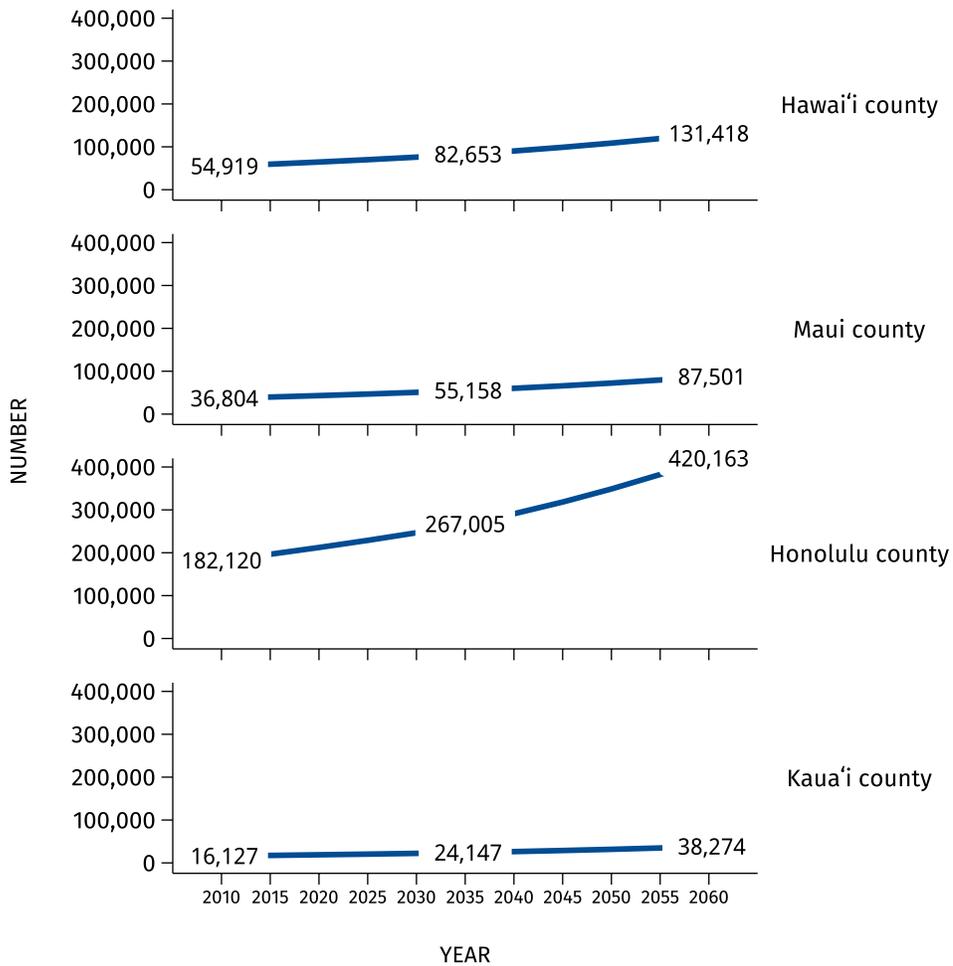


Data source: Hong 2012

- Within Hawai'i, the Native Hawaiian population is projected to grow about 2.3 times, increasing from around 290,000 to 680,000 between 2010 and 2060.
- Projections show nearly 340,000 Native Hawaiians residing in Hawai'i in 2020.
- From 2020 to 2030, the Native Hawaiian population is expected to grow by roughly 57,000 people.

Native Hawaiian population projections by county are provided in figure 0.10. Note that predictions for smaller geographic areas are often subject to greater uncertainty. Given current population levels, we expect to see growth in all counties, with a steeper curve for Honolulu and a flatter curve for Kaua'i. Preparing for more Native Hawaiians at the county level will be key to ensuring future needs are met.

**FIGURE 0.10** Projected number of Native Hawaiians in Hawai'i, by county  
[number of persons, Hawai'i, 2010 to 2060]



Data source: Hong 2012

- The number of Native Hawaiians in Honolulu county is projected to increase by nearly 240,000 between 2010 and 2060.
- In 2035, Maui county will have as many Native Hawaiians as Hawai'i county had in 2010.
- It will take Kaua'i county until 2060 to surpass the number of Native Hawaiians that were in Maui county in 2010.

Table 0.2 presents the expected age distribution of the Native Hawaiian population between 2010 and 2060. The large population of young Kānaka Maoli in 2010 will contribute to sizable growth in future decades. As a result, it is estimated that Native Hawaiian kūpuna (elders) will be a large population by 2060, potentially requiring special needs.

**TABLE 0.2** Projected number of Native Hawaiians in Hawai'i, by age  
[2010 to 2060]

Age group	2010	2015	2020	2025	2030	2035	2040	2045	2050	2055	2060
Total	289,970	313,362	338,888	366,180	395,511	428,962	467,788	512,064	561,522	616,361	677,356
0 to 4 yrs	30,727	38,965	42,103	44,930	48,107	53,404	59,998	66,672	73,082	79,830	87,768
5 to 9 yrs	28,829	30,571	38,760	41,883	44,696	47,854	53,120	59,680	66,320	72,698	79,410
10 to 14 yrs	26,801	28,809	30,550	38,734	41,855	44,666	47,822	53,084	59,640	66,275	72,649
15 to 19 yrs	27,233	26,705	28,706	30,440	38,596	41,705	44,506	47,651	52,896	59,428	66,040
20 to 24 yrs	22,450	26,931	26,408	28,387	30,101	38,169	41,243	44,013	47,124	52,311	58,771
25 to 29 yrs	21,538	22,133	26,551	26,036	27,987	29,676	37,632	40,663	43,394	46,461	51,576
30 to 34 yrs	18,982	21,224	21,810	26,163	25,656	27,578	29,242	37,084	40,071	42,762	45,785
35 to 39 yrs	17,235	18,609	20,805	21,378	25,646	25,148	27,033	28,663	36,353	39,281	41,918
40 to 44 yrs	17,175	16,736	18,077	20,206	20,763	24,909	24,424	26,254	27,835	35,310	38,152
45 to 49 yrs	17,971	16,336	15,912	17,199	19,216	19,747	23,691	23,227	24,967	26,468	33,585
50 to 54 yrs	16,058	16,661	15,149	14,749	15,955	17,818	18,310	21,968	21,536	23,150	24,537
55 to 59 yrs	13,484	14,530	15,078	13,713	13,345	14,445	16,125	16,569	19,880	19,490	20,948
60 to 64 yrs	10,368	11,869	12,790	13,272	12,074	11,741	12,727	14,197	14,588	17,505	17,157
65 to 69 yrs	7,958	8,662	9,923	10,695	11,099	10,101	9,816	10,652	11,874	12,199	14,639
70 to 74 yrs	5,158	6,422	6,988	8,011	8,637	8,966	8,163	7,927	8,611	9,593	9,854
75 to 79 yrs	3,750	3,918	4,879	5,302	6,085	6,561	6,809	6,206	6,014	6,556	7,289
80 yrs and older	4,253	4,282	4,399	5,083	5,695	6,474	7,127	7,554	7,336	7,045	7,279

Data source: Hong 2012

An expanding Kanaka Maoli population and diaspora offer new challenges and opportunities for our lāhui to balance ancestral connections with diverse, lived experiences. A growing Native Hawaiian population will also require infrastructure and support systems to ensure the needs of our families are met, today and into the future. Specifically, population projections highlight the need to plan for larger numbers of our very young keiki and our kūpuna.

Some suggest that Hawai'i's overall population may be in a cycle of decline, potentially leading to slower economic growth, a shrinking tax base, and fewer state-sponsored social supports. Such shifts may be compounded by migration trends and prolonged health and financial impacts of the COVID-19 pandemic.

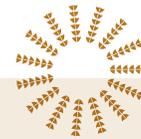
The next section summarizes several high-profile innovations that translate into critical gains across our lāhui. The examples, though not exhaustive, point to areas of vibrancy in our communities that may not be evident in conventional data. These bright spots signify the enduring value of 'Ōiwi culture and knowledge for our people, for Hawai'i, and for the world.

## ALOHA 'ĀINA AND COLLECTIVE EFFICACY

'Āina is land, or that which feeds us, suggesting a permanent and nourishing connection between humans and the earth. We are physically, spiritually, intellectually, and emotionally fed by 'āina. The concept of 'āina is found in the way we describe ourselves as Kānaka Maoli: kama'āina, kua'āina, hoa'āina, and kanu o ka 'āina, all of which refer to Natives of the land. 'Āina is considered our one hānau, our birthplace, as well as kulāiwi, our homeland where the bones of our ancestors reside. 'Āina is central to Kanaka well-being because it informs how we engage with the natural world and grounds us in 'ohana, kaiāulu, and the lāhui.

The generative connection between 'āina and people is best embodied by the practice of aloha 'āina. Aloha 'āina was embraced throughout our history to safeguard and restore the natural and social systems of Hawai'i and, by extension, the well-being of Kānaka Maoli. Goodyear-Ka'ōpua argues, "Aloha 'āina expresses an unswerving dedication to the health of the natural world and a staunch commitment to political autonomy, as both are integral to a healthy existence. Although it is often imperfectly translated to 'love for the land' and 'patriotism,' the aloha part of this phrase is an active verb, a practice rather than merely a feeling or belief" (quoted in Porter and Cristobal 2018, 201).

We continue to see inspiring examples of aloha 'āina across our communities. In 2015, Paepae o He'ēia, a community-based nonprofit, gathered thousands of volunteers to close a major puka (hole) in an eight-hundred-year-old kuapā (fishpond wall). This milestone was made possible by the vision and dedication of 'Ōiwi leaders who worked tirelessly for more than a decade to restore the loko í'a (fishpond) (Fox 2016). Paepae o He'ēia is not alone in its demonstration of aloha 'āina. From Hāena (Kaua'i) to Miloli'i (Hawai'i Island), community groups and leaders 'auamo kuleana (shoulder the responsibility) to care for cherished resources and wahi pana (storied places) to teach, nourish, and sustain our communities.



Groundswell activism is gathering energy among Native Hawaiians and is mobilizing multiple generations, islands, and communities.

Community-driven, ‘āina-based efforts restore ecological vibrancy, educate our keiki, and rebuild healthier and more sustainable food systems. In addition, new research is documenting how these efforts improve individual health and well-being. MA’O Organic Farms, a social enterprise in Wai‘anae, O‘ahu, runs a Youth Leadership Training program that offers a college internship and work experience to youth ages sixteen to twenty-four. With support from HMSA Foundation and Kamehameha Schools, a study asked, can ‘āina-based programs, without an explicit health focus, improve clinical outcomes? Results show they can. Researchers found that interns from the Youth Leadership Training program experienced a 60 percent reduced risk for diabetes and also contributed to second-order positive effects on their network of friends and families (Avendaño 2019; Juarez and Maunakea 2017).

Aloha ‘āina allows us to achieve community well-being by aligning our individual contributions to shared cultural values. It is similar to what scholars have termed collective efficacy—the capacity of the community to respond to problems and collectively intervene for the community’s betterment (Sampson, Raudenbush, and Earls 1997; Bandura 2000). Collective efficacy can be a form of self-governance where community members, operating under shared norms and expectations, take action to correct injustices, solve problems and shape the future. Three powerful examples of aloha ‘āina and collective efficacy are found in the Kū Kia‘i Mauna Kea movement, the Mālama Honua Worldwide Voyage, and recent advancements in Hawaiian culture-based education.

## Kū Kia‘i Mauna Kea

A call to protect the sacred mountain Mauna Kea went worldwide in the summer of 2019. It was issued in response to the proposed construction of a Thirty-Meter Telescope (TMT) that would join dozens of other existing telescopes on the slopes of Mauna Kea. The call resulted in local, national, and global demonstrations. It pulled together thousands of protestors across Ka Pae ‘Āina Hawai‘i (the Hawaiian Islands), many of whom traveled to Mauna Kea to serve as kia‘i (protectors) and to voice their disapproval of the project via slogans such as “‘A‘ole TMT!” and “We are Mauna Kea!”

Early in the movement, leaders made a peaceful, unrelenting adherence to kapu aloha. As an Indigenous philosophy, kapu aloha invokes the sacredness of akua and ‘āina and challenges us to act in nonviolent, inclusive and healthy ways while also remaining firm and vigilant in protest (ho‘omanawanui et al. 2019). As protectors congregated on the mauna, they formed a small community with bathrooms, janitors, cooks, and road guards. They shared hot food, water, snacks, healthcare, sunscreen, and rain protection with each other and organized protocols, training, and even created a school (Van Dyke 2019).

A galvanizing event occurred in July 2019, when police arrested thirty-three kūpuna who had chained themselves to the road to prevent construction equipment from reaching the mauna (Pu‘uhonua o Pu‘uhuluhulu 2019). Displayed across TV and social media, the arrests only unified the movement and resulted in greater public awareness and support for the protectors.

Still, opponents advocated for the telescope, citing economic and educational benefits for Hawai'i. There are Kānaka Maoli on both sides of this issue. As of this writing, the TMT project is still on hold, both sides remain at an impasse, and COVID-19 has restricted gatherings.

The Kū Kia'i Mauna Kea movement catalyzed collective efficacy that is also seen in other areas across Hawai'i. For example, the Hūnānāniho movement in Waimānalo, O'ahu, successfully halted county development plans for a beachside sanctuary known as Sherwoods. In Kahuku, O'ahu, a community-led intervention against a wind farm resulted in hundreds of demonstrators being arrested by state officials. Such community activism resonates with extant research, which shows that neighborhoods that are able to mobilize their voices and resources also demonstrate higher levels of collective efficacy and are better able to supplement family functions like caregiving and child supervision, have better health (Browning and Cagney 2002), reduced obesity rates and lower health disparities (Butel et al. 2019), report higher perceived trust and reciprocity (Collins, Neal, and Neal 2014), and are better able to control violence and aggressive behavior (Sampson, Raudenbush, and Earls 1997).

## Mālama Honua

The Mālama Honua Worldwide Voyage exemplifies aloha 'āina and collective efficacy on a global scale. Living on a remote island chain teaches us that our natural world is a gift with limits, therefore we must carefully steward our 'āina and resources to survive. The voyage engaged all of Island Earth, spanning sixty-thousand nautical miles and four years, and bridging traditional and new technologies to live sustainably, while sharing, learning, and creating global relationships (Kana'iaupuni 2019). As the canoe sailed, the crew lived and spread aloha 'āina. Research shows that overall well-being of crewmembers also improved on the voyage, suggesting the health effects of living our cultural practices (Mau et al., forthcoming).

The traditional Hawaiian sailing canoe, Hōkūle'a, began its journey to circumnavigate the globe in 2013. The entire voyage was performed without modern navigational tools, guided only by Indigenous knowledge of celestial navigation, using stars, sun, winds, swells, and other natural elements. Mālama Honua embodies the power of Indigenous collective efficacy in far-reaching ways. First, it is a tremendous scientific feat. Second, it illustrates the value of diverse forms of Indigenous knowledge that build compassion for the earth and all of its living and nonliving forms. Third, it radically challenges conventional paradigms and behavior in education. It does so by connecting people—Native Hawaiian and non-Hawaiians—with the mana that inspires deep relationships, understanding, and transformation. In the wake of the voyage, a global virtual wa'a (canoe) was formed (Pulver and Suthers 2019). Hōkūle'a and its sister vessel, Hikianalia, stopped at more than 150 ports around the world, where they were enthusiastically welcomed by onlookers. The Worldwide Voyage shared stories of hope and inspiration about how communities around the world are improving the planet's health. Initial contact in each country was with First Peoples, which

validated Indigenous sources of wisdom and science. The voyage purposefully blended Native knowledge systems and Western science to take full advantage of ancient and modern technologies and to promote learning.

Mālama Honua is a contemporary story of Kanaka education and activism. It highlights the value of blending Indigenous and modern perspectives to solve our most pressing global challenges (e.g., climate crisis, economic inequity, and social injustice). The voyage invited people across the world on a journey to learn and care for Island Earth—but the genesis of this story was birthed through a commitment to aloha ‘āina. We say, “He wa‘a he moku, he moku he wa‘a—the canoe is our island, and our island is the canoe.” And just as a voyage at sea requires conserving limited resources, a similar approach is needed to sustain life on our precious islands. The Worldwide Voyage is a reminder that our planet has finite resources and that aloha ‘āina can be taught and shared with the entire world.

Like Mauna Kea, Mālama Honua garnered international attention and fostered greater engagement and pride among Kānaka Maoli. When Hōkūle‘a returned to Hawai‘i in 2017, fifty thousand people gathered at Ala Moana Regional Park on O‘ahu to celebrate the historic voyage. The event showcased diversity and depth in our ranks as ‘ohana wa‘a (canoe families), hula hālau (hula groups), alii trusts, Hawaiian civic clubs, Hawaiian-focused charter schools, kula kaiapuni (immersion schools), ‘āina-based organizations, and ‘ohana participated in cultural protocol and exchanges. The voyage sparked collective efficacy by renewing existing partnerships and creating new pilina around local and global sustainability. We rediscovered that the art and science of wayfinding are the same skills, mindsets, and values needed to create a healthier future for the earth.

## Hawaiian Culture-Based Education

Aloha ‘āina and collective efficacy are learned behaviors. They emerge from the transfer of values and ‘ike (knowledge) between people. In recent decades, Hawaiian culture-based education has expanded throughout Hawai‘i’s education system and is forging innovative community–school partnerships. Hawaiian culture-based education leaders and advocates can also be found in the Mauna Kea and Mālama Honua movements. That is because aloha ‘āina and Hawaiian culture-based education reinforce one another and give rise to expressions of collective efficacy.

Education plays a major role in the socialization and development of future generations. While learning can happen anywhere, schooling is meant to prepare students to be successful contributors to society. At the same time, education does not occur in a vacuum; schools operate by (and perpetuate) the cultural values of the dominant society (Meşeci Giorgetti, Campbell, and Arslan 2017). The adoption of mainstream culture within schools may not be reflective of the ways minority and Indigenous students see the world. As such, scholars recognize the potential harm done to students when discontinuities exist between school and home cultures (Ogbu 1982; Swisher and Deyhle 1992; Torres 2017).



The Native Hawaiian population is growing and expanding its ability to pursue collective identity and self-determination.

Hawaiian culture-based education refers to the “grounding of instruction and student learning in the values, norms, knowledge, beliefs, practices, experiences, places, and language that are the foundation of [Native Hawaiian] culture” (Kana’iaupuni and Kawai’ae’a 2008, 71). Hawaiian culture-based education is part of an Indigenous education movement rooted in a broader historical and political struggle between Native peoples and “settler” governments (Demmert and Towner 2003; Lipka 2002; Brayboy et al. 2015). Putting Native Hawaiian values, practices, and perspectives at the center of education not only mitigates cultural discontinuities encountered by students, it can also offer competitive advantages (Kana’iaupuni, Ledward, and Malone 2017).

Research on Hawaiian culture-based education has surged in recent years, including studies by school type (Schonleber 2011; Mishina 2017), subject area (Richards 2013; Kukahiko 2019), community settings (Ledward 2013), and from teacher and ‘ohana perspectives (Ka’anehe 2020; Kawai’ae’a, Housman, and Alencastre 2007). When it comes to student outcomes, studies show Hawaiian culture-based education to be positively associated with cultural identity and school engagement (Kana’iaupuni, Ledward, and Jensen 2010) as well as community mindedness and college aspirations (Kana’iaupuni, Ledward, and Malone 2017). Exciting work is also underway regarding the development and application of culturally relevant assessments among public schools (Espania et al. 2019; Taira and Sang 2019; Sang and Worchel 2017).

In addition to Hawaiian culture-based education, Hawaiian-focused networks like Kanaeokana, ‘Aha Kauleo, and others are increasingly being consulted for ‘Ōiwi perspectives on history, facts, and public relations. Kua ‘Āina Ulu ‘Auamo, a backbone organization, brings networks together to synergize community-based solutions related to ‘āina stewardship. Aloha ‘āina-inspired examples, such as these, contribute to collective efficacy by strengthening social capital and cohesion among the community. And, as the planet’s climate becomes increasingly unstable, the future of life on our Pacific Islands is likewise shifting, making the resurgence and application of aloha ‘āina, as witnessed in Mauna Kea, Mālama Honua, Hawaiian culture-based education, and many other areas, a vital sign of a thriving lāhui.

## LOOKING AHEAD

This introduction orients the reader to the kāhea (call) of our work. We began by sharing our purpose and stance as Kanaka Maoli authors. Next, we described our Pua Model of well-being and contextualized its five dimensions within Native Hawaiian history, language, and culture. Native Hawaiian population trends and projections were provided to better understand changes within our lāhui over time. Finally, we reviewed examples of aloha ʻāina and connected them to the concept of collective efficacy.

The main contents of *Ka Huakaʻi 2021* examine data and trends for Adults, Families, and Communities (Chapter 1), Early Childhood (Chapter 2), and School-Age Children (Chapter 3). While much of the data presented was collected by others, we attempt to reframe the findings within our historical context in accordance with Kanaka Maoli values and perspectives. Taking a strengths-based approach, we call out bright spots that celebrate progress—even as certain disparities persist. This choice is intentional and political; we take a stand to reclaim our knowledge systems, reinforce traditional practices and ways of being, and restore spaces that stimulate Kanaka Maoli vibrancy. Educating our keiki and our families as strongholds in our communities is critical to this undertaking.

As of this writing, the coronavirus (COVID-19) is a global health and economic crisis, causing widespread disruption. In Hawaiʻi, the delivery of education has been severely impacted via school closures with rapid shifts to distance, blended, and hybrid learning. Research is underway to understand the implications of this disruption for Kanaka Maoli learners and others (Kukahiko et al. 2020). Native Hawaiian and Pacific Islander populations appear to be more negatively impacted by COVID-19, compared with other ethnic groups, in part because of inequities in social determinants of health that existed prior to the health crisis (Kaholokula, Samoa et al. 2020). Although data presented here were mostly gathered prior to the pandemic, we include insights within each chapter about potential future impacts of COVID-19 on Native Hawaiian education and well-being.

He ipu kāʻeo, nou. This full calabash is now yours.





THIS IS WHAT WE ARE CONFRONTED BY....

It is something that has to do with what our kids are going to inherit. This thing is our na'au, I no can explain.... The only thing that motivates us is that we want to teach the rest of the world Aloha 'Āina at whatever expense it would be, because we got to do it.

—**GEORGE HELM**, INTERVIEW WITH EDITH KANAKA'OLE AND ELEANOR WILLIAMSON, JULY 13, 1976



1

# Adults, Families, and Communities

## INTRODUCTION

The early decades of the twenty-first century have presented new challenges along with renewed resilience and hope for our Native Hawaiian ‘ohana (family). Among today’s mākuā (adults, parents) are four generations that have guided the lāhui (nation, people) through continuous and tremendous change, reflective of a strong and determined people. Each generation is a product of different realities and brings different life experiences and gifts to our communities.

The “silent generation”—which witnessed Hawai‘i’s transition into a territorial government and then US statehood—was the last generation to live at a time when (Native speakers) were abundant. These mākuā, and their children, the baby boomers born between 1946 and 1964, were faced with the marginalization of our Native language and traditional practices (Wilson and Kamanā 2006) as Hawai‘i became part of a larger American society.

Growing up, many baby boomers were raised in rural areas with strong, extended ‘ohana and community networks. A heightened sense of community and desire for social and environmental justice propelled this generation to lead the Hawaiian Renaissance and aloha ‘āina (love for the land) movements in the 1970s, which in turn led to revitalizing and restoring ‘ōlelo Hawai‘i (Hawaiian language), lo‘i (irrigated terraces for taro), wa‘a (canoes), loko i‘a (fishponds), hula kahiko (traditional hula), and other cultural practices (Laenui 2019). These cultural kahua (foundations) have allowed today’s younger generations greater access to ‘ike Hawai‘i (Hawaiian knowledge) and prompted a resurgence in ‘ōlelo Hawai‘i and traditional practices.

Those born after 1964 have been raised in increasingly diverse settings. Major social and technological changes and rapidly shifting networks and influences characterize Generation X (born between 1965 and 1980), Generation Y, a.k.a. millennials (born between 1981 and 1996), and Generation Z (born after 1997). Compared with previous times, today’s lifestyles

are more urban, ethnically diverse, gentrified, technologically connected, and “blended,” playing out in a globalized social milieu. The transition from Gen X to Y saw the world’s first digital natives grow up and enter the workplace, bringing perspectives and tech savvy informed by a lifetime of internet access. Generation Z is often dubbed “social justice warriors,” as evidenced by participation in community mobilizations throughout Hawai‘i today. We also see signs of younger generations leaning on their elder generations for guidance and inspiration (Fujikane 2019)—a critical element to ensure both transmission of knowledge, strengthening of intergenerational pilina (bonds), and necessary support systems in times of change (Saffery 2019). This dynamic must be reinforced as a necessary ingredient for lāhui resiliency in light of persistent and unacceptable issues facing our families.

Though the strong social fabric of Native Hawaiian ‘ohana and extended kauhale (community, neighborhood) remains intact, it has been stretched thin by multiple challenges, such as growing wealth divides in one of the world’s most expensive places to own a home. Native Hawaiians are experiencing increasing financial and food insecurity, limited access to traditional practices and foods, limited ‘ohana time because of the need to work multiple jobs, changing community demographics, and disproportionately high rates of poor health, incarceration, and drug and alcohol abuse. These factors create tensions in informal systems of support for ‘ohana and kauhale, such as child-rearing and shared parenting, and contribute to a host of intergenerationally transmitted negative outcomes that have proven difficult to reverse.

Broader demographic trends also affect today’s Native Hawaiian families in other ways. For example, compared with previous generations, millennials wait longer to marry and have children later (Kamehameha Schools 2019). Millennials also face increasingly tenuous prospects for homeownership and earnings, with some becoming economic refugees driven to leave Hawai‘i in search of a better economic future on the US continent.

Given recent trends, it is not unforeseeable that more than half of the Native Hawaiian population may be living outside Hawai‘i by 2030. The effect of out-migration on our Native Hawaiian ‘ohana has created a diaspora of families and communities living in distant places separated from each other and our ‘āina (Vaughn 2019). By better understanding the strengths and challenges presented in the following sections, we can help Native Hawaiian mākuā—both in present and future generations—to achieve greater well-being, allowing us to thrive as Kānaka Maoli (Native, Indigenous people) in our homeland and beyond.

Any discussion of the well-being of adults, families, and communities in Hawai‘i must take into account the historical trauma and dispossession of Native Hawaiians that manifests in a range of negative socioeconomic, cognitive, and emotional outcomes. For example, although the traditional diet and working lifestyle of Native Hawaiians are known to be healthy by most standards, the negative health indicators among contemporary Native Hawaiians, as a whole, can be traced to the severance of traditional practices for much of our population. This manifests in ongoing health inequities by income and educational attainment, where those with less money and education have fewer resources to support

healthy lifestyles. At the time of this writing, the COVID-19 pandemic appears to be disproportionately affecting Native peoples and people of color, potentially amplifying the inequities that are already present. Recent data also show that increases in life expectancy have plateaued among Native Hawaiians, unlike other ethnic groups in Hawai'i who tend to live longer lives.

Still, we are seeing bright spots and progress among Native Hawaiians. For example, in higher education, more Kānaka Maoli are in positions of greater influence at the University of Hawai'i than in previous times. Our findings show that the proportion of tenured faculty who are Native Hawaiian has increased from 6 to 10 percent in recent years. As of 2020, two of ten chancellors in the public university system are Native Hawaiian, as are three of the twelve members of the UH board of regents. Recent years have also seen the UH system prioritizing being a leader in Hawaiian and Indigenous education.<sup>1</sup> Perhaps as a result, we find enrollment among Native Hawaiians in the UH system increased by 6 percentage points between 2008 and 2019. This mirrors trends in overall Native Hawaiian college enrollment (not exclusive to the UH system), contrasting with the national decline in college enrollment since the 2008 recession. Overall college and graduate degree attainment among Native Hawaiians—while still lower than that of most other ethnicities, also increased between 2008 and 2017.

Educational attainment, in this context, is closely connected to income, which in turn can impact financial stability and a person's ability to live comfortably and provide for their 'ohana. Together with changes needed to shift social and institutional structures to be reflective and supportive of Native Hawaiians, further progress to address the continuum between education and career pathways is important to achieve equitable representation and overall socioeconomic stability of Native Hawaiians relative to the total population in Hawai'i.

In a broader context, Hawaiian culture-based education—including strengthened 'ōlelo Hawai'i—is gaining momentum in both public and private school systems. Initiatives based on Hawaiian values, language, culture, and history, such as Nā Hopena A'o (HĀ), are being prioritized in the Hawai'i Department of Education (DOE) and augmented by community-based organizations and strategic partners such as Kamehameha Schools. The development of tools to gauge the efficacy of Hawaiian culture-based education, and innovations in culturally relevant assessment, are being led by Hawaiian-focused charter schools and are gaining traction nationally.<sup>2</sup>

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<sup>1</sup>One example of structural changes at the University of Hawai'i is the creation of Hawai'i Papa o ke Ao, which has direct implications for teaching, learning, and assessment. This kind of institutional commitment may reveal inherent tensions within a system that perpetuates traditional Western models of higher education while at the same time educating system-changers and empowering disruptors, especially with regard to Native Hawaiian and Indigenous models of learning.

<sup>2</sup>For more on culturally relevant assessments and innovations, see this Education Week [blog](#).

Civic engagement—which is also an important educational outcome—is another area gathering energy among Native Hawaiians. Ongoing efforts to protect wahi pana (culturally significant sites) and to strengthen community resources such as Mauna Kea, Nā Wai 'Ehā, Lā'au Point, and others, are mobilizing multiple generations, islands, and communities. As media sources have pointed out, this groundswell in activism has increased Native Hawaiian political presence (Lovell 2020). Indeed, experiences with disasters like hurricanes and pandemics sometimes create new ways to work together. For example, as the COVID-19 pandemic exposed the fragility of our food supply, many local farmers and fishers reconnected with the community and found a foothold in community-supported agriculture (CSA) boxes and straight-to-consumer fish.

Leadership conversations and planning around sustainability, climate change, and conservation have become more urgent and have resulted in greater environmental/cultural regulation and protection in Hawai'i. A more sustained Indigenous voice, especially from younger generations, is influencing multiple segments of society, including how 'āina is (and is not) developed. There are also efforts to account for “blended returns” on 'āina as a way to generate social impact without subjugating Indigenous values and priorities to a financial bottom line. For example, Kamehameha Schools' management of Kawaihoa Ahupua'a counts natural/cultural resources and educational assets in addition to its more standard measure of income assets. In the broader community, the onset of COVID-19 has brought heightened awareness of the role of 'āina in collective well-being. This connection is articulated in the *'Āina Aloha Economic Futures Declaration* which, at the time of this writing, has gained momentum toward envisioning a stronger, more sustainable Hawai'i. 'Āina-based education continues to expand, as evidenced by a growing number of learning and innovation centers rooted in loko i'a (subsistence fishing), lo'i kalo (taro patch), māla 'ai (food garden), and native ecosystem restoration. In addition to locally based initiatives, we celebrate the global reach of Native Hawaiian expeditions such as the Mālama Honua Worldwide Voyage that took place from 2013 to 2017.

Such trends invite pressing questions: What does strong material and economic well-being look like for our lāhui in the twenty-first century? Where—and how—does Hawaiian self-sufficiency fit in this economic reality? Answers to these questions revolve around the concept of choice. Strong economic well-being means Native Hawaiians are able to choose a life path and attain a desired lifestyle and livelihood. Strong material well-being for Native Hawaiians means housing options that are part of supportive community and 'āina systems and fulfilling jobs within an economic landscape supportive of and led by Native Hawaiians. It means a sustainable Hawai'i, as manifested via mālama 'āina (caring for the land) and aloha 'āina values, including water, food, waste, and energy. For Native Hawaiians, strong economic well-being means that our youngest and oldest are cared for, and that our people can persist through adversity, including global threats such as the COVID-19 pandemic. It means an abundance of and access to native flora and fauna as part of a Hawaiian landscape of medicine, food, fiber, and other natural and cultural resources.

A rich backdrop of Native Hawaiian intellectual achievement provides a template for sustaining natural resources from generation to generation (Blaisdell 1993b; Kanahale 1986). Traditional practices and trades such as engineering, aquaculture, agriculture, horticulture, ocean navigation, water systems, and art represent a sophistication unmatched in Polynesia, and in some cases, the world (Abbot 1992; Finney 1992).

It follows that a key element of a strong Native Hawaiian economy is thriving ‘āina. Healthy and sustainable ‘āina and kai (oceans) are essential in providing food, water, recreation, cultural practices, and a healthy ecosystem. Traditionally, Hawai‘i’s land and ocean resources provided for all the needs of Native Hawaiian society. However, a dramatic shift in land use and stewardship practices over the past two hundred years has made Hawai‘i heavily dependent on external resources. In addition, more than a century of plantation agriculture, cattle, disease (avian and plant), invasive species, and unregulated harvesting has led to serious degradation of land and water resources, including native flora and fauna. This deterioration threatens our relationship with and dependence on the ‘āina and kai—which, for Native Hawaiians, are considered “extended ‘ohana”—and impedes our islands’ ability to thrive into the future.

From a contemporary economic perspective, a degraded ‘āina hurts key industries like sustainable tourism, agriculture, renewable energy and aquaculture, and jeopardizes our ability to weather current economic and environmental crises. Given the immense challenges of climate change and sea level rise, paired with the socioeconomic aftermath of COVID-19 (Hawai‘i Island Native Hawaiian Chamber of Commerce et al. 2020), ensuring resilient and healthy ‘āina is an increasingly critical concern.

These issues have prompted interventions and progress in the areas of renewable energy, ‘āina-based engagement for learners and community, and local food security. For example, the Aloha+ Challenge, a multisector voluntary partnership that was launched in 2014 by Hawai‘i Green Growth, represents a statewide commitment to achieve six interconnected sustainability targets by 2030: increase clean energy, increase local food production, improve natural resource management, reduce waste, establish smart and sustainable communities, and increase local green jobs and education. Each metric is tracked and displayed in an online dashboard and marks an important step forward in our collective efforts to ensure and sustain healthy ‘āina.

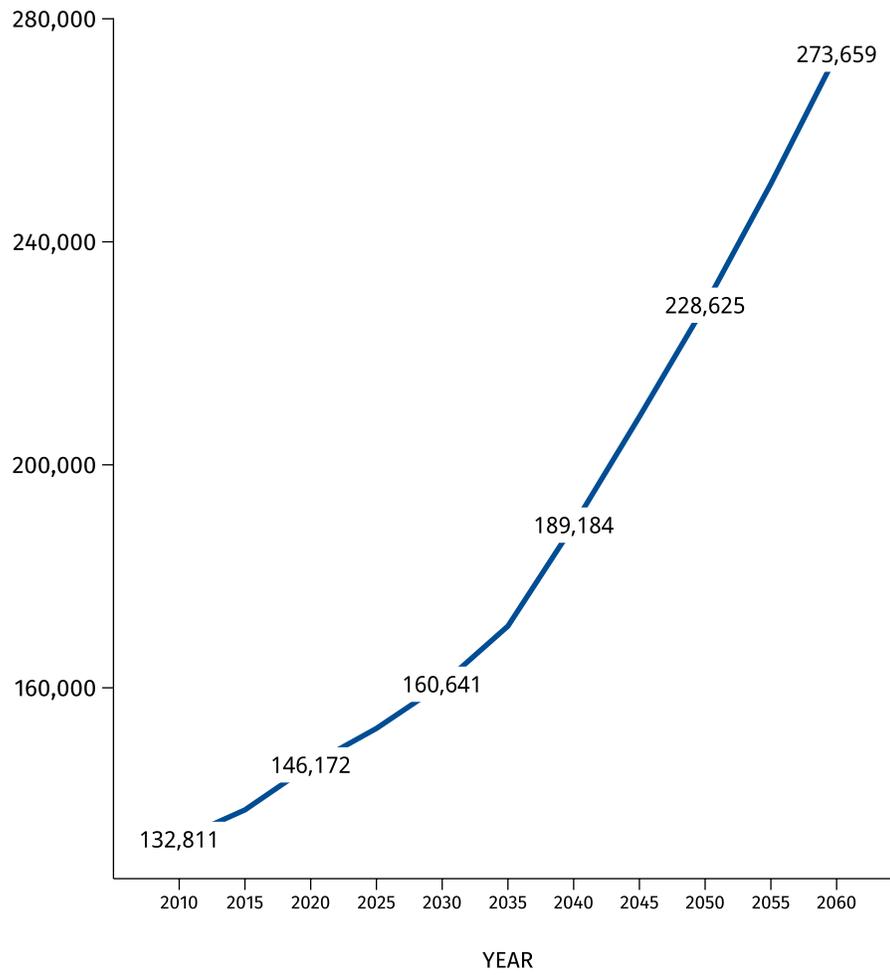
The well-being of Native Hawaiian adults, families, and communities is multifaceted and rich. It can and should be examined from many different angles, over multiple generations and contexts. We begin with population characteristics and estimates to establish baseline information about the growing population of Native Hawaiians. We then discuss the social, economic, physical, spiritual/emotional, and educational well-being of Native Hawaiian adults, families, and communities. This context sets the stage for understanding the well-being of young keiki and school-age children in subsequent chapters. Although the data we present here do not fully capture the richness of our community, these sources provide important clues in our collective quest to be informed and innovative on our journey to becoming a thriving lāhui.

## POPULATION—ADULTS, FAMILIES, AND COMMUNITIES

Over time, the Native Hawaiian population has demonstrated strength and resilience. Despite the loss of the vast majority of Native Hawaiians in the eighteenth and nineteenth centuries mainly due to foreign disease, the total number of Native Hawaiians is on the rise, both in Hawai'i and on the US continent. With a growing population that has expanding influence, Native Hawaiians are poised to pursue collective identity and self-determination in Ka Pae 'Āina Hawai'i (the Hawaiian Islands) and among other Indigenous peoples (Vaughn 2019).

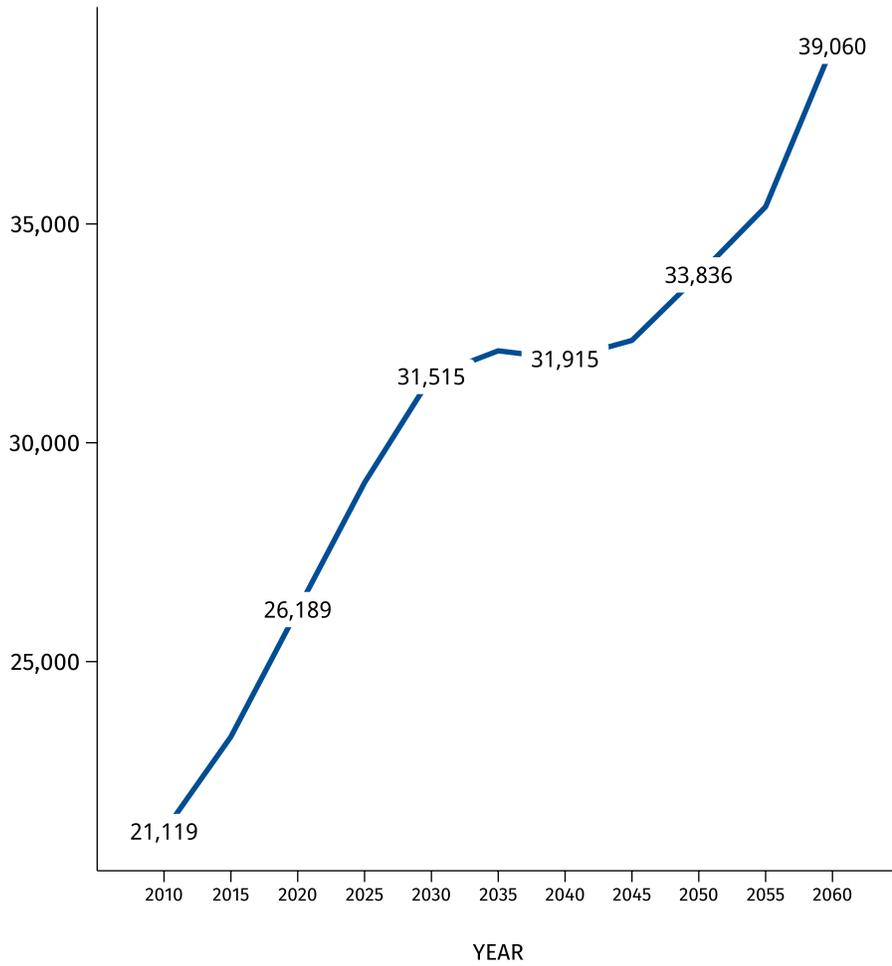
Looking within subgroups of the adult population, we expect steady growth over time among the working-age population (fig. 1.1). For the population of retirement-age kūpuna (grandparents, elders), short-term growth is expected over the next decade, followed by a plateau from 2030 to 2045 and sustained increases thereafter, reaching nearly forty thousand by 2060 (fig. 1.2). These projections are based on the most recent available census data from 2010 and may vary with more recent estimates based on population samples. Forthcoming Census 2020 data will provide actual population counts and be available to calculate updated population projections.

**FIGURE 1.1** Projected number of working-age Native Hawaiian adults in Hawai'i  
[Native Hawaiian adults ages 25–64, 2010 to 2060]



Data source: Hong 2012

**FIGURE 1.2** Projected number of retirement-age Native Hawaiian adults in Hawai'i  
[Native Hawaiian adults ages 65 years and older, 2010 to 2060]



Data source: Hong 2012

Who leaves and who stays in Ka Pae ‘Āina Hawai‘i? Using American Community Survey data from the US Census, we find that more people are staying in Hawai‘i, rather than leaving, and that the gap is narrowing over time (Kekahio, Kana‘iaupuni, and Hong, forthcoming).<sup>3</sup> Non-Hispanic Whites make up the largest volume of migration coming to Hawai‘i, comprising more than half of in-migrants, whereas Native Hawaiians are relatively less likely to return home when they leave, leading to a radical transformation of Hawai‘i’s ethnic composition. In recent times, Native Hawaiians are the only major ethnicity in Hawai‘i with consistent negative net migration, meaning that there are more Native Hawaiians leaving than entering Hawai‘i. On the whole, nearly two thousand Native Hawaiians leave Hawai‘i each year. Even when subtracting the number of those leaving for military and college, the annual out-migration of Native Hawaiians is about one thousand each year (Kekahio, Kana‘iaupuni, and Hong, forthcoming).

These trends in migration highlight a long-standing challenge, as increased numbers of Kānaka Maoli living away from the homeland can result in disconnection from ‘āina and ‘ohana—two key anchors of Native Hawaiian well-being. In addition, at the time of this writing, economic predictions suggest that thirty thousand residents, including Native Hawaiians, may leave Hawai‘i by 2022 due to the recession caused by COVID-19 (Finnerty 2020). Despite these patterns and predictions, new norms brought about by COVID-19 are demonstrating that digital platforms and creative approaches (e.g., virtual concerts, cultural activities, learning opportunities) can increase connectivity across islands and oceans, and anecdotal evidence suggests a desire to sustain this momentum. Recent scholarship also revisits the idea of disconnection, arguing that Indigenous identity and kuleana (privilege, responsibility) remain strong and connected, no matter where Native Hawaiians live (Vaughn 2019).

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<sup>3</sup> This migration pattern has been consistent from 2005 to 2017. Our calculations combine data into three successive five-year intervals to increase the reliability of estimates. This method allows separate analyses for migration of smaller ethnic groups or regions. Migrants who left for domestic locations are included in our calculations; however, those who left for international locations are not. See the [Introduction](#) to this volume for more information.

## SOCIAL WELL-BEING

Social well-being indicators—the nature of relationships within ‘ohana, communities, and the larger society—tell us much about how the lāhui is doing. The social and cultural connections that tie Native Hawaiians to one another form a network of emotional and practical support that sustains individuals in their life goals, educational and otherwise.

Social well-being begins at home. ‘Ohana, in Native Hawaiian scholarship, is “an inclusive Hawaiian concept of family that emphasizes mutual respect for all individuals making up the extended family and kinship network” (Young 2019, 16–17). The strength and cohesion of the family are the cornerstones of a healthy, resilient, and abundant community.

Research shows that the quality of family relationships and the stability of families have significant effects on the development and educational outcomes of children (Craigie, Brooks-Gunn, and Waldfogel 2012; Lee and McLanahan 2015). Data presented in this section and in later chapters show that conditions such as single-parent households, unemployment, financial insecurity, incarceration, and chronic illness are more prevalent within the Native Hawaiian community than they are among other major ethnicities in Hawai‘i. Taken together, the weight and breadth of these stressors can breed frustration, anxiety, and poor mental health outcomes that accompany disproportionately high rates of domestic abuse, substance abuse, arrest, and incarceration among Native Hawaiians (Office of Hawaiian Affairs et al. 2010). As is true for many Indigenous peoples, these conditions are rooted in the persistent effects of historical trauma and oppression. As a result, many of the existing well-being measures indicate that Native Hawaiians disproportionately experience social and economic hardships.

Despite these hardships, Native Hawaiians display remarkable resilience and continue to draw on traditional cultural values and the influence of kūpuna to strengthen the social systems that serve as a primary source of support, not only for families but also for communities. Social connections across a community are one of several key protective factors<sup>4</sup> that offer a buffer and increase kōkua (help, assistance) through strong relationships and collective efficacy. Contemporary examples of collective efficacy include the Kū Kia‘i Mauna Kea movement and the Mālama Honua Worldwide Voyage. These social markers, along with the COVID-19-inspired call to action captured in the *‘Āina Aloha Economic Futures Declaration*, illustrate how collective ideals and community mobilization can lead Hawai‘i toward a future rooted in mālama ‘āina, social equity, and justice.

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<sup>4</sup> Other protective factors include parental resilience, knowledge of parenting and child development, concrete supports for parents, and social and emotional competence of children (Center for the Study of Social Policy, n.d.).

Thus, for Native Hawaiian adults, families, and communities, cultural traditions—including our values, language, and rich history—continue to serve as buffers and wellsprings of well-being. In the following discussion of social well-being, we begin with an analysis of family characteristics. We then review strengths and challenges facing Native Hawaiians, both at the family and community level.

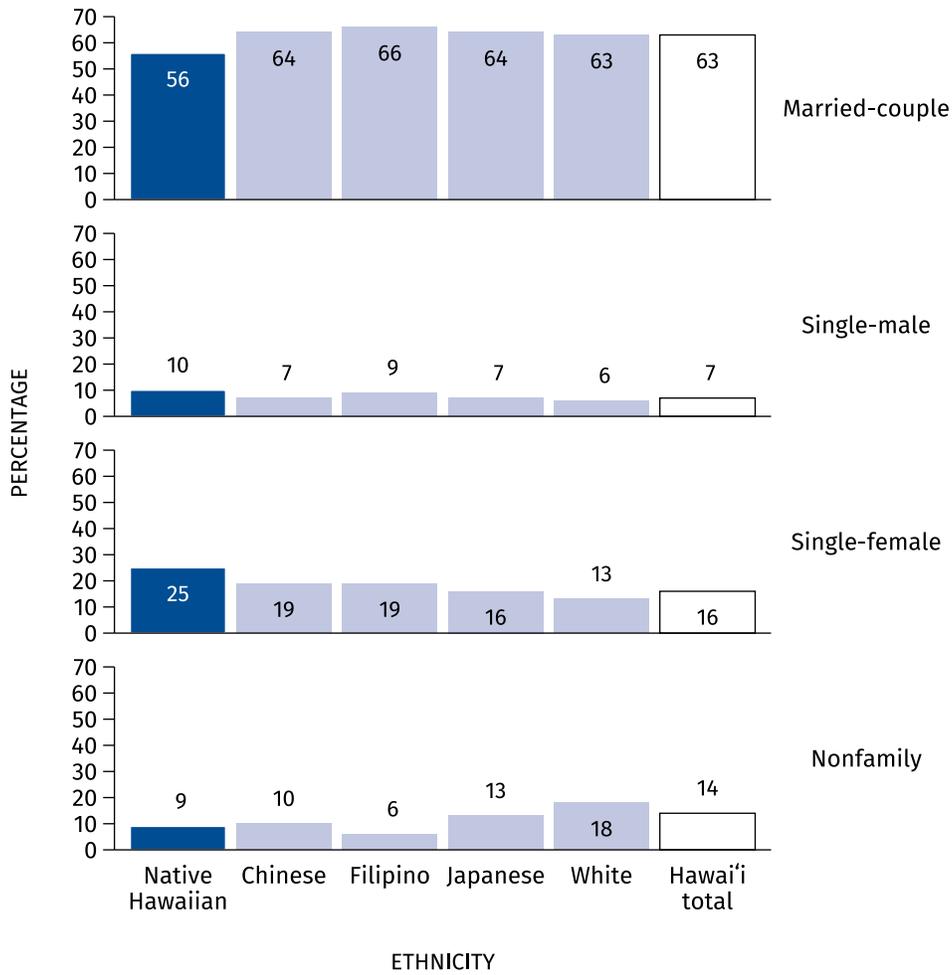
## Family Structure

Strong and healthy families provide positive support, wisdom, and a sense of unity and belonging. Here we examine available data on the structure of Native Hawaiian families, first among individuals, then from the perspective of the head of a household. We then discuss the size and density of households based on coresidency and the number of occupants per room.

In this publication, a family (or family unit) refers to two or more individuals living together related by birth, marriage, or adoption. A nonfamily refers to a person who either lives alone or shares a home with people to whom they are not related by marriage, birth, or adoption. For more information, see [“Methods, Data Sources, and Definitions”](#) at the end of this volume.

Among adults in Hawai‘i, Native Hawaiians are the second-most likely to live in either in a married-couple, single-male, or single-female family (fig. 1.3). Figure 1.4 shows that these rates have remained stable over the past decade.

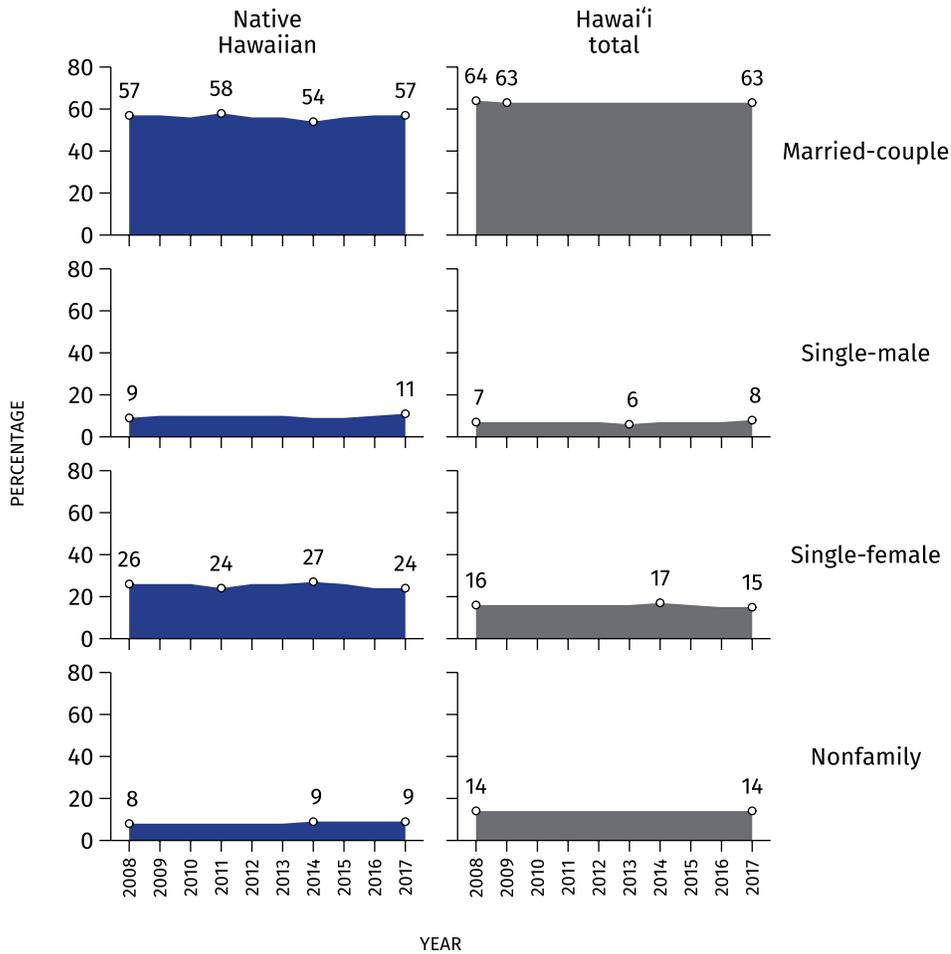
**FIGURE 1.3** Family types of individuals  
 [as a percentage of individuals, by ethnicity, Hawai'i, 2017]



Data source: US Census Bureau, American Community Survey, Public Use Microdata Sample 5-year file  
 Note 1: Nonfamily refers to a person who either lives alone or shares a home with people to whom they are not related by marriage, birth, or adoption.  
 Note 2: The designation "White" in this chart refers to non-Hispanic Whites, alone or in combination with other ethnicities, as defined by the American Community Survey.

- Among the major ethnicities in Hawai'i, Native Hawaiians are the second-most likely to live within a family—91 percent live in married-couple, single-male, or single-female families.
- Out of all Native Hawaiians who do not live in a nonfamily, more than one-third (38 percent) live in single-parent families (not shown).
- Of Hawai'i's major ethnicities, Whites are the least likely to live in a family, with 18 percent living in nonfamilies.

**FIGURE 1.4** Trends in family types of individuals  
 [as a percentage of individuals, by Native Hawaiian and Hawai'i total, 2008 to 2017]



Data source: US Census Bureau, American Community Survey, Public Use Microdata Sample 1-year files

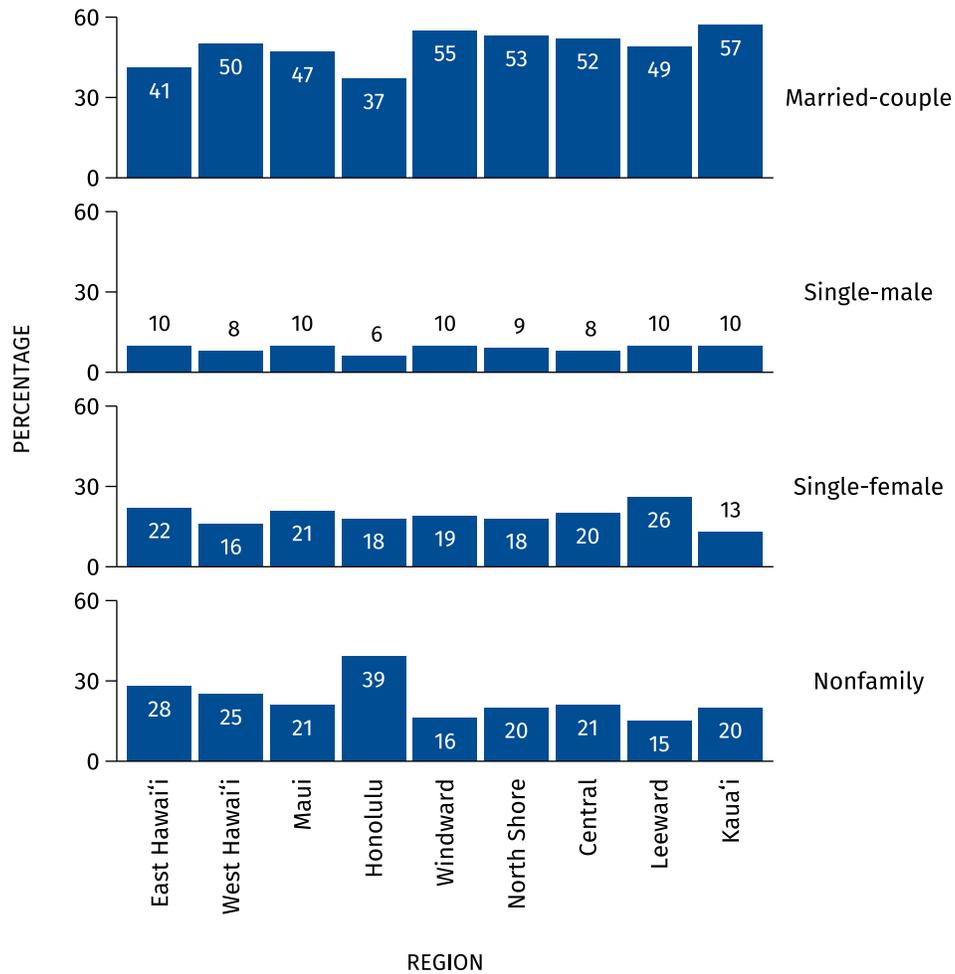
Note 1: Nonfamily refers to a person who either lives alone or shares a home with people to whom they are not related by marriage, birth, or adoption.

Note 2: Data labels are presented for the first and last points, the maximum and minimum points, and some inflection points where the trend changes.

- From 2008 to 2017, there has been relative stability in the percentages of Native Hawaiian individuals living in nonfamily, married-couple, single-female, and single-male families.

We now turn to an analysis of households based on the ethnicity of the head of the household. Figure 1.5 provides a distribution of Native Hawaiian household types by region. Across all regions except for Kaua'i, there was a decrease in the percentage of Native Hawaiian married-couple households between 2000 and 2015 (fig. 1.6).

**FIGURE 1.5** Regional distribution of household types among Native Hawaiian households  
 [as a percentage of households headed by a Native Hawaiian, by region, Hawai'i, 2015]

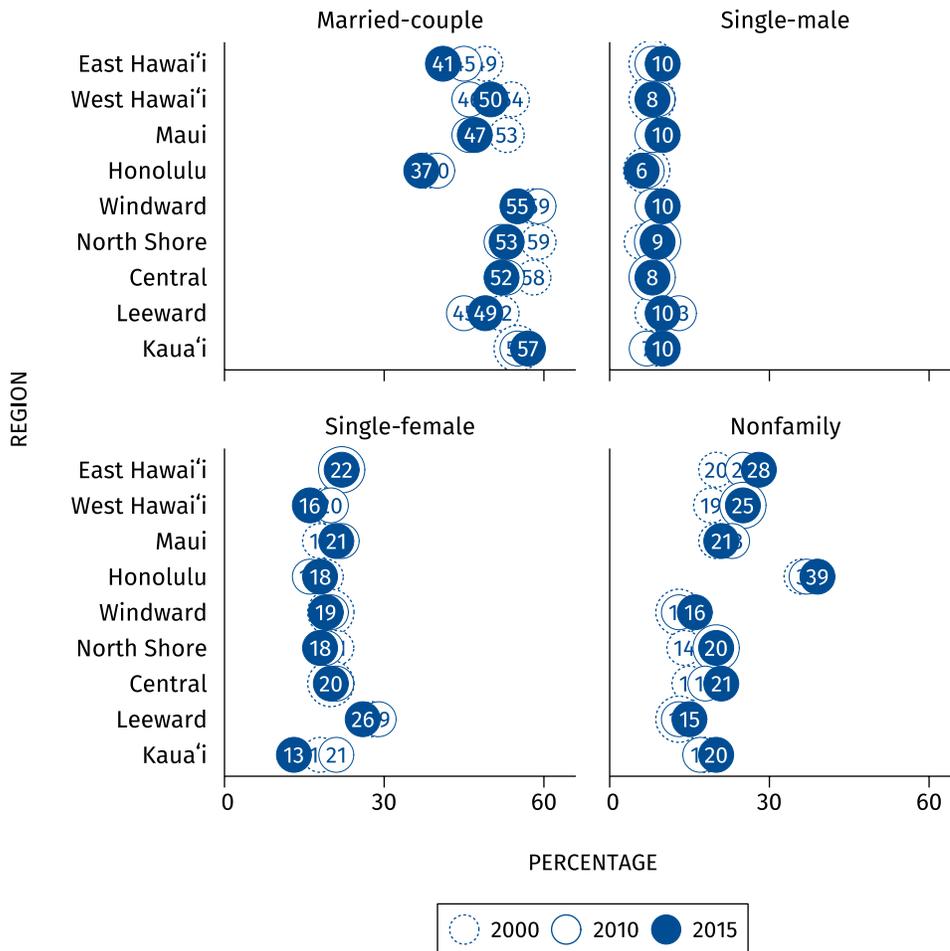


Data source: US Census Bureau, American Community Survey, Selected Population Tables

Note 1: Nonfamily refers to a person who either lives alone or shares a home with people to whom they are not related by marriage, birth, or adoption.

- Comparing regions, Leeward has the highest combined percentage (85 percent) of married-couple, single-male, and single-female households headed by a Native Hawaiian, followed by Windward (84 percent).
- Looking across regions, Leeward has the highest proportion of single-female households (26 percent) and the highest combined percentage of single-female and single-male households (36 percent).
- Among households headed by a Native Hawaiian, the highest percentage of nonfamily households is in the Honolulu region (39 percent).

**FIGURE 1.6** Trends in the regional distribution of household types among Native Hawaiian households [as a percentage of households headed by a Native Hawaiian, by region, Hawai'i; 2000, 2010, and 2015]



Data source: US Census Bureau, 2011–15 American Community Survey, Selected Population Tables; US Census Bureau, 2006–10 American Community Survey, Selected Population Tables; Census 2000, Summary File 4

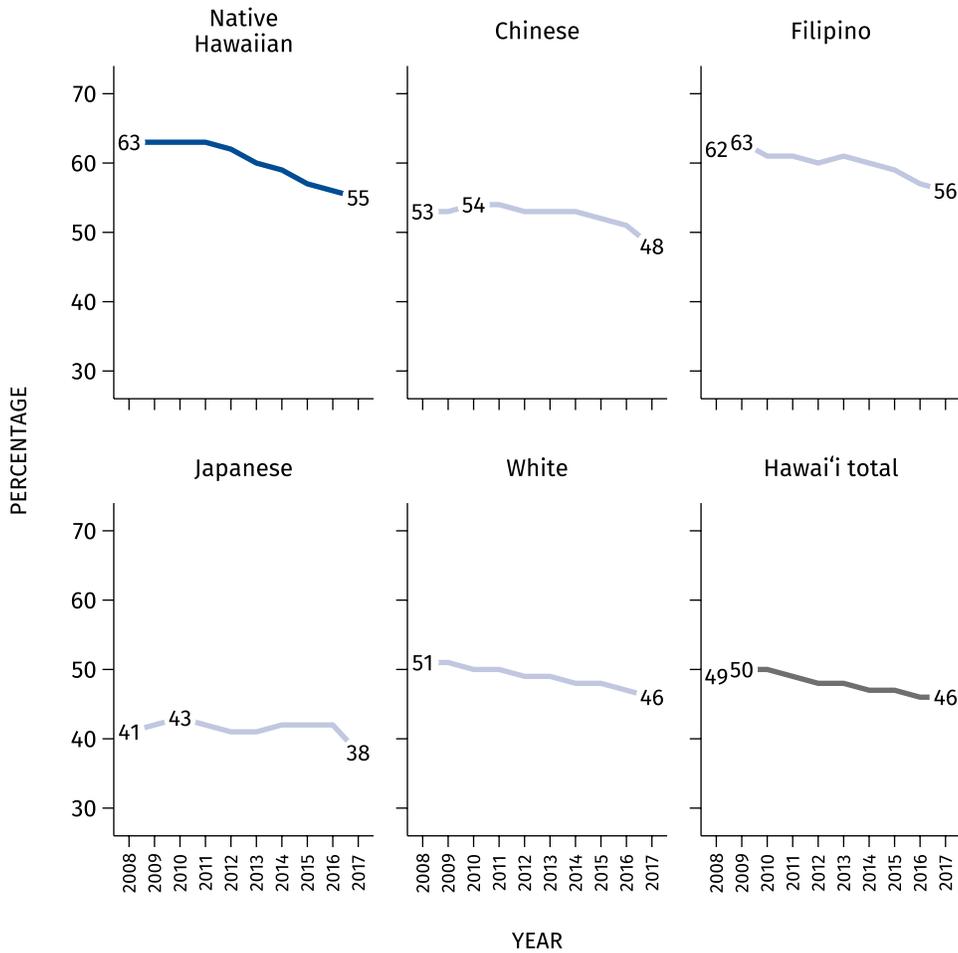
Note 1: Nonfamily refers to a person who either lives alone or shares a home with people to whom they are not related by marriage, birth, or adoption.

Note 2: This chart includes overlapping and sometimes obscured data points. The most recent data points are all visible; older data points that are not discernible suggest little or no change over time.

- Among households headed by a Native Hawaiian, all regions except Kaua'i had a decrease in the percentage of married-couple households between 2000 and 2015.
- From 2000 to 2015, the proportion of single-female households headed by a Native Hawaiian decreased or remained the same in all regions except Maui.
- The percentage of nonfamily households headed by a Native Hawaiian increased across all regions between 2000 and 2015.
- Between 2000 and 2015, the proportion of single-male households headed by a Native Hawaiian increased or remained the same in all regions except Honolulu.

Looking at the prevalence of families that have children ages seventeen and younger, we see a downward trend in Hawai'i and among Native Hawaiian family households in particular. From 2008 to 2017, Native Hawaiian family households had the largest decrease in the percentage of family households with children, compared with Hawai'i's other major ethnicities (fig. 1.7). The same pattern is seen among Native Hawaiian family households with keiki ages four and younger (see [fig. 2.3](#)).

**FIGURE 1.7** Trends in family households with children  
[as a percentage of family households, by family household ethnicity, Hawai'i, 2008 to 2017]



Data source: US Census Bureau, American Community Survey, Public Use Microdata Sample 1-year files

Note 1: A family household consists of a family and may also include people not related to the householder.

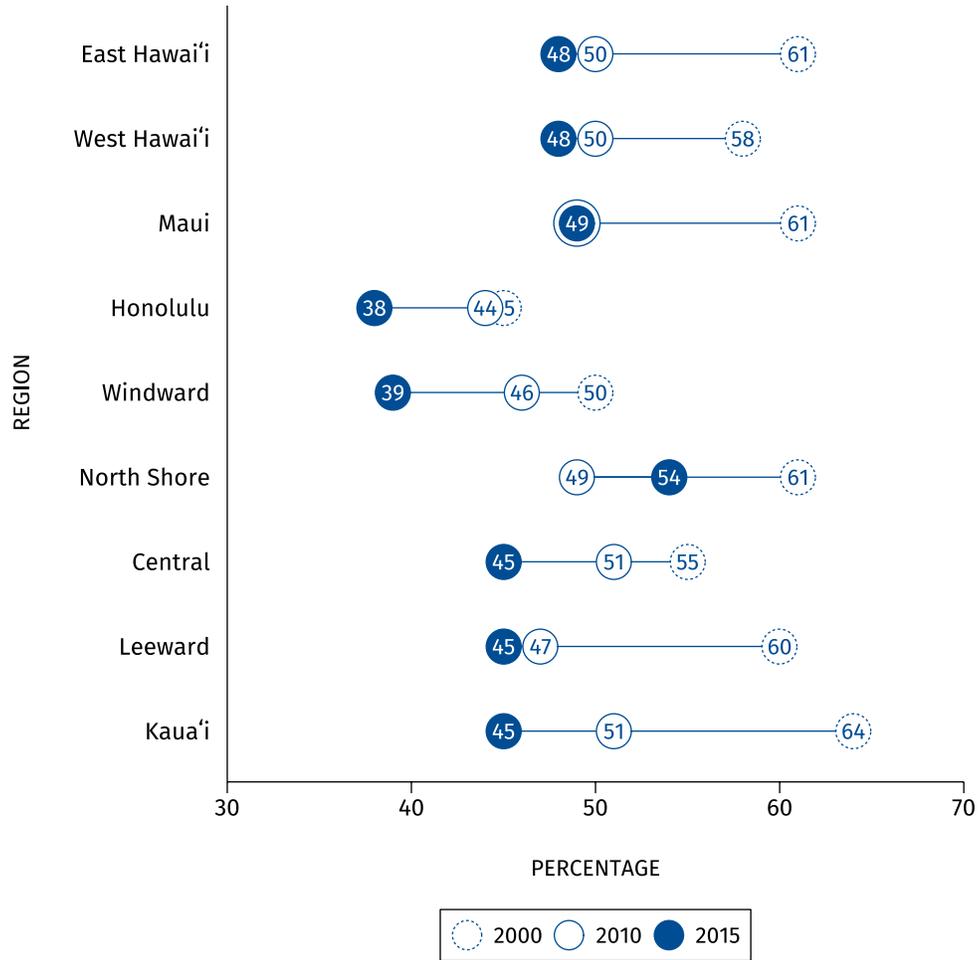
Note 2: The designation "White" in this chart refers to non-Hispanic Whites, alone or in combination with other ethnicities, as defined by the American Community Survey.

Note 3: Data labels are presented for the first and last points, the maximum and minimum points, and some inflection points where the trend changes.

- Comparing households across Hawai'i, Native Hawaiians had the greatest decrease in the percentage of family households with children, declining from 63 to 55 percent between 2008 and 2017.
- From 2008 to 2017, the percentage of family households with children decreased significantly among all major ethnicities in Hawai'i.

A regional perspective affirms that across all regions from 2000 to 2015, there has been a decline in the prevalence of Native Hawaiian-headed family households with children, with the greatest decreases in Kaua'i and Leeward (fig. 1.8). In general, there is a clear trend showing that Native Hawaiian family households in 2000 were more likely than today's households to have children.

**FIGURE 1.8** Trends in Native Hawaiian-headed family households with children—regional comparison  
 [as a percentage of family households headed by a Native Hawaiian, by region, Hawai'i; 2000, 2010, 2015]



Data source: US Census Bureau, 2011–2015 American Community Survey, Selected Population Tables; US Census Bureau, 2006–2010 American Community Survey, Selected Population Tables; Census 2000, Summary File 4

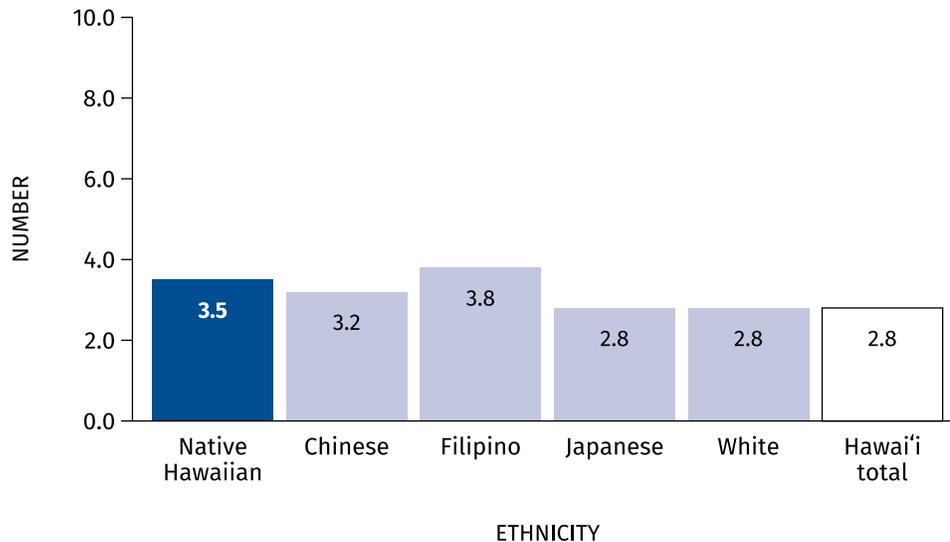
Note 1: A family household consists of a family and may also include people not related to the householder.

- The percentage of Native Hawaiian-headed family households with children decreased in all regions from 2000 to 2015.
- From 2000 to 2015, the regions with the largest decreases in the percentage of Native Hawaiian-headed family households with children were Kaua'i (19 percentage points) and Leeward (16 percentage points).

## HOUSEHOLD DENSITY

The number of people in a household influences the availability of resources and is also related to educational outcomes. For example, children growing up in crowded households have lower high school graduation rates and overall educational completion (Lopoo and London 2016). Native Hawaiian households tend to be slightly larger than most households in Hawai'i (fig. 1.9), a characteristic that has persisted since 2000 (not shown).

**FIGURE 1.9** Average number of persons per household  
[by ethnicity, Hawai'i, 2017]



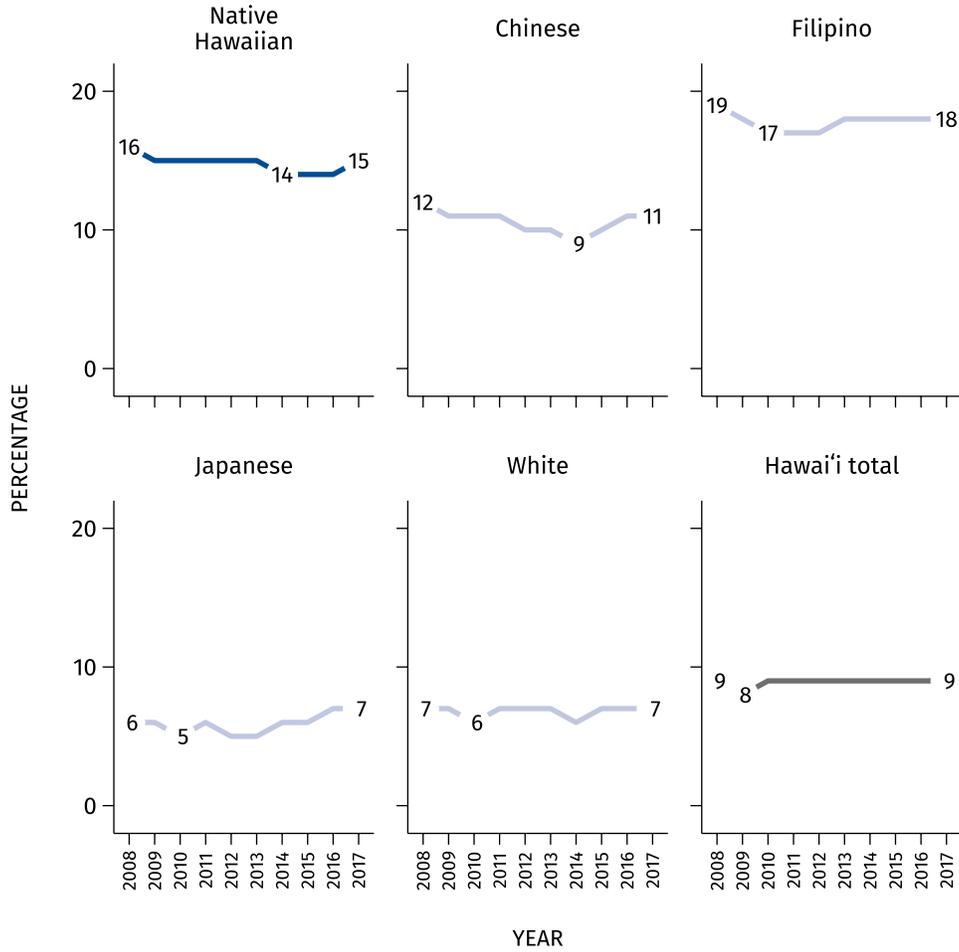
*Data source:* US Census Bureau, American Community Survey, Public Use Microdata Sample 5-year file

Note 1: The designation "White" in this chart refers to non-Hispanic Whites, alone or in combination with other ethnicities, as defined by the American Community Survey.

- Comparing Hawai'i's major ethnicities, Native Hawaiians have the second-largest average household size (3.5 people per household).
- Filipinos have the largest average household size in Hawai'i (3.8 people per household).

As of 2017, nearly one in seven Native Hawaiian households (15 percent) have more than one occupant per room. Trend data indicate that the percentage of crowded Native Hawaiian households remained relatively consistent from 2008 to 2017 (fig. 1.10). This crowding, which is common among low-income families and concentrated among younger people, often results from the lack of affordable housing and can disguise the effects of "hidden homelessness," or couch surfers. Research on the impact of household crowding on educational outcomes shows that children who live in a crowded household before reaching age nineteen are comparatively less likely to graduate from high school and have relatively lower educational attainment at age twenty-five (Lopoo and London 2016).

**FIGURE 1.10** Trends in households with more than one occupant per room  
 [as a percentage of households, by household ethnicity, Hawai'i, 2008 to 2017]



Data source: US Census Bureau, American Community Survey, Public Use Microdata Sample 1-year files

Note 1: The designation "White" in this chart refers to non-Hispanic Whites, alone or in combination with other ethnicities, as defined by the American Community Survey.

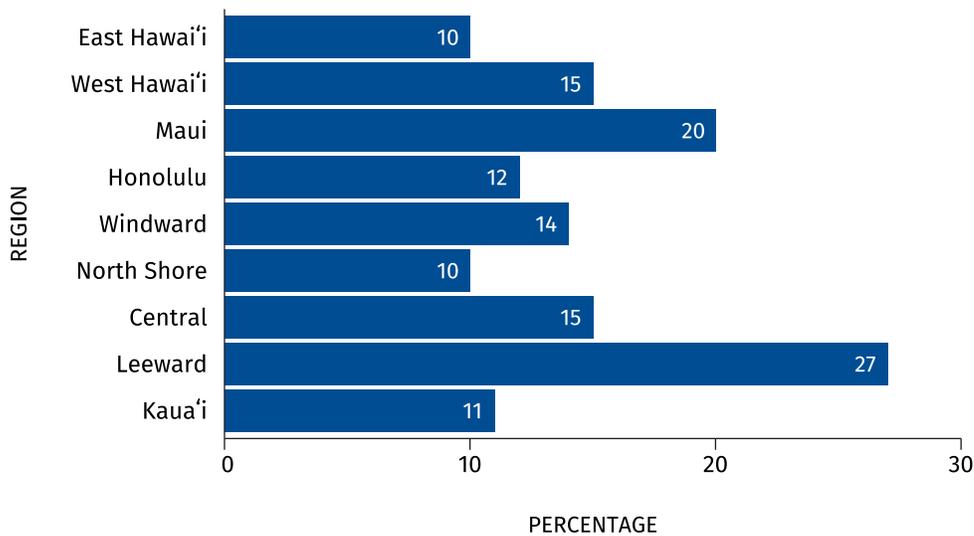
Note 2: Data labels are presented for the first and last points, the maximum and minimum points, and some inflection points where the trend changes.

- From 2008 to 2017, the percentage of Native Hawaiian households with more than one occupant per room did not change significantly—similar to trends among other major ethnicities in Hawai'i.

### Household Density—Regional Highlights

Looking more specifically at housing units of Native Hawaiian-headed households across regions, the most crowding occurs in Leeward (27 percent) and Maui (20 percent) (fig. 1.11). Over time and across most regions, household density of Native Hawaiian housing units decreased from 2000 to 2015 (fig. 1.12). Further research is needed to explore what factors caused the change.

**FIGURE 1.11** Native Hawaiian housing units with more than one occupant per room—regional comparison  
[as a percentage of housing units occupied by Native Hawaiian-headed households, by region, Hawai‘i, 2015]

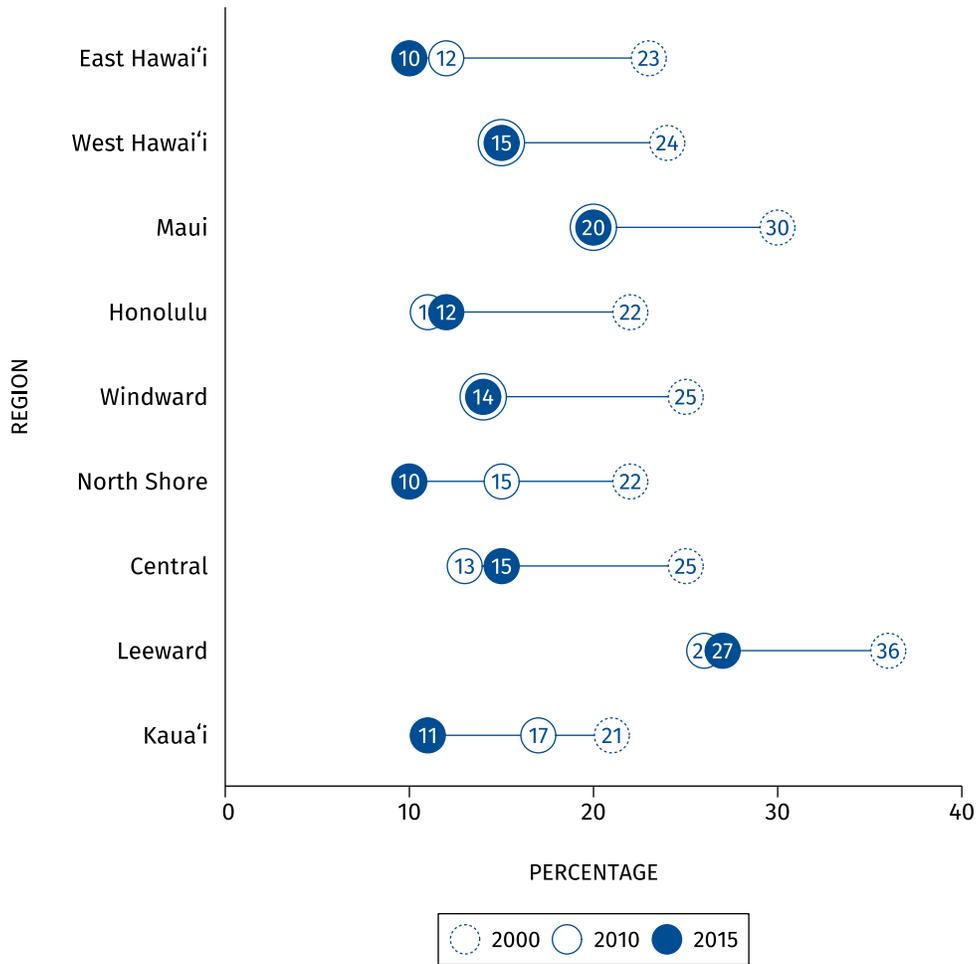


Data source: US Census Bureau, American Community Survey, Selected Population Tables

Note 1: A housing unit is a house, apartment, mobile home, group of rooms, or a single room that is occupied (or intended for occupancy) as separate living quarters.

- Across Hawai‘i, the percentage of Native Hawaiian housing units with more than one occupant per room is highest in Leeward (27 percent) and Maui (20 percent).
- Regions where Native Hawaiian housing units are the least likely to have more than one occupant per room are East Hawai‘i, North Shore, and Kaua‘i.

**FIGURE 1.12** Trends in Native Hawaiian housing units with more than one occupant per room—regional comparison  
 [as a percentage of housing units occupied by Native Hawaiian-headed households, by region, Hawai'i; 2000, 2010, 2015]



*Data source:* US Census Bureau, 2011–2015 American Community Survey, Selected Population Tables; US Census Bureau, 2006–2010 American Community Survey, Selected Population Tables; Census 2000, Summary File 4

*Note 1:* This chart includes overlapping and sometimes obscured data points. The most recent data points are all visible; older data points that are not discernible suggest little or no change over time.

- On the whole, housing units occupied by Native Hawaiian-headed households became less densely populated from 2000 to 2015.
- From 2000 to 2015, the percentage of Native Hawaiian housing units with more than one occupant per room decreased in all regions by at least 9 percentage points.
- Across regions, East Hawai'i had the biggest change in the percentage of Native Hawaiian housing units with more than one occupant per room, decreasing from 23 to 10 percent between 2000 and 2015.

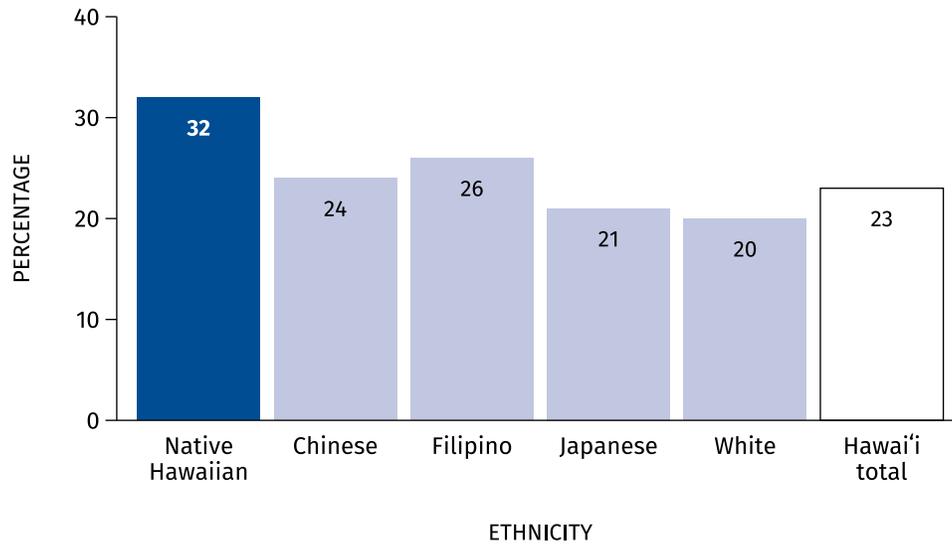
## SINGLE-MOTHER FAMILIES

Research suggests that, on average, the stressors faced by single parents are especially challenging and are greater than those faced by conventional married-couple families. Examples include increased financial burdens, chronic stress (Cairney et al. 2003), loneliness (Baranowska-Rataj, Matysiak, and Mynarska 2014), and depression (Jackson et al. 2000). Because educational outcomes are related to these family conditions, it becomes increasingly important for single-parent caregivers to have social and emotional support beyond the immediate family unit, in addition to material and economic resources (Stack and Meredith 2018). Additionally, recent research on the economic mobility of US youth finds that the low prevalence of single-parent households in a neighborhood is the best predictor of one's ability to move from a low-income category to a higher income category, even after controlling for other socioeconomic factors (Wilcox, Price, and Van Leeuwen 2018).

In *Ka Huaka'i*, we focus primarily on single-mother families, given that much of the research and scholarship on single parenthood focuses on mothers (Lancet Public Health 2018). This focus may be due to the fact that most custodial parents—those who share a home with a child and generally have legal custody—are mothers. For example, in 2018, of the 12.9 million custodial parents in the United States, 80 percent were mothers, compared with 20 percent who were fathers (Grall 2020). Further research and attention are needed, given that single-father households have been increasing steadily since 1960 (Livingston 2013).

Recent data from the US Census, which combine five years of survey results, show that Native Hawaiian families, on average, are the most likely to be single-mother families, compared with families of other major ethnicities in Hawai'i (fig. 1.13). This is congruent with our trend data mapped back to 2008 (fig. 1.14).

**FIGURE 1.13 Single-mother families**  
 [as a percentage of families, by family ethnicity, Hawai'i, 2017]



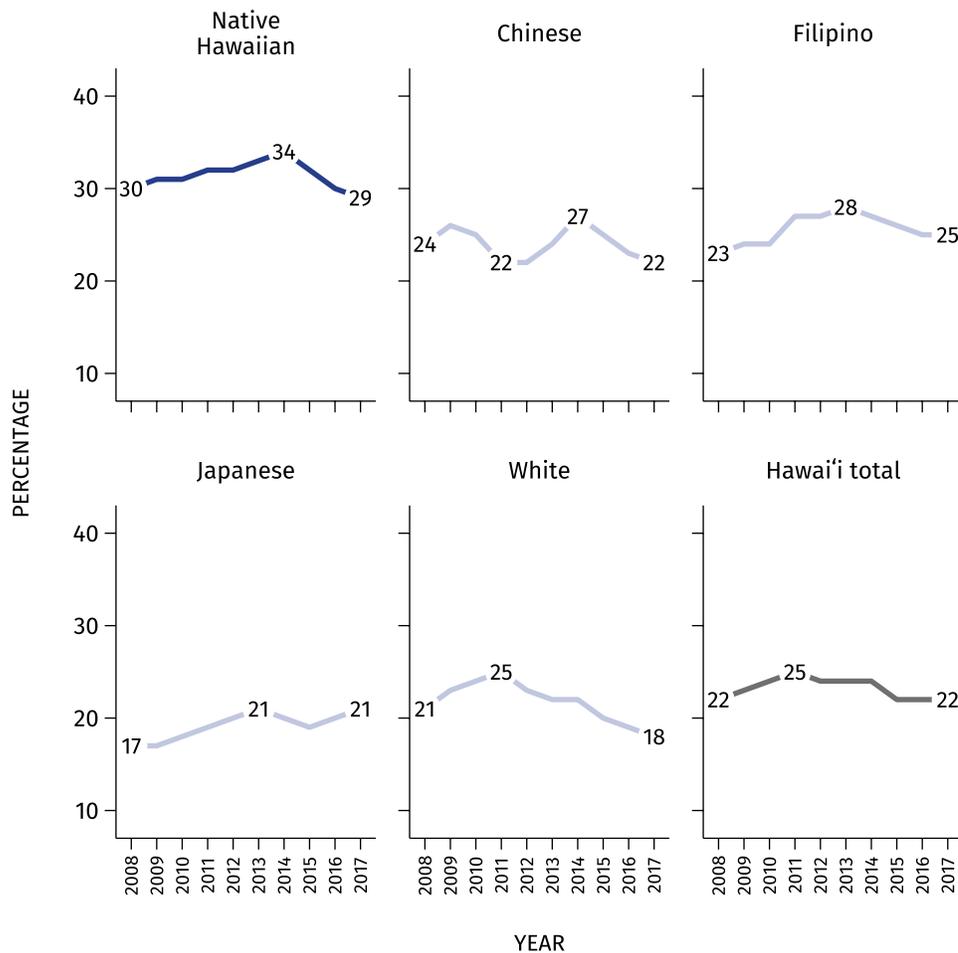
*Data source:* US Census Bureau, American Community Survey, Public Use Microdata Sample 5-year file

Note 1: The data include subfamilies, which are defined as families that do not maintain their own household but live in a household where the householder or householder's spouse is a relative.

Note 2: The designation "White" in this chart refers to non-Hispanic Whites, alone or in combination with other ethnicities, as defined by the American Community Survey.

- Nearly one-third (32 percent) of Native Hawaiian families are single-mother families—the highest percentage among the major ethnicities in Hawai'i.
- Among Hawai'i's major ethnic groups, those with the lowest rates of single-mother families are Whites (20 percent) and Japanese (21 percent).

**FIGURE 1.14** Trends in single-mother families  
[as a percentage of families, by family ethnicity, Hawai'i, 2008 to 2017]



*Data source:* US Census Bureau, American Community Survey, Public Use Microdata Sample 1-year files

Note 1: The data include subfamilies, which are defined as families that do not maintain their own household but live in a household where the householder or householder's spouse is a relative.

Note 2: The designation "White" in this chart refers to non-Hispanic Whites, alone or in combination with other ethnicities, as defined by the American Community Survey.

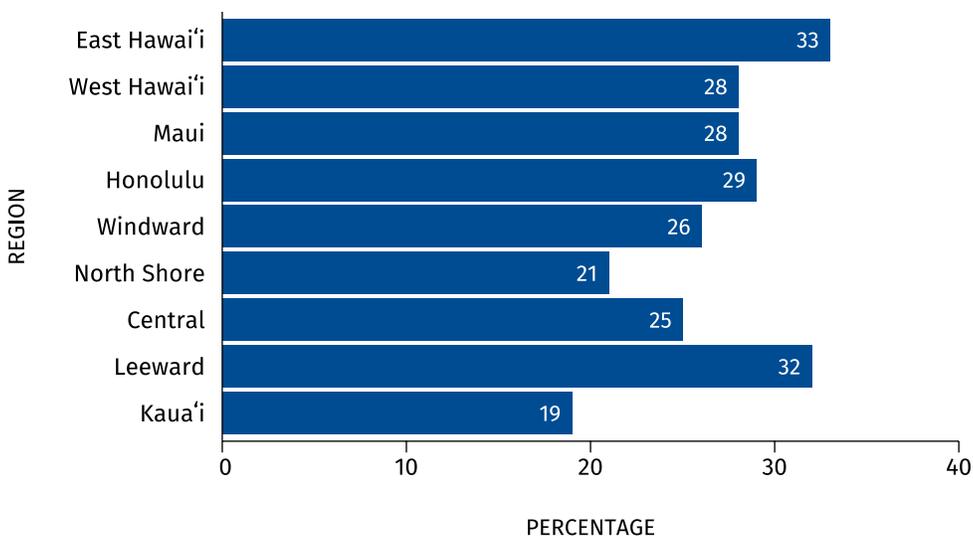
Note 3: Data labels are presented for the first and last points, the maximum and minimum points, and some inflection points where the trend changes.

- Comparing 2008 with 2017, the proportion of single-mother families among Native Hawaiians did not change significantly.
- The percentage of Native Hawaiian single-mother families increased from 30 to 34 percent between 2008 and 2014, followed by a decrease of 5 percentage points from 2014 to 2017.

### Single-Mother Families—Regional Highlights

Based on regional data from 2015, East Hawai'i and Leeward have the highest percentage of Native Hawaiian family households led by a single mother (fig. 1.15). Trend data reveal that from 2000 to 2015, the proportion of single-mother households headed by a Native Hawaiian increased in regions such as Windward and decreased in regions such as the North Shore (fig. 1.16).

**FIGURE 1.15** Native Hawaiian family households headed by a single mother—regional comparison  
[as a percentage of family households headed by a Native Hawaiian (with own children), by region, Hawai'i, 2015]

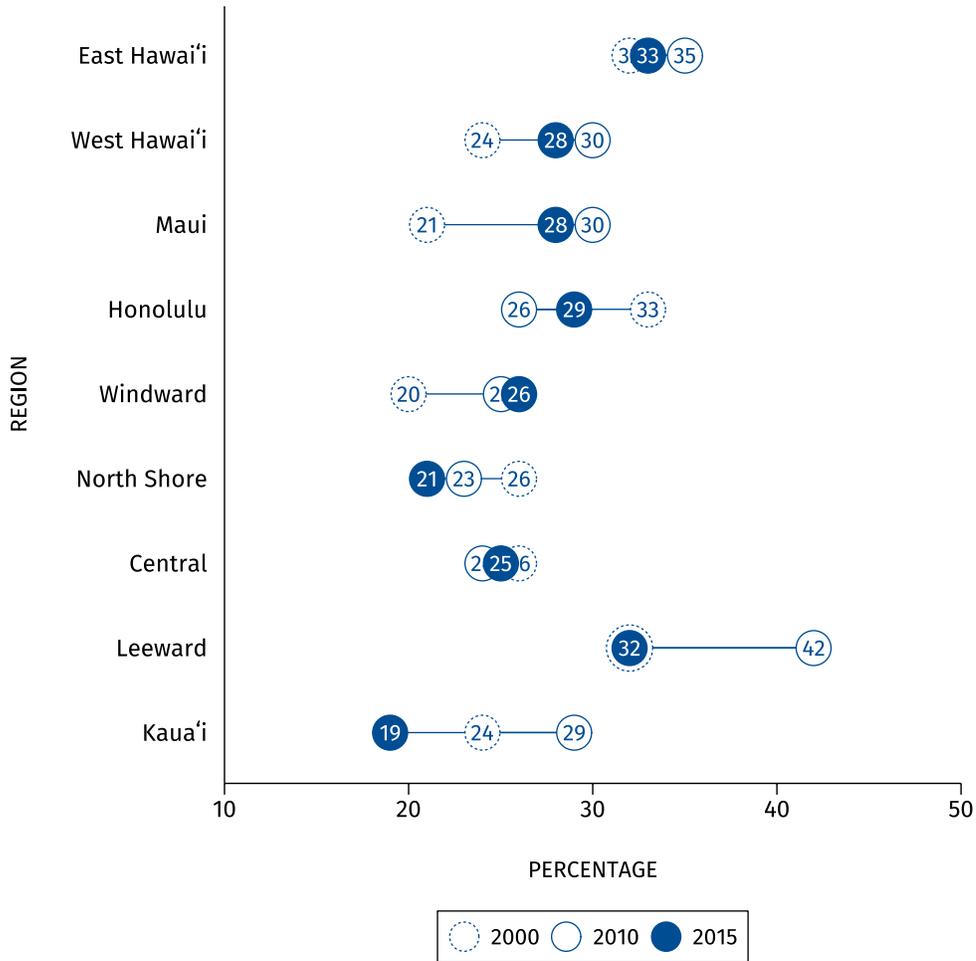


Data source: US Census Bureau, American Community Survey, Selected Population Tables

Note 1: A family household consists of a family and may also include people not related to the householder.

- Comparing family households headed by a Native Hawaiian, Kaua'i has the lowest percentage of single-mother family households (19 percent), although this percentage is not significantly lower than that of the Windward, North Shore, and Central regions.
- Among family households headed by a Native Hawaiian, East Hawai'i and Leeward regions have a significantly greater proportion of single-mother households, compared with Kaua'i, North Shore, and Central.

**FIGURE 1.16** Trends in Native Hawaiian family households headed by a single mother—regional comparison  
 [as a percentage of households headed by a Native Hawaiian (with own children), by ethnicity, Hawai‘i; 2000, 2010, 2015]



Data source: US Census Bureau, 2011–15 American Community Survey, Selected Population Tables; US Census Bureau, 2006–10 American Community Survey, Selected Population Tables; Census 2000, Summary File 4

Note 1: A family household consists of a family and may also include people not related to the householder.

Note 2: This chart includes overlapping and sometimes obscured data points. The most recent data points are all visible; older data points that are not discernible suggest little or no change over time.

- From 2000 to 2015, the percentage of Native Hawaiian households headed by a single mother decreased in Honolulu, North Shore, Central, and Kaua'i.
- Over the same time period, East and West Hawai'i, Maui, and Windward saw an increase in the percentage of Native Hawaiian families headed by a single mother, though all of these regions except for Windward saw a slight decrease from 2010 to 2015.

## HOUSEHOLDS WHERE GRANDPARENTS RESIDE

With the relatively high likelihood of single-mother families among Native Hawaiians, grandparents can play a critical role in caring for minor children. In multigenerational households, where grandparents reside with both their children and their grandchildren, grandparents may mitigate family stressors by sharing some of the household's financial and caregiving responsibilities. In instances where a child's parent is absent, grandparents may step in as the sole caregiver for the child.

The beneficial effect of kūpuna in children's lives is well established in the Native Hawaiian community and is consistent with traditional cultural values emphasizing the importance of 'ohana. For Native Hawaiian children, kūpuna represent a critical link to one's ancestors and act as caregivers, protectors, and sources of wisdom.

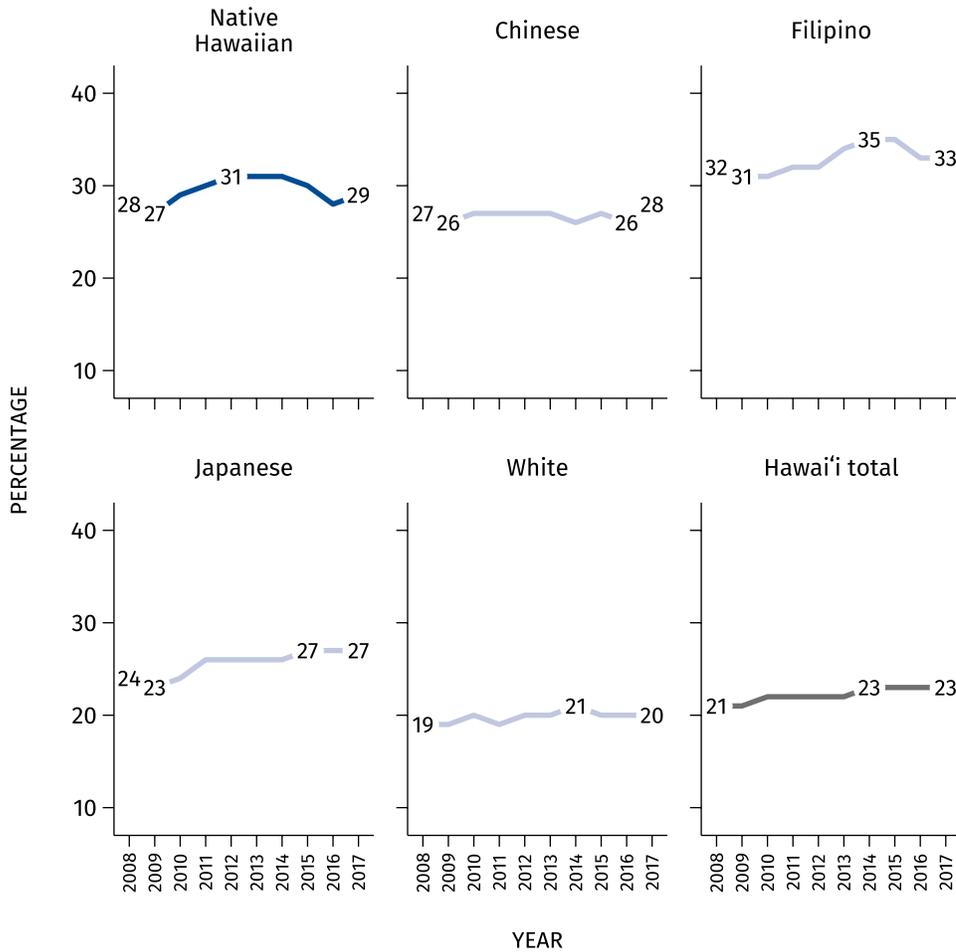
However, scholarship also notes the reality of age-related challenges that some kūpuna face when assuming the caregiving role of parents (Mokuau et al. 2015). Kūpuna may also experience health risks from contagious illnesses in multigenerational households, as seen during the global pandemic of 2020. A recent article suggests that kūpuna<sup>5</sup> in multigenerational households are more likely than kūpuna living alone to report COVID-19 symptoms (Hawai'i Data Collaborative 2020). Although the proportion of Native Hawaiian households with children where a grandparent is present was not significantly different in 2017 than it was in 2008, for the Hawai'i total, there is an upward trend in the percentage of households with children where grandparents are present (fig. 1.17).



Nearly one-third (29 percent) of Native Hawaiian households with children have a grandparent present—6 percentage points higher than the Hawai'i total.

<sup>5</sup> In this particular article, the term "kūpuna" refers to grandparents and seniors in general, not just those who are Native Hawaiian.

**FIGURE 1.17** Trends in households with children where a grandparent is present  
 [as a percentage of households with children ages 0–17, by household ethnicity, Hawai‘i, 2008 to 2017]



Data source: US Census Bureau, American Community Survey, Public Use Microdata Sample 1-year files

Note 1: Grandchildren are defined as the grandparents' own grandchildren who are younger than 18 years old.

Note 2: The designation "White" in this chart refers to non-Hispanic Whites, alone or in combination with other ethnicities, as defined by the American Community Survey.

Note 3: Data labels are presented for the first and last points, the maximum and minimum points, and some inflection points where the trend changes.

- Among Native Hawaiian households with children ages seventeen and younger, the proportion of households where a grandparent is present peaked at 31 percent from 2012 to 2014.
- In 2017, the percentage of Native Hawaiian households with children where a grandparent is present (29 percent) was higher than the Hawai‘i total (23 percent).
- Relative to other households with children, Japanese households experienced the greatest sustained increase in the prevalence of a grandparent being present, increasing by 4 percentage points from 2009 to 2017.

### Families Living with Grandparents—Regional Highlights

Looking across regions, Leeward has the highest rate (15 percent) of grandparents and grandchildren living together (see [fig. 2.9](#)). Over time, the percentage of kūpuna coresiding with their mo'opuna (grandchildren) has decreased in most regions; Maui, West Hawai'i, and Central were the only regions that did not experience this downward trend (see [fig. 2.10](#)). The cause for these changes may be attributed to the overall decrease in the number of households with children (see [fig. 1.8](#)) and possibly because young people are increasingly moving to urban areas for enhanced career opportunities.

## Family Strengths and Challenges

### FAMILY INTERACTION

Strong family ties and relationships support children through their growth and education. Conversely, neuropsychological research shows that disruptive experiences and family instability can hinder child development (Noble, Tottenham, and Casey 2005; Craigie, Brooks-Gunn, and Waldfogel 2012). Various studies have identified common traits that characterize a strong family, such as spending time together, showing appreciation, communication, shared values and beliefs, effective coping with stress, and expressed commitment to one another (DeFrain 1999; Stern, Yuen, and Hartsock 2004; Stinnett and DeFrain 1985).

The Hawai'i Family Touchstones project (Stern and Min 2010) identifies several key areas of family strength in Hawai'i:

- Nearly three-quarters (71 percent) of Hawai'i's families eat dinner together on a regular basis.
- Three in four families (76 percent) regularly spend time together doing something fun (with the highest rate in Hawai'i county).
- More than one-third (36 percent) of families regularly attend religious services (with the highest rate in Maui county).
- Nearly one in five families (18 percent) engage in regular cultural practices (with the highest rate in Hawai'i county).
- Families in Hawai'i maintain frequent contact with 'ohana—70 percent spend time with grandparents at least once a week, and 60 percent are in regular contact with aunts and uncles.
- Parents maintain community connections, with 60 percent serving as volunteers (with the highest rate in Kaua'i county).

- Social capital is highly valued, with 89 percent of respondents saying they can rely on another person in their community outside of their family.
- Most families (72 percent) feel safe in their communities (with the highest rate in Kaua'i county).

## DOMESTIC VIOLENCE

Despite indications of strength and cohesion of the 'ohana, stressors faced by many Native Hawaiian families sometimes lead to unhealthy family dynamics, conflict, and physical violence. Child and domestic abuse have devastating effects on children's development, whether the acts of violence are directed at the children themselves or toward other members of the family.

Generally speaking, the number of Native Hawaiian child abuse victims, relative to the overall population of keiki ages zero to seventeen, is low. Still, the numbers are sobering: In 2015, child abuse and neglect reached a high point among Native Hawaiian keiki, affecting 702 unique Native Hawaiian victims (Hawai'i Department of Human Services 2015). Furthermore, Native Hawaiian keiki have been historically overrepresented in abuse cases, constituting 40 percent of all cases affecting children ages seventeen and younger in 2018 (see [fig. 2.6](#)).

Across Hawai'i and among confirmed reports of Native Hawaiian children, the most common precipitating factors leading to child abuse and neglect include the inability to cope with parenting responsibility (contributing to nearly one-quarter of all reported causes), unacceptable child-rearing method, and drug abuse. Based on 2017 data provided by the Hawai'i Department of Human Services, regional differences emerge among Native Hawaiian children in West Hawai'i, where factors related to parental stress (i.e., heavy, continuous childcare responsibility, loss of control during discipline, lack of tolerance of child's behavior, inability to cope with parenting responsibility, unacceptable child-rearing method) make up 79 percent of all reported causes of child abuse and neglect, compared with 55 percent for the Hawai'i total and 39 percent in the North Shore<sup>6</sup> region, which has the lowest rate.

The prevalence of child abuse and neglect underscores the high value of community-based programs that educate and reinforce protective factors such as encouraging parental resilience and building social and emotional competence for keiki.

Spousal abuse, or the abuse of an intimate partner, is more prevalent among Native Hawaiians than it is among most other major ethnicities in Hawai'i. In a survey of adult men and women in Hawai'i, Native Hawaiian and Caucasian respondents reported the highest

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<sup>6</sup> The percentage for the North Shore region reflects counts for Wahiawa and Waialua combined.

rates of physical abuse by an intimate partner (13 percent), compared with 6 percent among Japanese and Filipinos, and 4 percent among Chinese (Hawai'i Health Data Warehouse 2015a). Data on reported sexual abuse by an intimate partner reveal a similar pattern: Among Native Hawaiian and Caucasian respondents, one in twenty (5 percent) has experienced sexual abuse, compared with 3 percent among Japanese, 2 percent of Chinese, and 1 percent of Filipinos (Hawai'i Health Data Warehouse 2015b).

It has been noted that some Native Hawaiians may be reluctant to report abuse to officials and may prefer to resolve domestic issues within the family, suggesting that rates of actual abuse may be higher. Additionally, findings from interviews and a focus group involving ten Native Hawaiian women found that most women struggled to disclose violence to their health provider unless they had developed a trusting relationship with the provider (Oneha, Magnussen, and Shoultz 2010). Further, formal Western systems of care, such as shelters and support groups, may be lacking, "because infrastructure does not address historical trauma caused by colonization" (Oetzel and Duran 2004, 58). Accordingly, several social services programs incorporate culturally based interventions and traditional Hawaiian methods for resolving family issues, including ho'oponopono, meaning "to set right" (Mokuau 1990).

## Community Strengths

As a natural extension of the 'ohana, the larger community is highly valued in Native Hawaiian culture, whether at the scale of a kauhale, comprising a few families, or at the scale of the entire pae 'āina or greater lāhui. In addressing community strengths, we describe traits and trends at the community level regarding connectedness to 'āina, 'ohana, and kaiāulu (greater community); perceptions of community safety; 'Ōiwi (Native, Indigenous) leadership; the revitalization of 'ōlelo Hawai'i; and community access to cultural resources.

### CONNECTIONS TO 'ĀINA, 'OHANA, AND KAIĀULU

In Native Hawaiian worldview, space and time are intertwined such that land and sea are linked by past, present, and future as part of a community with inherent cultural and spiritual significance that transcends physical traits. Navigator Nainoa Thompson illustrates the significance of this connection to identity:

If you cannot connect to your ancestors, what can you connect to? We become Hawaiians because we come from the land and the oceans, and I believe there is a need to be connected to our land and the oceans. So when we are disconnected from that, that part of us, we are wandering. (Thompson 2016, 160)

This understanding is reflected in the strong ties many Native Hawaiians feel for Ka Pae ‘Āina Hawai‘i, the ancestral home to Kānaka Maoli. Scholars note that the land and sea of Hawai‘i are tied genealogically to Native Hawaiians and are an integral part of spiritual beliefs, cultural practices, oral traditions, and recurrent pan-Polynesian interaction (Oliveira 2014; Kame‘eleihiwa 1992; Kanahēle 1986; Cachola-Abad 1993). As a result, connections to the ‘āina solidify Native Hawaiian identity through genealogical, spiritual, and physical practices and beliefs (Kana‘iaupuni and Liebler 2005).

Research confirms the strong ties Native Hawaiians have for the islands of Hawai‘i (Oneha 2001; Kana‘iaupuni and Liebler 2005) and speaks to the draw of many Native Hawaiians to remain among—or return to—the ‘āina and the people of the islands. Studies of the Native Hawaiian diaspora reveal how economic forces drove many to leave, but only physically, as they remain loyal to the collective and strongly bonded by ancestral and community ties to the homeland (Halualani 2002; Kana‘iaupuni and Liebler 2005; Kauanui 1998, 2007; Oneha 2001).

In a recent survey about decisions related to migration, Native Hawaiians were much more likely than other respondents to cite strong ties to ‘ohana and ‘āina as reasons to stay in the islands (Pagud, Kekahio, and Kana‘iaupuni, forthcoming). While economics plays a role in the choice to return to the islands, social connections to family, friends, and community were primary reasons for returning. As one respondent put it, “I rather come home to my family. I want to come home to my people. All the people that live on the island are my people. My family.” For some, these connections outweigh the high cost of living in Hawai‘i. These findings highlight that while economic conditions may drive many to leave for better opportunities, community and family ties exert a strong pull, bringing back many to this island home.

Connections to people are equally important. Traditional Hawaiian values promote the importance of social relationships and the collective group (Kanahēle 1986; Mokuau 1990). Culturally, interdependence and shared obligations are encouraged, and the greater good of the community is placed above individual interests. Community bonds provide belonging, safety, protection, and a wealth of capital and resources. A 2018 statewide survey of more than three thousand Hawai‘i residents found that Native Hawaiians are more likely than others to feel connected to their community. Among survey respondents, 46 percent of Native Hawaiians indicated being “extremely” or “quite a bit” connected to the communities they live in, compared with 33 percent of non-Hawaiian respondents (Kekahio 2020).

Linked to feelings of community connectedness are perceptions of community safety, a key component of well-being. A 2013 study of Native Hawaiian and Asian American communities in Hawai'i found that perceptions of safety are adversely impacted by youth violence and delinquency, but strengthened through positive relations with neighbors (Hishinuma, Chang, and Soli 2011). Findings from the 2018 Hawai'i Well-being Study (SMS Research 2018) suggest that Native Hawaiians have more positive perceptions of community safety than do their non-Native Hawaiian peers in the following dimensions:

- Knowing and trusting their neighbors (71 percent of Native Hawaiians, compared with 64 percent of non-Native Hawaiians)
- Feeling safe walking in their communities at night (79 percent versus 64 percent)
- “Never” or “very rarely” felt worried about being a victim of a crime in the community where they live (72 percent versus 63 percent)

## ‘ŌIWI LEADERSHIP

The value of servant leadership underscores Hawaiian perspectives that promote interdependence and a shared obligation for community well-being. Service-oriented activism benefits both the volunteer and the larger public. Those directly involved derive personal satisfaction and growth, new social networks, and improved health, and the community as a whole thrives with the contributions of its active members (Boehnke and Wong 2011; Vestergren, Drury, and Hammar 2019).

In a recollection of his father’s advice on leadership, Nainoa Thompson recalls principles of selflessness, the importance of values, and the strength of community building.

My father [Pinky Thompson] was constantly saying, “This voyage is not about you”.... He told us to look to our core, to the common values that are so precious and so meaningful that you’ll never let them go for anything. He said this community will challenge you.... This community that you need to rebuild, make sure the rebuilding process is simple. Give them your vision. Articulate your values. Let them come. Never allow your community to be defined and split off by geography or by race. Hold them together by common vision and shared values. They will come. Define them as people who want to learn, people who want to work, and people who want to give back. Go build your community. (2016, 169–70)

‘Ōiwi leadership is multidimensional and can overlap with Western definitions. From a Native Hawaiian perspective, however, leadership goes beyond capitalism-driven notions of individual achievement, status, and success. For example, ‘Ōiwi leadership prioritizes

community service, civic engagement, and connectedness between past and future generations. In the section that follows, we present findings from three surveys on community well-being and Native Hawaiian community engagement. A more thorough review of Hawaiian civic engagement and collective efficacy in action is included in the [Introduction](#) of this publication.

A recent report based on the 2018 Hawai'i Index of Well-Being Survey points to “serving others and improving one’s community” as one aspect of ‘Ōiwi leadership (Caparoso et al. 2020). Survey responses give insights into how and where Native Hawaiians serve as leaders in their communities. For example, compared with non-Native Hawaiians, Native Hawaiians are equally likely to report serving others and improving one’s community “at work” (27 percent) and “among business/professional networks” (11 percent). However, Native Hawaiians are more likely to report servant leadership “at home or with family” (41 versus 39 percent) and “in the neighborhood (church, sports, clubs)” (35 versus 28 percent)—a pattern that holds true for all counties with reportable data. Hawai'i county has the highest reported rate of leadership among Native Hawaiians at home or with family (52 percent) and in neighborhoods (41 percent). When asked, “If leadership means serving others and improving your community, where do you act as a leader?” the only context in which Native Hawaiians are less likely than non-Native Hawaiians to report doing so is “among friends.”

In an evaluation study that surveyed adults on Kaua'i (with 691 respondents, 166 of whom are Native Hawaiian), 86 percent of Native Hawaiians agreed or strongly agreed that, “I know I can make a difference in my community,” compared with 77 percent of non-Native Hawaiians (Kamehameha Schools 2018a). Voting is one way to make a difference, and Native Hawaiians on Kaua'i are equally likely, compared with non-Native Hawaiians, to have voted in the last twelve months (68 percent). These data, together with findings from the 2018 Hawai'i Index of Well-Being Survey mentioned above, indicate that Native Hawaiians display high rates of community engagement, service, and leadership.

Older generations have invested significant hana (work) in developing leadership skills and mindsets in today’s ‘ōpio, or youth. An example of the importance of leadership that extends beyond one’s own generation is seen in the findings of a 2018 Kamehameha Schools Young Alumni Survey (Kamehameha Schools 2018b). This survey, which draws from a Native Hawaiian leadership scale developed a decade earlier (Borofsky 2010), shows that 91 percent of respondents agreed or strongly agreed that “part of my kuleana is to be a leader (where appropriate).” Nine out of ten respondents agreed or strongly agreed that “I lead by example.” Among graduates of Kamehameha Schools, 85 percent said they “pass on knowledge from my ancestors to younger generations.” Similarly, 86 percent reported, “I am not afraid to take a stand (for what I believe in).” These signs of ‘Ōiwi leadership among young adults, particularly in recognizing the kuleana to bridge knowledge between older and younger generations, are encouraging evidence of the strength of Native Hawaiian communities.

Overall, these data indicate that Native Hawaiians are more likely than non-Native Hawaiians to engage in community service and leadership at home and in community settings—a finding that also is seen in the rising generation of leaders who are now young adults.

## ‘ŌLELO HAWAI‘I

‘Ōlelo Hawai‘i immersion preschools, which were initially inspired by Māori language revitalization in New Zealand, have continued to grow since their inception in 1985. Across Ka Pae ‘Āina Hawai‘i, there are now twelve pūnana leo, or language nests, and twenty-four kula kaiapuni, or k–12 public schools, that use ‘ōlelo Hawai‘i exclusively as a medium of instruction (‘Aha Pūnana Leo 2018). ‘Ohana with keiki enrolled in these schools are supported and encouraged to learn and use ‘ōlelo Hawai‘i at home, extending the schools’ reach into the community. Early studies indicate that these programs are effective learning environments for Native Hawaiian haumāna (students) to acquire their heritage language, despite ongoing funding challenges and lack of instructional materials relative to what is available in English (Housman et al. 2011; Okura 2017).

With more than thirty-five years of ‘ōlelo Hawai‘i immersion education in Hawai‘i, many of today’s parents and instructors in these programs are graduates of immersion programs themselves. The pūnana leo of Hawai‘i have also inspired other Indigenous language immersion programs beyond Hawai‘i, including in the Ojibway and Saami communities (Okura 2017). Based on a recent ‘Aha Pūnana Leo annual report (2018), highlights of the leadership role of Hawaiian immersion schools include:

- Various immersion sites on different islands have received nearly 150 visitors from Indigenous organizations from around the world.
- ‘Aha Pūnana Leo was invited to the United Nations as a subject matter expert on Indigenous language revitalization, which led to the proclamation of the “International Year of Indigenous Languages” in 2019.
- The Mokuola Honua Global Center for Indigenous Language Excellence was established in Hilo by ‘Aha Pūnana Leo.

Progress in revitalizing ‘ōlelo Hawai‘i is apparent not only in enrollment and global influence, but also in the numbers of Kānaka Maoli who currently report at least some familiarity with the language. Based on a community survey of about three thousand respondents in Hawai‘i (Kamehameha Schools, Lili‘uokalani Trust, and the Office of Hawaiian Affairs 2018), 11 percent of Native Hawaiian respondents reported that they or someone in their household “have full conversations with other Hawaiian speakers.” Two-thirds of Native Hawaiian respondents said they understand or use some words or phrases in ‘ōlelo Hawai‘i. Only 22 percent of Native Hawaiians reported using ‘ōlelo Hawai‘i “not at all,” compared with 54

percent of non-Native Hawaiians. At the county level, Native Hawaiians in Hawai'i county were the least likely to use 'ōlelo Hawai'i "not at all." On the whole, increased engagement with 'ōlelo Hawai'i will likely lead to increased access to other speakers and resources.

## COMMUNITY ACCESS TO CULTURAL RESOURCES

Papakilo, an online "database of databases," provides public access to a variety of data resources relating to Hawaiian culture, land, and identity. Launched in 2011 and maintained by the Office of Hawaiian Affairs, this website allows users to search for information in historical collections of newspapers, Māhele (land division) records, genealogy indexes, and museum collections. The historical newspaper collection represents one of the largest collections of text written by Native speakers of any Polynesian language and is increasingly used by students and scholars to reclaim cultural knowledge that has been obscured due to colonial practices that attempted to suppress Native Hawaiian culture, especially in the twentieth century.

"Kani'āina: Voices of the Land," is a digital archive of the Ka Leo Hawai'i radio program in 'ōlelo Hawai'i, which was broadcast from the 1970s to the 1990s and is now maintained by the University of Hawai'i. Users can listen to 393 episodes of the program, which include interviews with, and musical performances by, mānaleo from every region of Hawai'i. Another cultural resource, Kumukahi, was developed by Kamehameha Schools as a bilingual, community-based website that presents living Hawaiian culture and its connections to a rich ancestral past. Together, these and many other digital resources represent increasing opportunities for Kānaka Maoli and others around the world to listen to and learn from the voices of kūpuna and cultural practitioners.

Technology has also expanded opportunities for people of all ages to learn basic and intermediate 'ōlelo Hawai'i. Kanaeokana, a collaborative network of Native Hawaiian schools, partnered with Duolingo to develop 'ōlelo Hawai'i learning software for smartphones to allow free access to those motivated to learn, including Kānaka Maoli in the diaspora. The interactive app was launched in October of 2018, and as of August 2020 has more than 600,000 active users (Duolingo 2020).

Another recent achievement for increasing community access to resources is the 2018 publication of *Ka Baibala Hemolele*, the 'ōlelo Hawai'i translation of the Bible. This latest edition makes studying the Bible in 'ōlelo Hawai'i accessible to more readers, especially those who are still learning the language. Parallel text in 'ōlelo Hawai'i and English allows readers to compare the same verse in the two languages, and diacritical markings (i.e., 'okina and kahakō) make the text more readable for today's 'ōlelo Hawai'i learners. *Ka Baibala Hemolele* is a resource for Kānaka Maoli who identify as Christian to study the Bible in their ancestral language, even if they are not yet fluent, which can lead to new insights and perspectives based on cultural and linguistic differences embedded in the text.

In summary, Native Hawaiian strengths at the community scale include 'Ōiwi leadership and community engagement; cultural connections through 'ohana, 'ōlelo, and 'āina; and increasing access to cultural resources and educational opportunities. By leveraging new technologies, 'ike kupuna (ancestral wisdom), and collective expertise, Native Hawaiians are increasingly able to socially engage with one another in culturally meaningful ways across geographic and generational boundaries.

## COVID-19 RESPONSE

The COVID-19 pandemic of 2020 generated immediate threats and challenges to well-being. Kanaka Maoli communities and organizations responded in numerous ways, committing to protect the well-being of all Hawai'i residents, especially vulnerable kūpuna. This commitment was evident in the thirty-day Lāhui Kānaka kapu (prohibition) proclaimed by a number of kumu hula (hula teachers) in response to the 2020 summer surge of COVID-19 cases across Ka Pae 'Āina Hawai'i. The Office of Hawaiian Affairs supported the kumu hula and other 'Ōiwi leaders in providing free webinars centered on the concept of pālama, a protected space, to support healthy behaviors, Hawaiian perspectives, and family and community well-being (Office of Hawaiian Affairs 2019).

Native Hawaiian-serving organizations also led discussions with the Department of Health, stressing the need for COVID-19 data and reporting to include ethnic breakdowns. Once these data became available, the vulnerability of the Pacific Islander population in Hawai'i (not including Native Hawaiians) became clear (KITV 2020), and government and community groups directed needed resources to those communities. Based on available data as of September 11, 2020, Native Hawaiians have had comparatively low rates of COVID-19, with 12 percent of cumulative cases despite being 21 percent of the population (Hawai'i Department of Health 2020).

## Community Challenges

At a macro level, a significant challenge facing Native Hawaiian communities is the effect of historical trauma and racism. Historical events such as the US occupation of the Hawaiian Islands continue to affect Native Hawaiian communities and have led to mistrust, discrimination, racism, feelings of inferiority, and minority status in our own homeland. In an essay about his grandfather, 'Ōiwi scholar Gushiken (2019) describes the relationship between colonial injustices and cycles of violence:

The truth is that each abuse, each incensed fit that he threw, was caused by something greater. When we, as Hawaiians, live in a world where we are not allowed to connect with our land and determine, for ourselves, how and why we live on this earth, we cannot find peace and harmony in the chaos of loss. (161)

Despite these obstacles, scholar and musician Jon Osorio remains hopeful.

I believe we are making progress. I no longer worry that people outside our community dismiss our protests when construction digs up ancestral bones. For one thing, I know that we Kānaka have become more articulate about how the iwi (bones) of the body retain the sacredness and house the spirit of the departed. But we also know that bones deposit nutrients into the earth and make it more productive. The story and the practice of the sacredness of iwi, like so many of our stories and practices, have practical applications. (Osorio and Osorio 2016, 193)

Native Hawaiian communities continue to work collectively to heal from historical injustices and current systemic inequities. In this section we describe two ongoing social community challenges in the Native Hawaiian community: crime and social justice, and incarceration.

## CRIME AND SOCIAL JUSTICE

Native Hawaiians are disproportionately represented in the criminal justice system. For example, compared with other ethnicities, Native Hawaiians are more likely to be sentenced to prison, to receive longer prison sentences and probation terms, and to have their parole revoked (Office of Hawaiian Affairs 2010). This disproportionate impact accumulates at each stage, meaning that the proportion of Native Hawaiians who are incarcerated (39 percent), or have their parole revoked (41 percent) is greater than the proportion of Native Hawaiians who are arrested (25 percent) (Office of Hawaiian Affairs 2010).

The effects of parental incarceration can have negative implications on the well-being of children and can be associated with increased risk of trauma, emotional difficulties among younger school-age children, and an increased likelihood of having school problems for children ages six to seventeen (Murphey and Cooper 2015). Conservative estimates suggest that among children in Hawai'i, 5 percent, or sixteen thousand children, have had a parent in jail or prison at some point in their childhood (Annie E. Casey Foundation 2016). As of 2015, one in fourteen children across the United States experiences parental incarceration in their lifetime, with odds increasing among children who are black, live in poverty, live outside of metropolitan areas, and whose parents have little education (Murphey and Cooper 2015).

As shown below, rates of arrest and incarceration for Native Hawaiians are among the highest of all major ethnic groups in Hawai'i. When compared with data published in *Ka Huaka'i 2014*, we find increases in both arrest rates and percentages of the incarcerated Native Hawaiian population. The increasingly disproportionate number of young Native Hawaiian men and women in Hawai'i's correctional system has profound implications for Native Hawaiian education. Not only are educational and other opportunities severely limited for incarcerated adults, but Native Hawaiian children of inmates are also at increased risk of growing up without a parent to support them through critical stages of development.

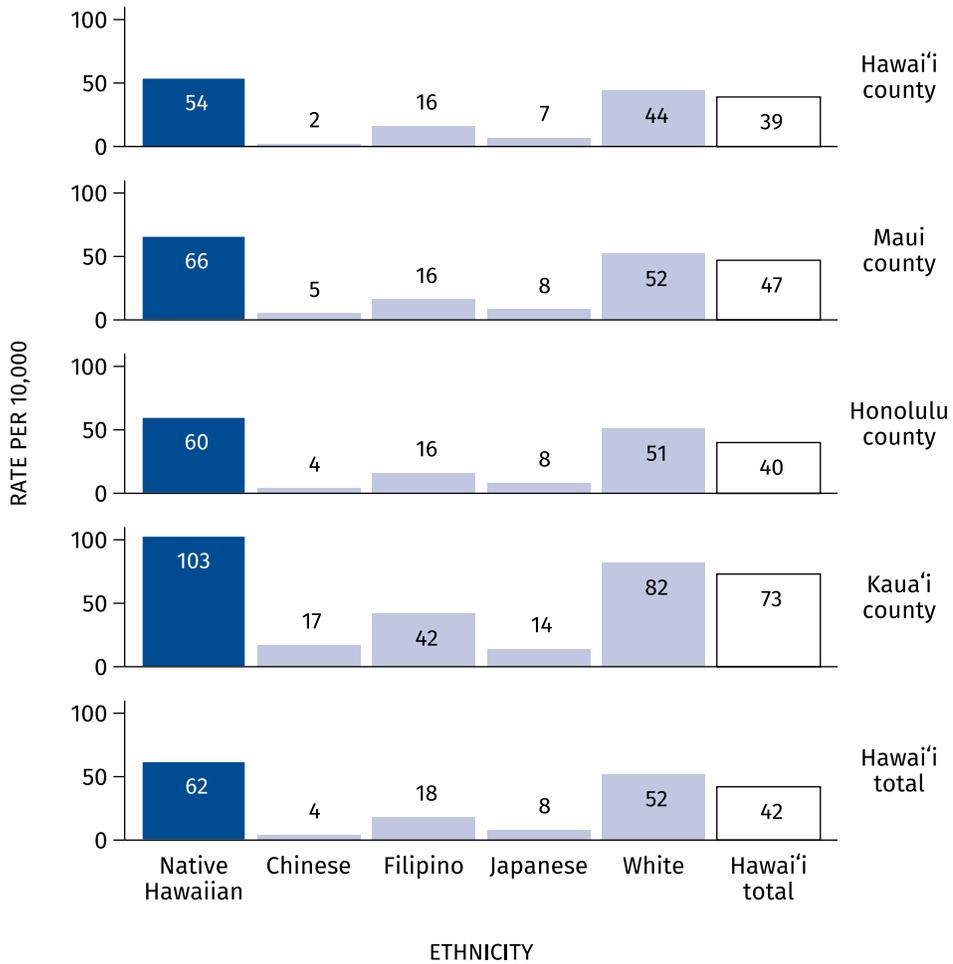
Moreover, the criminal activities that lead to arrests and incarceration—such as crime and drug use—directly influence the safety and stability of communities, which may further hinder the educational prospects for Native Hawaiian children and adults.

### **Arrest Rates**

Across Hawai'i, arrest rates among Native Hawaiian adults and juveniles represent the largest proportion of arrests for all types of offenses including violent crime, aggravated assault, robbery, and drug manufacturing and sales. Overrepresentation in the criminal justice system has far-reaching consequences for Native Hawaiians and severely limits an incarcerated person's ability to finish school, have a driver's license, find stable employment, and provide financially for self and family (Office of Hawaiian Affairs 2010).

The following figures show the combined rates of Native Hawaiian juvenile and adult arrests by type (violent crime, aggravated assault, robbery, and drug manufacturing or sales). Rates are defined as the number of arrests per ten thousand individuals in that ethnic group's local population. Across all types and in all counties, Native Hawaiians generally have the highest arrest rates relative to other ethnicities, often followed by Whites. Figure 1.18 shows arrest rates for violent crime.

**FIGURE 1.18** Arrests for violent crime (juveniles and adults combined)—county comparison  
 [arrests as a rate per 10,000 juveniles and adults, by ethnicity and county, Hawai'i, 2016]

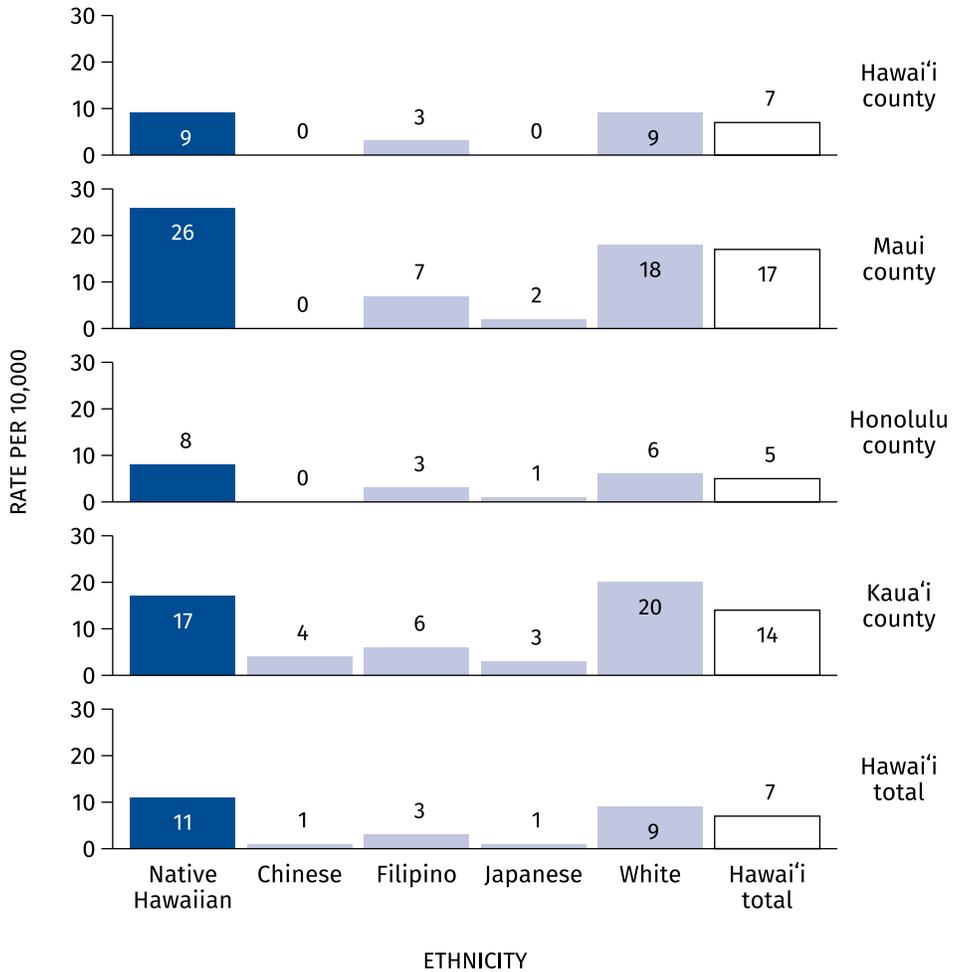


Data source: A Review of Uniform Crime Reports (years 2015 and 2016 combined), Hawai'i Department of the Attorney General, Crime Prevention and Justice Assistance Division, Research and Statistics Branch

- In all counties, Native Hawaiians have the highest arrest rates for violent crime, compared with juveniles and adults from Hawai'i's other major ethnicities.
- For the Hawai'i total, the arrest rate for violent crime among Native Hawaiians is 62 per 10,000 juveniles and adults.

Figure 1.19 shows a county comparison of arrests made for aggravated assault, by ethnicity.

**FIGURE 1.19** Arrests for aggravated assault (juveniles and adults combined)—county comparison [arrests as a rate per 10,000 juveniles and adults, by ethnicity and county, Hawai'i, 2016]

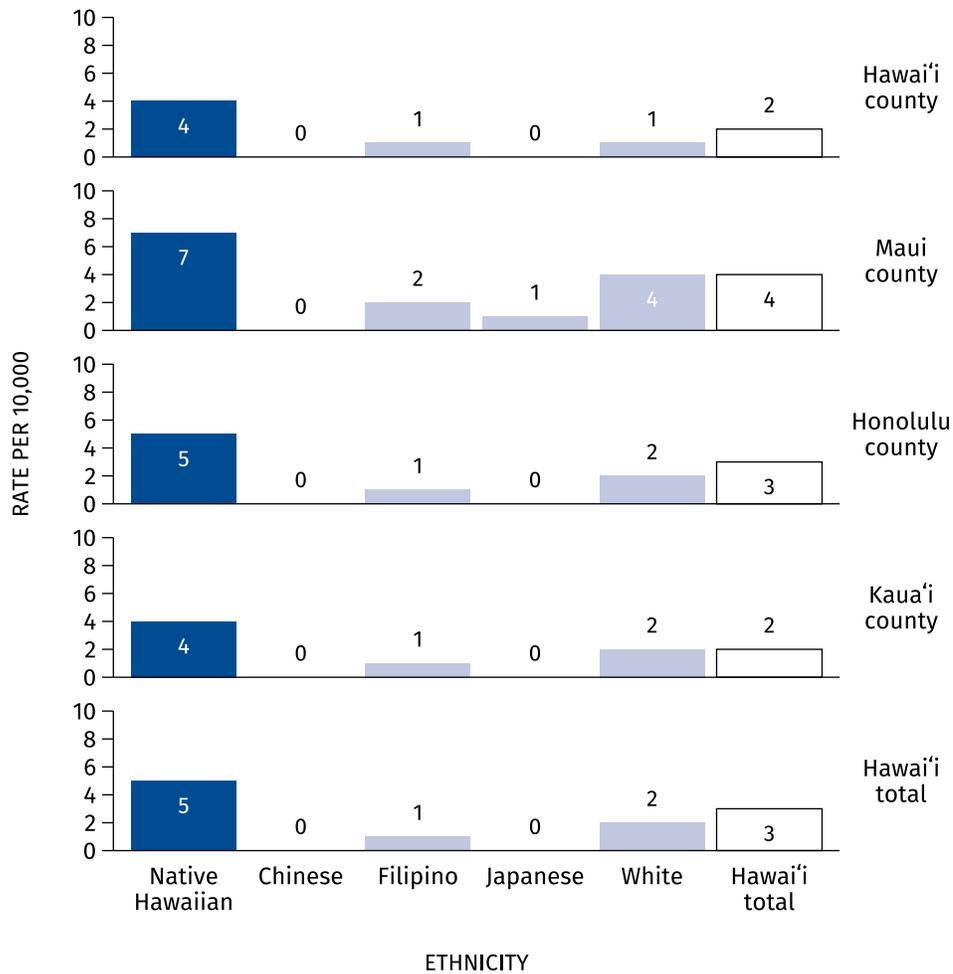


Data source: A Review of Uniform Crime Reports (years 2015 and 2016 combined), Hawai'i Department of the Attorney General, Crime Prevention and Justice Assistance Division, Research and Statistics Branch

- In all counties except Kaua'i, Native Hawaiians have the highest arrest rates for aggravated assault, compared with juveniles and adults from Hawai'i's other major ethnicities.
- For the Hawai'i total, the arrest rate for aggravated assault among Native Hawaiians is 11 per 10,000 juveniles and adults.

Figure 1.20 summarizes arrest rates for robbery offenses, by county.

**FIGURE 1.20** Arrests for robbery (juveniles and adults combined)—county comparison  
[arrests as a rate per 10,000 juveniles and adults, by ethnicity and county, Hawai'i, 2016]

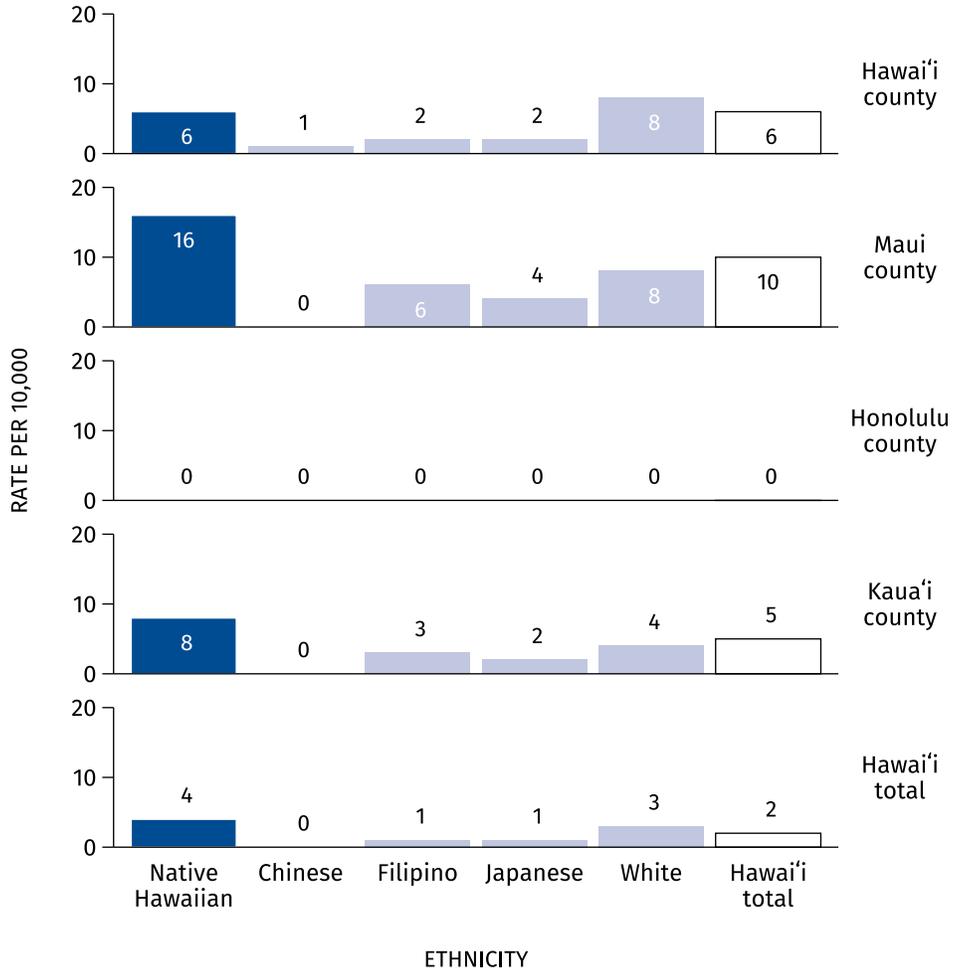


Data source: A Review of Uniform Crime Reports (years 2015 and 2016 combined), Hawai'i Department of the Attorney General, Crime Prevention and Justice Assistance Division, Research and Statistics Branch

- Across all counties, Native Hawaiians have the highest arrest rates for robbery, compared with juveniles and adults from Hawai'i's other major ethnicities.
- In Hawai'i county, the arrest rate for robbery among Native Hawaiians is twice as high as the Hawai'i total.

Figure 1.21 shows arrest rates for drug manufacturing or sales, by county.

**FIGURE 1.21** Arrests for drug manufacturing or sales (juveniles and adults combined)—county comparison  
 [arrests as a rate per 10,000 juveniles and adults, by ethnicity and county, Hawai'i, 2016]



Data source: A Review of Uniform Crime Reports (years 2015 and 2016 combined), Hawai'i Department of the Attorney General, Crime Prevention and Justice Assistance Division, Research and Statistics Branch

Note 1: Zeros in this figure are accurate numbers that reflect either a large or a small population in a category, given the rate per 10,000.

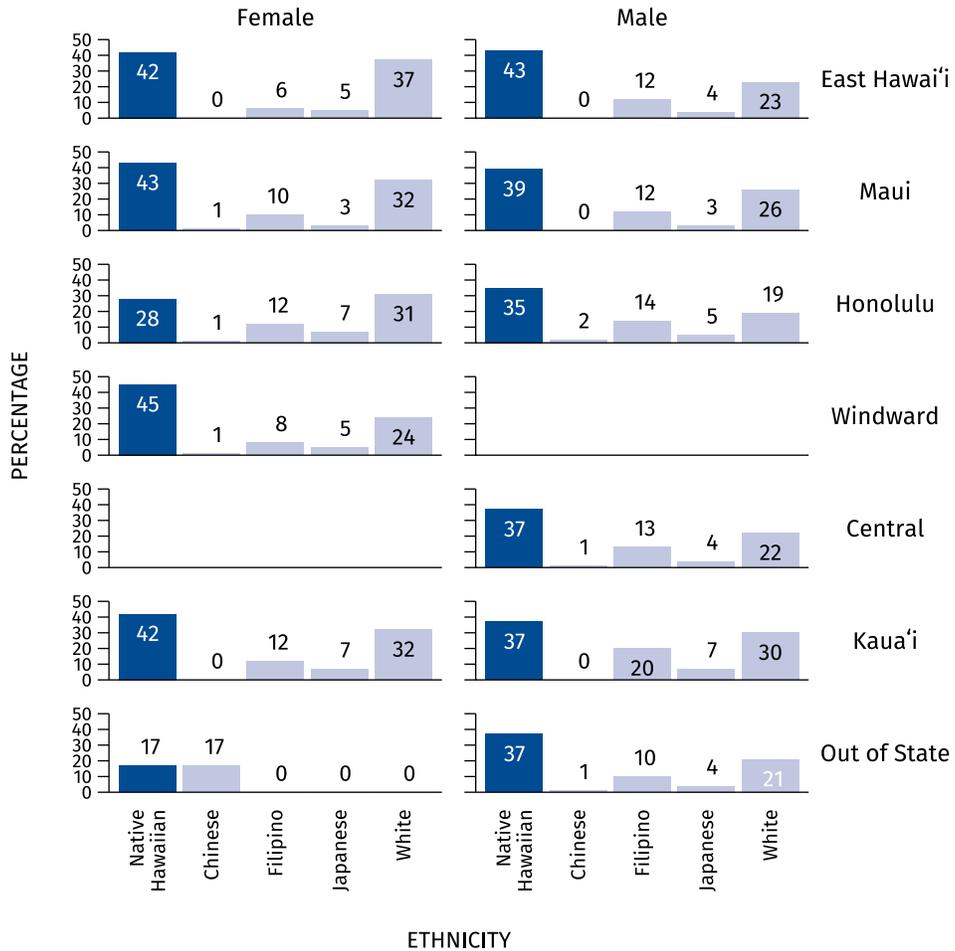
- In Maui and Kaua'i counties, Native Hawaiians have the highest arrest rates for drug manufacturing and sales, compared with juveniles and adults from Hawai'i's other major ethnicities.

## INCARCERATION

Elevated arrest rates among Native Hawaiians and a criminal justice system with acknowledged inequities (Office of Hawaiian Affairs 2012; Umemoto et al. 2012; Office of Hawaiian Affairs 2010) contribute to the overrepresentation of Native Hawaiians in Hawai'i's prison system. Native Hawaiians constitute the largest share of Hawai'i's adult incarcerated population (Hawai'i Concurrent Resolution 85 Task Force 2018). The overrepresentation of Native Hawaiians in Hawai'i's prison system is consistent across males and females (fig. 1.22). The *Hawai'i State House Task Force on Prison Reform* final report proposes the following recommendations specifically to reduce the number of Native Hawaiians in the prison system:

1. Develop evidence-based early intervention strategies that are focused on diverting Native Hawaiian youth away from the criminal justice system and toward pathways for success.
2. Create cultural courts in the criminal justice system.
3. Expand in-prison Native Hawaiian educational and cultural programs.
4. Make culturally relevant reentry programs available to Native Hawaiians.
5. Implement the recommendations of the 2012 Native Hawaiian Justice Task Force (Hawai'i Concurrent Resolution 85 Task Force 2018, xix).

**FIGURE 1.22** Ethnic distribution of the incarcerated population—regional comparison  
 [as a percentage of the incarcerated population, by sex and region, Hawai'i, 2015 and 2017 combined]



Data source: Hawai'i Department of Public Safety

Note 1: Missing lines or bars indicate data that are unavailable, not applicable, or suppressed due to small sample size.

Note 2: Zeros in this figure are accurate numbers that reflect either a large or a small population in a category, given the rate per 10,000.

- Native Hawaiians are disproportionately represented among incarcerated males and females across all regions and in out-of-state facilities.
- Looking across regions, Honolulu has the lowest proportion of incarcerated Native Hawaiian females (28 percent).

Our understanding of social and criminal justice relating to Kānaka Maoli is increasing, yet systemic change has remained elusive. Further research and analysis are needed to better understand and account for the socioeconomic variables influencing criminal behavior and resulting in the disproportionate representation of Native Hawaiians in the criminal justice system.

While there is evidence of strong social well-being in our Native Hawaiian communities, there are challenges that prevent optimal well-being for many 'ohana. Native Hawaiian households continue to be larger than households of most other ethnicities in Hawai'i, and crowding may be an issue, suggesting a lack of affordable housing. That said, household density is showing signs of improvement, as housing units occupied by Native Hawaiian-headed households—across all regions—have become less likely to have more than one occupant per room since the year 2000.

Compared with other major ethnicities in Hawai'i, Native Hawaiian families are the most likely to be single-mother families, to experience loved ones being arrested or incarcerated, and to endure domestic and child abuse. As the 'ohana is the key to the well-being of our keiki, a systems perspective is needed to address these significant impediments to learning and life.

There are positive countervailing forces at the community level that continue to break down these obstacles to well-being, such as a strong sense of place and belonging, high rates of leadership and service, and cultural awareness and pride. Both research and lived experience demonstrate that Native Hawaiians continue to draw from and contribute to traditional cultural values and practices, kinship connections, kupuna supports, spirituality, and community as sources of strength and resilience.

## MATERIAL AND ECONOMIC WELL-BEING

Culturally, Native Hawaiians view economic well-being holistically, including measures of financial health and the drivers of those measures, such as the health and well-being of society and the environment within which the economy thrives.

This integration can be literal, as seen in the relationship between the word wai, which means water, and waiwai, which means wealth. From a Hawaiian perspective, material and economic well-being, embodied in the term waiwai, signifies abundance and sufficiency, and relates to the broader concept of lawa pono. Lawa pono suggests being sufficient, having a balanced supply, where “enough is plenty.” Recent scholarship articulates this economic principle with regard to lawai'a, or Hawaiian fishing practices: “To fish in a Hawaiian way— isn't about the take. Rather, it's about taking care. Lawai'a pono is about our responsibility to practice restraint and make sacrifices today for the long-term benefit of generations to follow” (Blake and Young 2019, 79). Such practices are evident among many within Native Hawaiian and other Indigenous communities today, despite a narrower societal framing of material well-being influenced by consumerism and Western capitalism.

Household income and the material resources available to a family can influence the academic achievement of children. In a study looking at associations between family income and children's school readiness, researchers found that for children from low-income families, higher incomes were associated with higher reading and math scores (Isaacs and Magnuson 2011). Over time, gaps in achievement between high-income and low-income families have widened, perhaps caused by a rise in income inequality, the difficulty of upward mobility, and the evolving structure of families (Reardon 2013).

Hawai'i is no stranger to income inequality. For example, while the economic status of Native Hawaiians has improved in recent years, marked by an upward trend in families with a livable income (see [fig. 1.24](#)), Native Hawaiians continue to experience disproportionately adverse material and economic conditions, compared with other major ethnicities in Hawai'i. In addressing Native Hawaiian economic well-being, we look to established data sources that, while valid, tend to highlight deficits. The following section examines available data on income, employment, earnings, poverty, public assistance, and housing.

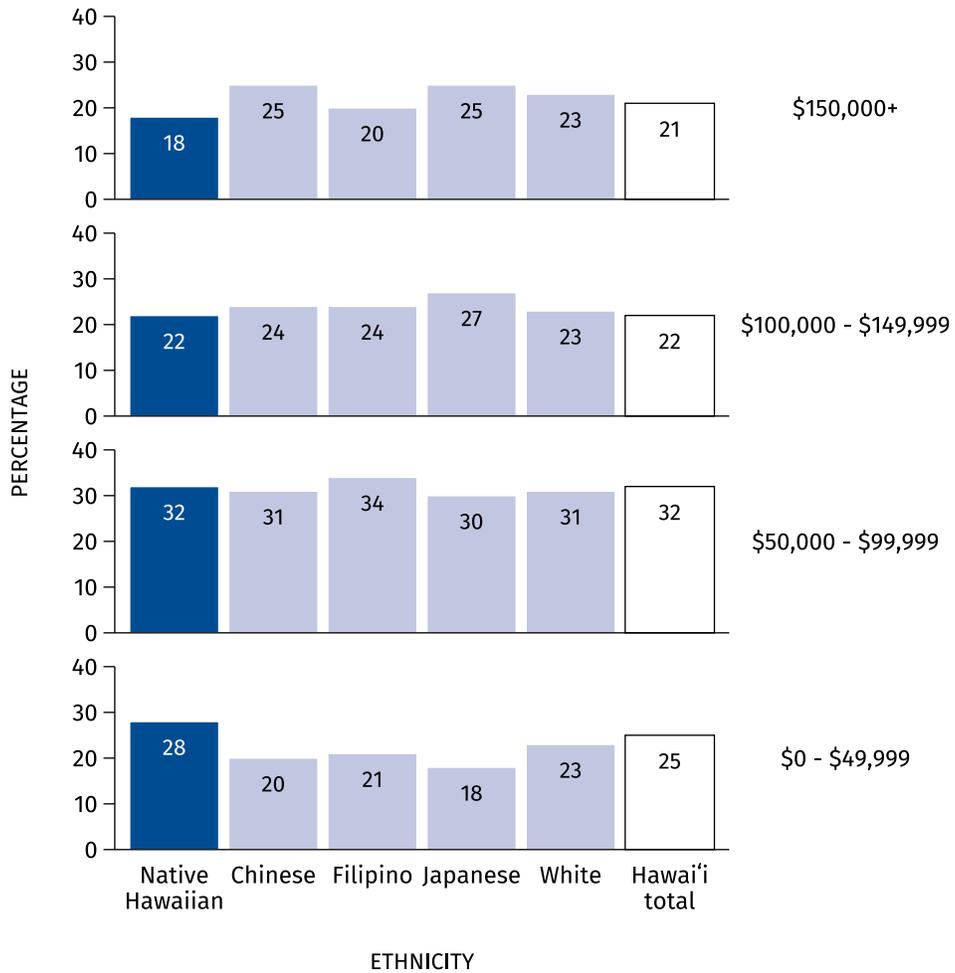
## Income, Employment, and Earnings

Household income, though not always equivalent to wealth and happiness, is a conventional measure of economic well-being and includes earnings from wages and salary, Social Security payments, public assistance, and investment income. In Hawai'i, where the cost of living is among the highest in the United States, a higher income often translates into more life options for families. Livable, stable, and meaningful employment is associated with greater economic well-being. Because of Hawai'i's high cost of living, unemployment, under normal circumstances, is rare.

### INCOME

Income is related directly to employment and is a key factor in measuring economic well-being. Relative to other major ethnicities in Hawai'i, Native Hawaiians have the lowest average family income (Kamehameha Schools 2019) and the greatest proportion of family households earning \$49,999 or less per year (fig. 1.23).

**FIGURE 1.23** Family income of family households  
[by ethnicity, Hawai'i, 2017]



Data source: US Census Bureau, American Community Survey, Public Use Microdata Sample 5-year file

Note 1: A family household consists of a family and may also include people not related to the householder.

Note 2: The designation "White" in this chart refers to non-Hispanic Whites, alone or in combination with other ethnicities, as defined by the American Community Survey.

- Across Hawai'i's major ethnicities, Native Hawaiians have the smallest percentage of family households (18 percent) earning \$150,000 or more annually, and the largest percentage (28 percent) with a family income of \$49,999 or less.
- The combined percentage of Native Hawaiian family households with a family income of \$50,000 to \$149,999 is the same as the Hawai'i total (54 percent).

We also examine income using the following categories:

1. Livable income: annual income required to provide the basic necessities for a comfortable life (based on the concept of living wage)
2. Gap: income that is more than 185 percent of the poverty guideline, but below the threshold for a livable income
3. Low income: income between 101 and 185 percent of the poverty guideline (the cutoff used for most income subsidy benefits in Hawai'i)
4. Poverty: income at or below federal poverty guidelines defined for Hawai'i by the US Department of Health and Human Services<sup>7</sup>

Trend data from 2008 to 2017 show that the percentage of Native Hawaiian families with a livable income has increased in recent years (fig. 1.24). However, compared with other ethnic groups in Hawai'i, Native Hawaiian families are the least likely to have a livable income (fig. 1.25).

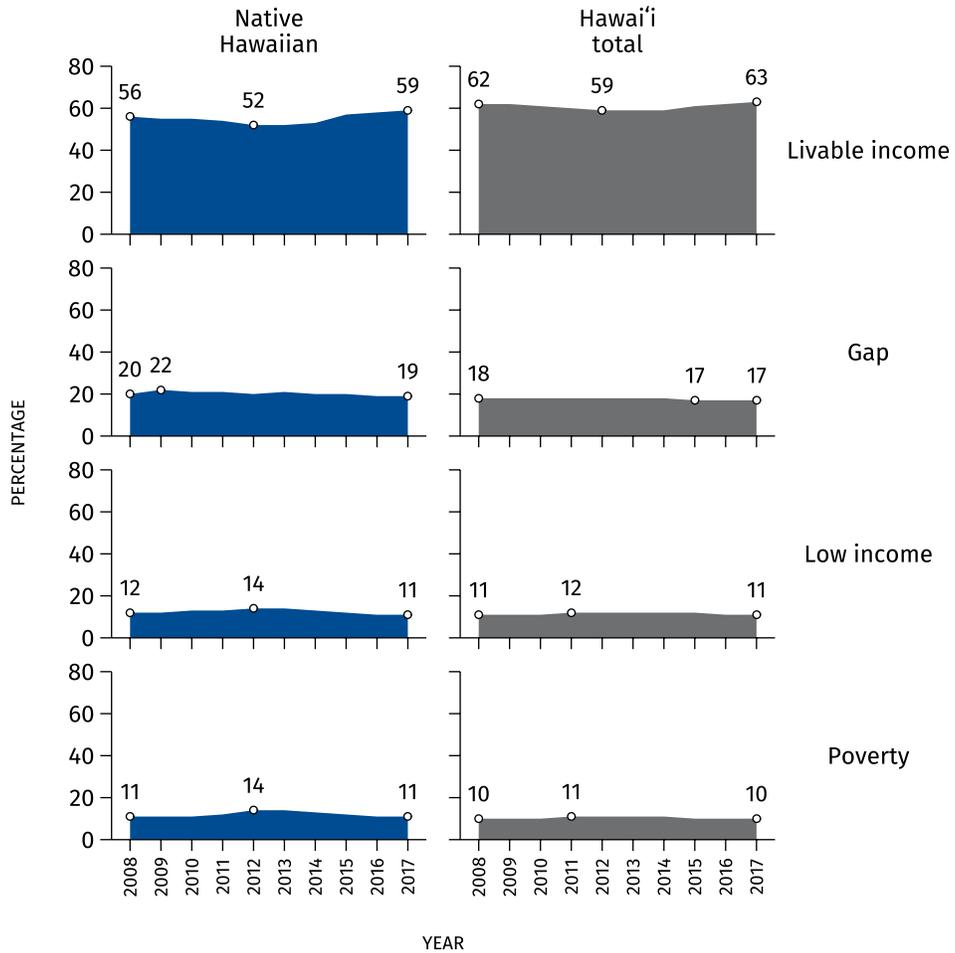


The past decade has seen a rise in the percentage of Native Hawaiian families with a livable income, particularly among families with school-age children.

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<sup>7</sup> The US Census Bureau takes several economic variables into account when classifying households that experience poverty. In terms of income, the poverty threshold for a family of four (with two children under the age of eighteen) is about \$26,000 a year. The US Census does not differentiate thresholds geographically.

**FIGURE 1.24 Trends in income categories of families**  
 [among families, by Native Hawaiian and Hawai'i total, 2008 to 2017]



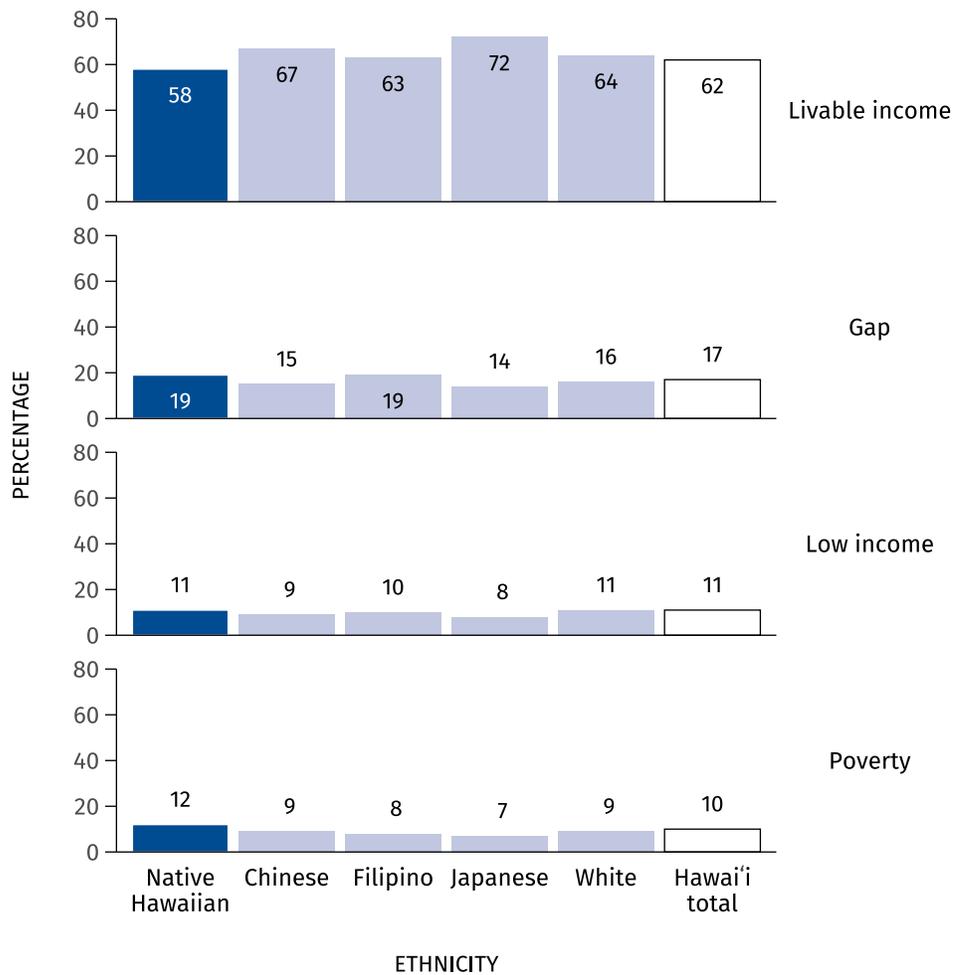
Data source: US Census Bureau, American Community Survey, Public Use Microdata Sample 1-year files

Note 1: The data include subfamilies, which are defined as families that do not maintain their own household but live in a household where the householder or householder's spouse is a relative.

Note 2: Data labels are presented for the first and last points, the maximum and minimum points, and some inflection points where the trend changes.

- Over a ten-year period, there was an increase in the percentage of Native Hawaiian families with a livable income, rising from 56 to 59 percent between 2008 and 2017.
- Between 2008 and 2012, the percentage of Native Hawaiian families with a livable income declined by 4 percentage points.
- Similar decreases between 2008 and 2012 were observed among Chinese, Filipino, and White families, though to a slightly lesser extent (not shown).
- Poverty rates among Native Hawaiian families increased from 11 to 14 percent between 2008 and 2012.

**FIGURE 1.25** Income categories of families  
[among families, by ethnicity, Hawai'i, 2017]



Data source: US Census Bureau, American Community Survey, Public Use Microdata Sample 5-year file

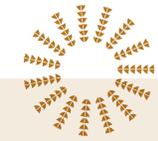
Note 1: The data include subfamilies, which are defined as families that do not maintain their own household but live in a household where the householder or householder's spouse is a relative.

Note 2: The designation "White" in this chart refers to non-Hispanic Whites, alone or in combination with other ethnicities, as defined by the American Community Survey.

- Among the major ethnicities in Hawai'i, Native Hawaiians have the highest percentage of families in poverty (12 percent) and the lowest percentage of families with a livable income (58 percent).
- About one in five Native Hawaiian and Filipino families (19 percent) is in the gap group—the highest rate among the major ethnicities in Hawai'i.
- The proportion of families with low income is similar among Native Hawaiians (11 percent), Filipinos (10 percent), and Whites (11 percent).

Employment, education, age, and occupation all contribute to the livable income status of families. For example, our internal research indicates that families with children, where the parents are older and have higher educational attainment and higher-paying jobs, are more likely to have a livable income. The growing trend to delay marriage and childbearing is another factor related to higher levels of education and earnings (Kamehameha Schools 2019).

A measure that is increasingly used to gauge economic well-being comes from ALICE (asset limited, income constrained, employed) research conducted by Aloha United Way. ALICE provides information about households that are above the federal poverty level but are unable to afford the basic cost of living in Hawai'i. This metric is known as the ALICE threshold (Aloha United Way 2020). According to the 2020 ALICE report, roughly four in every seven Native Hawaiian households are below the ALICE threshold, meaning that the majority of Native Hawaiian households in Hawai'i struggle to make ends meet financially (Aloha United Way 2020).



From 2000 to 2015, Honolulu, Windward, Central, and Kaua'i regions exhibited improved income trends for Native Hawaiian family households.

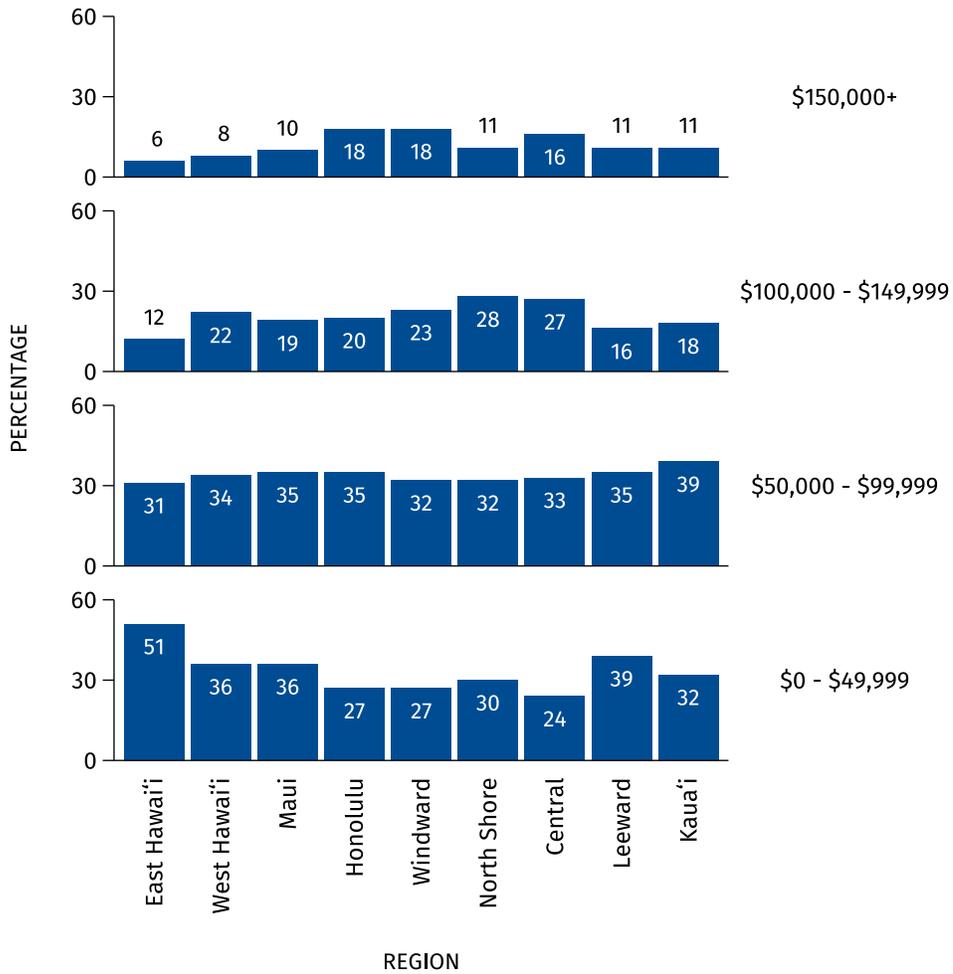
### Income—Regional Highlights

Comparing the distribution of income among family households headed by a Native Hawaiian across regions, East Hawai'i has the highest percentage (51 percent) of households making \$49,999 or less per year and the lowest proportion (6 percent) of households earning \$150,000 or more. By contrast, the Honolulu, Windward, and Central regions have a comparatively lower percentage of Native Hawaiian households earning \$49,999 or less annually and a higher percentage making \$150,000 or more. North Shore and Central have the highest proportion of Native Hawaiian households in the \$100,000 to \$149,999 category (fig. 1.26)

Looking at trends in income over time, Kaua'i had the greatest decrease in the proportion of Native Hawaiian family households earning \$49,999 or less per year, declining from 59 to 32 percent between 2000 and 2015. From 2000 to 2015, the greatest gains among Native Hawaiian family households earning \$150,000 or more per year were in Windward (14 percentage points), Central (13 percentage points), and Honolulu (11 percentage points) (not shown).

In terms of livable income, the majority of Native Hawaiian family households across regions have a livable income, except for in East Hawai'i and Leeward (fig. 1.27).

**FIGURE 1.26** Regional distribution of income of family households headed by a Native Hawaiian  
[by region, Hawai'i, 2015]

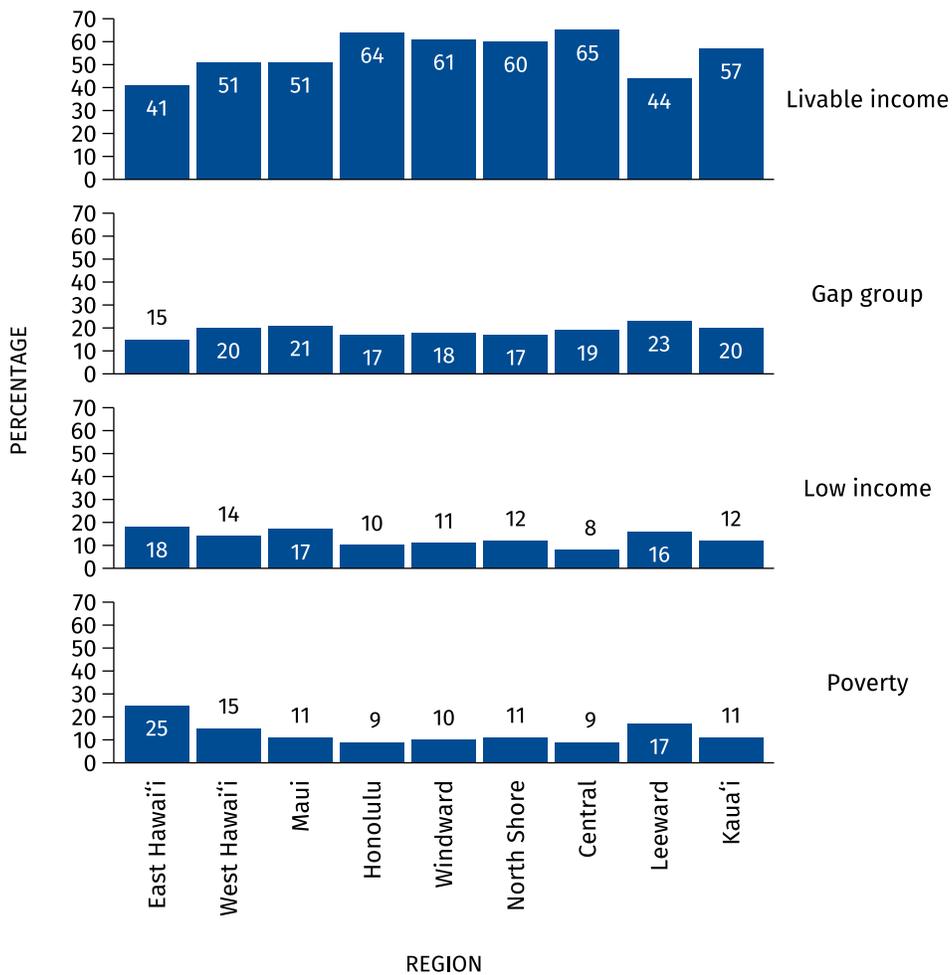


Data source: US Census Bureau, American Community Survey, Selected Population Tables

Note 1: A family household consists of a family and may also include people not related to the householder.

- Comparing regions, East Hawai'i has the highest proportion (51 percent) of family households headed by a Native Hawaiian where the income is \$49,999 or less annually, and the lowest percentage (6 percent) with a family income of \$150,000 or more per year.
- By contrast, family households headed by a Native Hawaiian in the Honolulu, Windward, and Central regions tend to have comparatively higher rates of family income over \$150,000 and are less represented in the lower income range.

**FIGURE 1.27** Income categories among Native Hawaiian family households—regional comparison  
 [among family households headed by a Native Hawaiian, by region, Hawai'i, 2015]



Data source: US Census Bureau, American Community Survey, Selected Population Tables

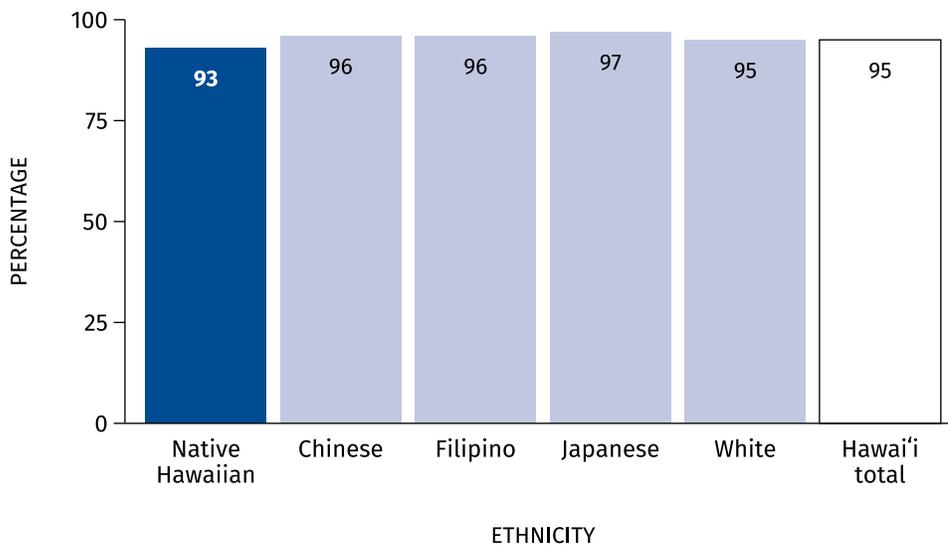
Note 1: A family household consists of a family and may also include people not related to the householder.

- In all regions except East Hawai'i and Leeward, the majority of family households headed by a Native Hawaiian have a livable income.
- Across regions, Leeward has the largest percentage of Native Hawaiian-headed family households in the gap group (23 percent).
- Compared with other regions, East Hawai'i has the largest percentage of Native Hawaiian-headed family households facing poverty (25 percent) and low income (18 percent).

## EMPLOYMENT

The employment rate of Native Hawaiians (93 percent) is lower than that of other groups and the overall Hawai'i total (95 percent) (fig. 1.28). However, the employment rate represents only the population that is in the labor force. Native Hawaiian participation in the labor force is lower than the Hawai'i total. In addition, rates of underemployment (i.e., working less than full time or thirty-five hours per week, when a person otherwise could be working at that level) are also slightly lower among Native Hawaiians, compared with the Hawai'i total (Kamehameha Schools 2019). These findings suggest that addressing employment disparities between Native Hawaiians and other ethnicities in Hawai'i must take into account more than just employment rates.

**FIGURE 1.28** Employment rates  
[among the civilian population in the labor force, by ethnicity, Hawai'i, 2017]



*Data source:* US Census Bureau, American Community Survey, Public Use Microdata Sample 5-year file

Note 1: The labor force is defined as civilians ages 16 and older.

Note 2: The designation "White" in this chart refers to non-Hispanic Whites, alone or in combination with other ethnicities, as defined by the American Community Survey.

- Compared with other major ethnicities in Hawai'i, Native Hawaiians have the lowest employment rate (93 percent).
- The Japanese employment rate is 4 percentage points higher than that of Native Hawaiians; however, this difference is not statistically significant.
- The Hawai'i total employment rate is 95 percent.

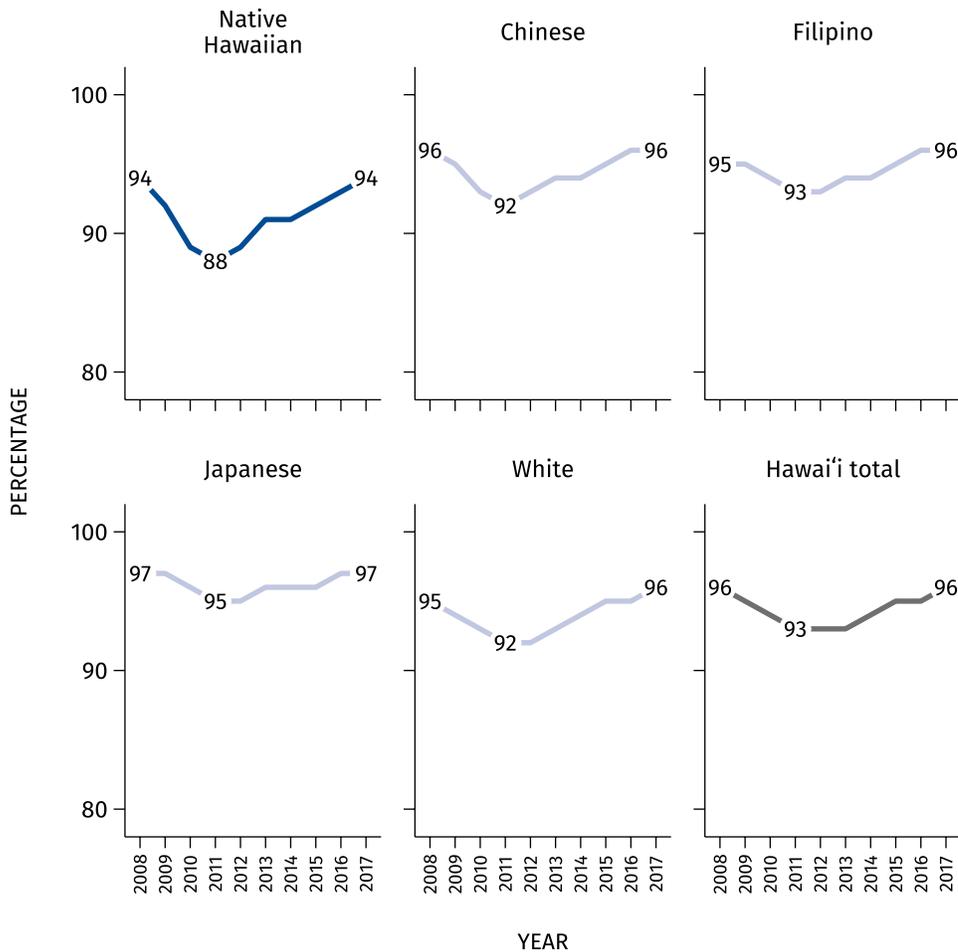
The 2008 recession had a greater effect on the employment rates of Native Hawaiians than it did on the rates of other ethnic groups in Hawai'i (fig. 1.29). Looking across time and Hawai'i, some regions were more affected by the recession than others, in particular, regions that typically have the heaviest reliance on tourism (see [fig. 1.31](#)). Early observations suggest that a similar pattern may ensue in the wake of COVID-19. In a national ranking of “recession-vulnerable” metropolitan areas, Kahului-Wailuku-Lahaina came in second of 382, with a 40 percent share of jobs in 2019 at high risk to be negatively impacted by COVID-19 (Muro, Maxim, and Whiton 2020).



Despite being hit disproportionately hard by the 2008 recession, Native Hawaiians returned to pre-recession employment levels (94 percent) by 2017.



**FIGURE 1.29** Trends in employment rates  
[among the civilian population in the labor force, by ethnicity, Hawai'i, 2008 to 2017]



Data source: US Census Bureau, American Community Survey, Public Use Microdata Sample 1-year files

Note 1: The labor force is defined as civilians ages 16 and older.

Note 2: The designation "White" in this chart refers to non-Hispanic Whites, alone or in combination with other ethnicities, as defined by the American Community Survey.

Note 3: Data labels are presented for the first and last points, the maximum and minimum points, and some inflection points where the trend changes.

- Between 2008 and 2011, employment rates decreased among all major ethnic groups in Hawai'i.
- Native Hawaiian employment rates fell from 94 to 88 percent between 2008 and 2011—the greatest decrease among Hawai'i's major ethnic groups.
- Among Japanese individuals, the employment rate went down by 2 percentage points between 2008 and 2011—the smallest decrease among Hawai'i's major ethnic groups.
- By 2017, all of the major ethnicities in Hawai'i had recovered from the decline in employment experienced between 2008 and 2011.

Slightly lower employment rates among the Native Hawaiian population may partially explain the lower average income among Native Hawaiian families (see [fig. 1.23](#)), higher poverty (see [fig. 1.34](#)), and lower livable income rates (see [fig. 1.25](#)), compared with Hawai'i's other ethnicities.

Other employment data further demonstrate ways in which Native Hawaiian families with children were affected by the 2008 recession. Our analysis shows that from 2008 to 2017, the percentage of children who had at least one working parent fluctuated more among Native Hawaiians than it did among Hawai'i's other major ethnicities. For example, between 2008 and 2012, the proportion of Native Hawaiian children who had at least one working parent decreased from 89 to 85 percent (the greatest decrease among all major ethnicities) and, starting in 2014, began to increase, reaching a high of 90 percent by 2017 (not shown).

### **Employment—Regional Highlights**

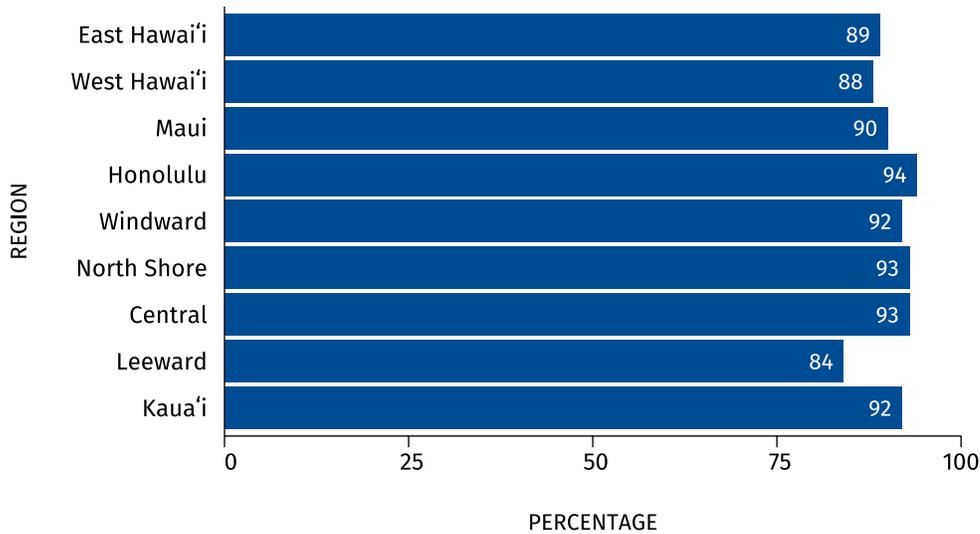
The region where Native Hawaiians have the highest employment rates is Honolulu, followed by North Shore, Central, and Windward. Across all regions, the lowest employment rate among Native Hawaiians is in Leeward (84 percent)—10 percentage points lower than that of Honolulu (fig. 1.30).



Between 2000 and 2015, East Hawai'i, Honolulu, Leeward, and Kaua'i regions saw improved employment rates among Native Hawaiians.



**FIGURE 1.30** Native Hawaiian employment rates—regional comparison  
 [as a percentage of the Native Hawaiian civilian labor force, by region, Hawai‘i, 2015]



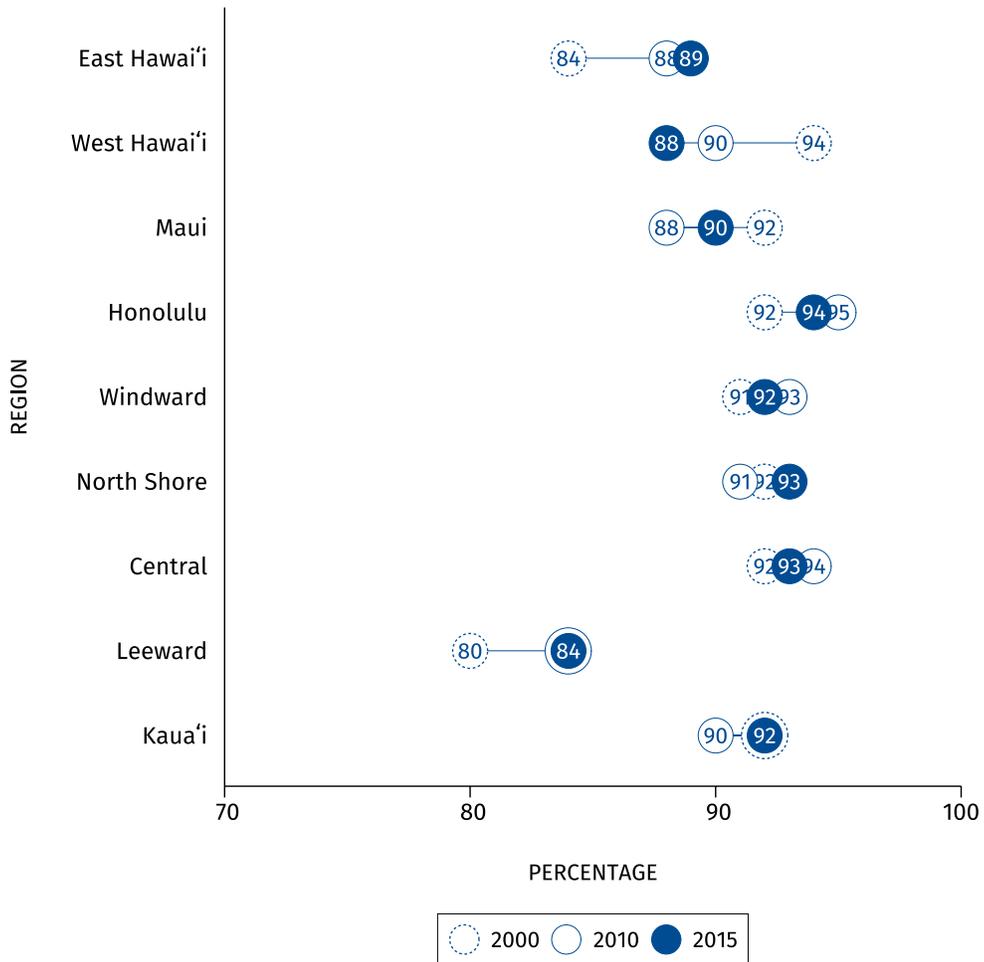
*Data source:* US Census Bureau, American Community Survey, Selected Population Tables

**Note 1:** The labor force is defined as civilians ages 16 and older.

- Four O‘ahu regions have the highest Native Hawaiian employment rates: Honolulu (94 percent), North Shore (93 percent), Central (93 percent), and Windward (92 percent).
- The Native Hawaiian employment rate for Leeward is 84 percent—the lowest rate among regions and 10 percentage points lower than the region with the highest rate of employment (Honolulu).
- Native Hawaiian employment rates in East Hawai‘i, West Hawai‘i, and Maui are significantly lower than those on Kaua‘i and O‘ahu (except Leeward).

Between 2000 and 2015, changes in Native Hawaiian employment rates varied from region to region. All regions, except East Hawai‘i, Honolulu, Kaua‘i, and Leeward, saw decreases in Native Hawaiian employment rates during this time. On Hawai‘i Island, employment increased steadily among Native Hawaiians in East Hawai‘i, while West Hawai‘i experienced a dramatic decrease (6 percentage points). By contrast, employment rates for Native Hawaiians did not change significantly in any region between 2010 and 2015 (fig. 1.31).

**FIGURE 1.31** Trends in Native Hawaiian employment rates—regional comparison  
 [as a percentage of the Native Hawaiian civilian labor force, by region, Hawai'i; 2000, 2010, 2015]



Data source: US Census Bureau, 2011–2015 American Community Survey, Selected Population Tables; US Census Bureau, 2006–2010 American Community Survey, Selected Population Tables; Census 2000, Summary File 4

Note 1: The labor force is defined as civilians ages 16 and older.

Note 2: This chart includes overlapping and sometimes obscured data points. The most recent data points are all visible; older data points that are not discernible suggest little or no change over time.

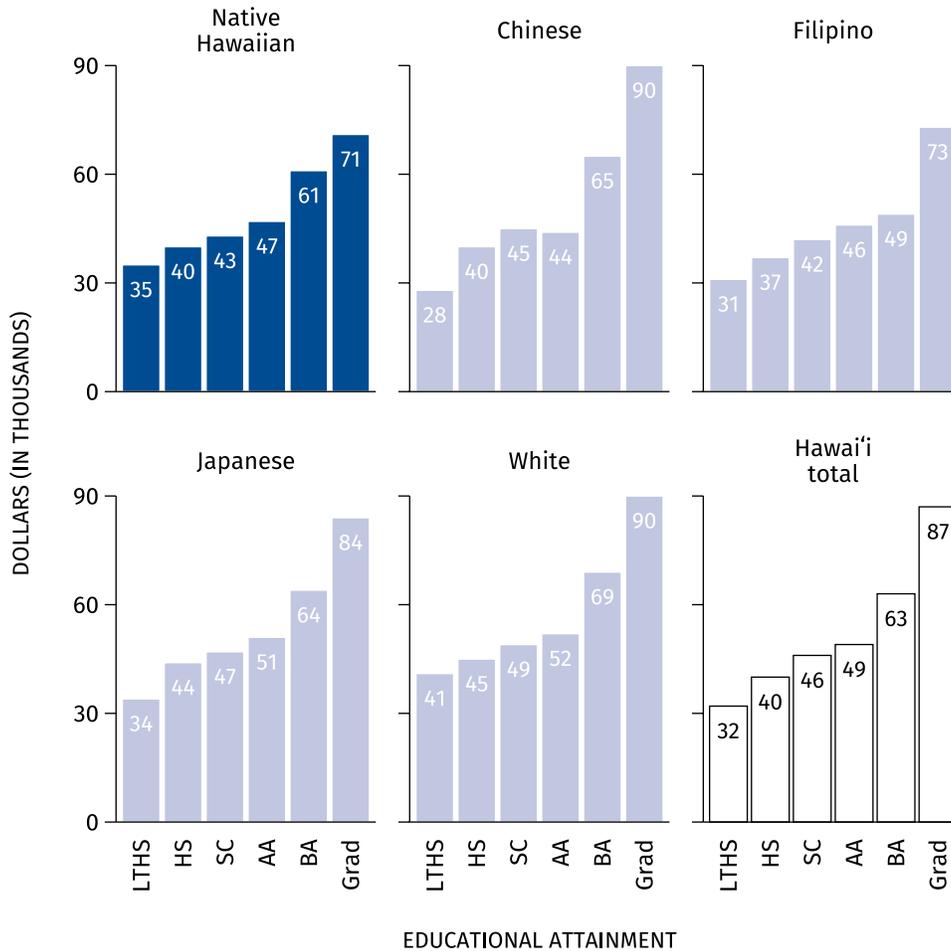
- Between 2000 and 2015, most regions—with the exception of East Hawai'i, Honolulu, Kaua'i, and Leeward—saw decreases in the employment rate.
- The employment rate of Native Hawaiians in East Hawai'i increased steadily from 2000 to 2015; however, Native Hawaiians in West Hawai'i experienced a dramatic decline in employment during the same period, decreasing from 94 to 88 percent between 2000 and 2015.

## EARNINGS AND OCCUPATION

It is widely acknowledged that educational attainment is associated with earnings. Having a college degree, for example, generally results in increased annual earnings and greater earnings over one's life span. The level of education also matters. For instance, over a lifetime of living and working in Hawai'i, an adult with an associate's degree from the University of Hawai'i makes \$360,000 more, on average, than an adult whose highest degree is a high school diploma. The lifetime earnings gap increases to \$950,000 for an adult with a bachelor's degree and \$1,560,000 for an adult with a postgraduate degree (Page et al. 2016). Factors beyond one's level of education also influence earnings, such as age, sex, race/ethnicity, and occupation (Carnevale, Rose, and Cheah 2011).

On the whole, the level of educational attainment and household income among Native Hawaiians is generally lower than that of other major ethnicities (see [figs. 1.23](#) and [1.95](#)). An in-depth analysis reveals that Native Hawaiians who complete college and earn a degree do not always follow the typical education-to-workforce pathway. For example, compared with other ethnicities, Native Hawaiian graduates who hold degrees with higher earning potential are more likely to be in occupations with lower average earnings. More specifically, Native Hawaiians who graduate with a science, engineering, or related degree are relatively more likely to go into the service industry or work for a nonprofit or government organization. We also find that Native Hawaiians who complete college are more likely than their non-Hawaiian counterparts to obtain a degree in education, art, or the humanities (Kamehameha Schools 2019). This may partially explain why Native Hawaiians with college and graduate degrees do not generally realize the same earning gains as other groups ([fig. 1.32](#)).

**FIGURE 1.32 Average earnings, by educational attainment**  
 [in 2017 dollars, among employed individuals ages 25 and older, by ethnicity, Hawai'i, 2017]



Data source: US Census Bureau, American Community Survey, Public Use Microdata Sample 5-year file

Note 1: The designation "White" in this chart refers to non-Hispanic Whites, alone or in combination with other ethnicities, as defined by the American Community Survey.

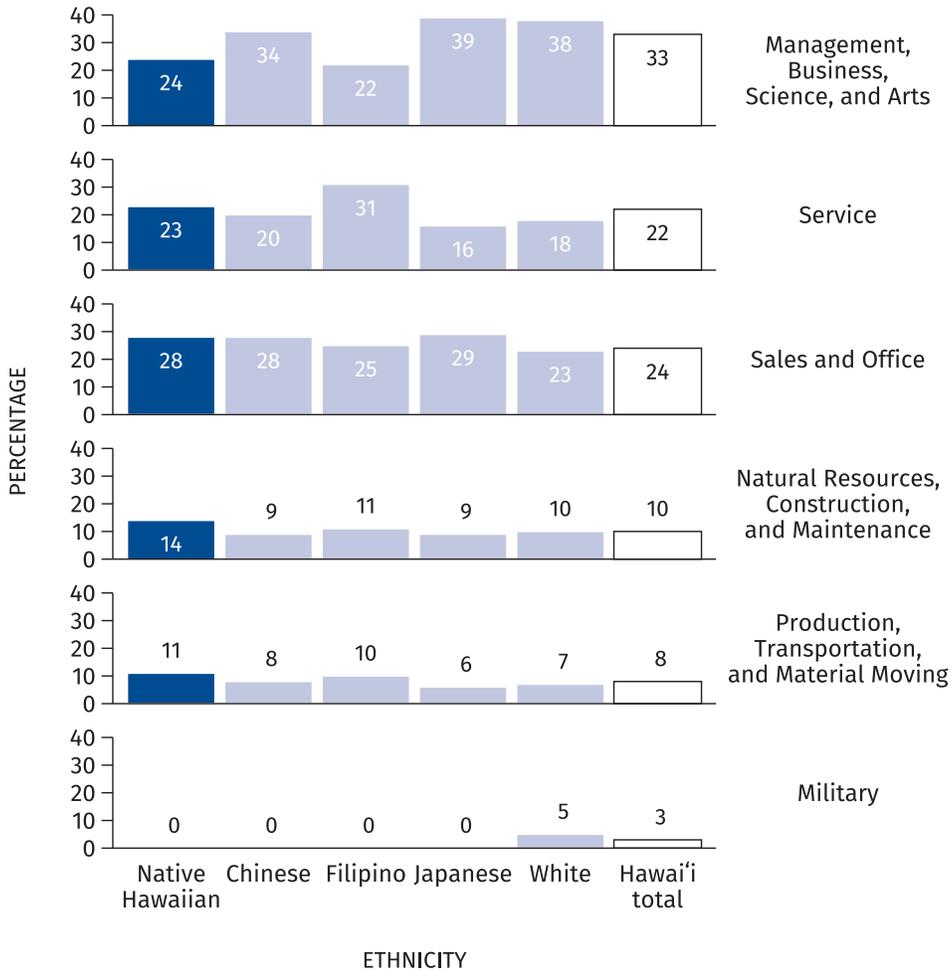
Note 2: LTHS = Less than high school; HS = High school; SC = Some college; AA = Associate's degree; BA = Bachelor's degree; Grad = Graduate degree.

- Higher earnings are consistently associated with higher levels of educational attainment.
- Based on the Hawai'i total, individuals with a graduate degree earn more than \$20,000 more per year than do those with a bachelor's degree.
- Among Native Hawaiians, those with a bachelor's degree earn nearly \$20,000 more than individuals whose highest degree is a high school diploma.

While we do not have data that specifically explain the differences in the levels of education and earnings among Native Hawaiians, possible reasons may include potential discriminatory practices, lack of the right type of jobs in Hawai'i, lack of "connections" to higher-paying industries, and easier money from manual labor jobs. Regarding the latter point, our internal analysis shows that one-quarter of occupations held by Native Hawaiians are manual labor jobs (Kamehameha Schools 2019). Manual jobs generally pay more than jobs in the Service or Sales and Office categories and do not require postsecondary education. In fact, there are diminishing returns on wages with higher education in these types of jobs. This means that there is not as much incentive to pursue higher education for those working or planning to work in these occupations. In other words, Native Hawaiians in occupations other than manual labor are relatively more likely to experience the gains associated with higher educational attainment.

Looking more broadly across occupations, the most common occupation category among Native Hawaiians is Sales and Office—which happens to be the second-lowest paying occupation category (Kamehameha Schools 2019). Among other ethnic groups in Hawai'i (except Filipinos), jobs in Management, Business, Science, and Arts are the most common occupations (fig. 1.33).

**FIGURE 1.33** Occupation categories of employed individuals  
[among employed individuals, by ethnicity, Hawai'i, 2017]



Data source: US Census Bureau, American Community Survey, Public Use Microdata Sample 5-year file  
 Note 1: The designation "White" in this chart refers to non-Hispanic Whites, alone or in combination with other ethnicities, as defined by the American Community Survey.

- More than one-fourth (28 percent) of employed Native Hawaiians work in Sales and Office—the most common occupation category among Native Hawaiians.
- Among employed Native Hawaiians, occupations in the Service category (23 percent) are as common as occupations in Management, Business, Science, and Arts (24 percent).
- Compared with Hawai'i's other major ethnic groups, Native Hawaiians have the highest combined proportion (25 percent) of employed individuals working in Natural Resources, Construction, and Maintenance or Production, Transportation, and Material Moving occupations.
- For the Hawai'i total, one-third (33 percent) of employed individuals work in Management, Business, Science, and Arts—the most common occupation category in Hawai'i.

Based on data from the US Census, educational attainment is the most significant predictor of occupation category. The second-most significant predictor is sex, as males are much more likely to perform jobs involving manual labor (Kamehameha Schools 2019).

In a separate analysis, we find that Native Hawaiian males are more likely than Native Hawaiian females to be in labor-intensive jobs in Natural Resources, Construction, and Maintenance, and in Production, Transportation, and Material Moving (Kamehameha Schools 2019). As a group, these job categories include the second- and third-highest paying jobs in Hawai'i, excluding military (Kamehameha Schools 2019). Many of these occupations do not require a college degree. As a result, there may be economic incentives for some Native Hawaiian males to enter directly into the workforce and begin earning wages, taking advantage of relatively higher-paying occupations that do not require college degrees.

## Poverty and Public Assistance

Poverty is described as “a denial of choices and opportunities, a violation of human dignity. It means lack of basic capacity to participate effectively in society. It means not having enough to feed and clothe a family” (United Nations 1998, under “The Challenge”). The US Census Bureau takes several economic variables into account when classifying households that experience poverty. In terms of income, the poverty threshold for a family of four (with two children under the age of eighteen) is about \$26,000 a year. The US Census does not differentiate thresholds geographically.

In Hawai'i, where the cost of living is disproportionately higher than what is typical on the US continent, the poverty threshold is closer to about \$27,900 for a family of four (Aloha United Way 2020). However, the basic household expenses for a family of four are about \$72,350, which is more than double the adjusted federal poverty guideline. This would mean one parent would need to earn \$36.17 per hour—a significant challenge considering that more than half of all jobs in Hawai'i do not exceed \$20 per hour. This explains why a significant number of families are identified as being asset limited, income constrained, employed—or “ALICE households” (Aloha United Way 2020).

To support those in poverty, public assistance programs are made available to individuals and families that demonstrate financial need. Public assistance programs have shown both short-term effects (e.g., helping to immediately reduce poverty and encourage working opportunities) and long-term effects (e.g., contributing to health, educational, and employment outcomes) (Sherman, Trisi, and Parrott 2013). It is important to keep in mind, however, that a majority of assistance is generally allocated toward healthcare spending and services, resulting in gaps for those who require assistance with other basic needs such as housing and childcare (Aloha United Way 2017).

## POVERTY

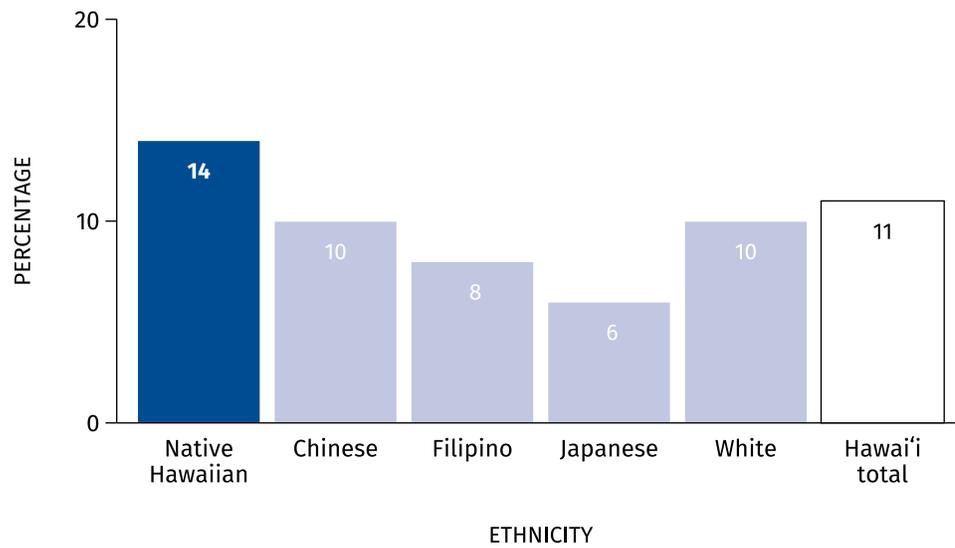
Compared with other ethnic majority groups in Hawai'i, Native Hawaiians continue to be more economically disadvantaged as evidenced by lower incomes, higher reliance on public assistance, and higher poverty rates (US Department of Housing and Urban Development 2017). Understanding this economic disadvantage can be explained, in part, by the lingering and persistent effects of the 2008 recession, which disproportionately affected Native Hawaiian communities with higher rates of unemployment and lower levels of income (Hostetter 2014; US Department of Housing and Urban Development 2017).

Employment is often viewed as a means to escape poverty. In 2016, more than half of the 40.6 million Americans living in poverty were working-age adults (Stevens 2018). An internal report by Kamehameha Schools (2019) found that among Native Hawaiian individuals in poverty, about one-third work, and among those who work, about one-third are employed full time. However, the report also noted that Native Hawaiians in poverty who are employed tend to have jobs in lower-paying occupations (e.g., Service or Sales and Office).

These findings suggest two things: (1) A number of adults in poverty are working or are able to work, and (2) Native Hawaiians in poverty encounter barriers to working full time and finding higher-paying positions. Therefore, while policies supporting employment opportunities—as a means to reduce poverty—may be favorable, they must account for the broader socioeconomic conditions that may impact the type of work individuals are able to engage in (e.g., costs of childcare, dealing with illness and disability, educational attainment, etc.).

In Hawai'i, 14 percent of Native Hawaiian individuals live in poverty—a higher rate than that of other major ethnicities and the Hawai'i total (fig. 1.34). While the poverty rate among Native Hawaiian individuals in recent years does not differ significantly from that of a decade ago, there was an increase in poverty rates from 2008 to 2013, similar to what most of Hawai'i's other major ethnicities experienced (fig. 1.35). Individuals who are young and female make up a disproportionate percentage of Native Hawaiians living in poverty (Kamehameha Schools 2019).

**FIGURE 1.34** Individuals in poverty  
[as a percentage of individuals, by ethnicity, Hawai'i, 2017]



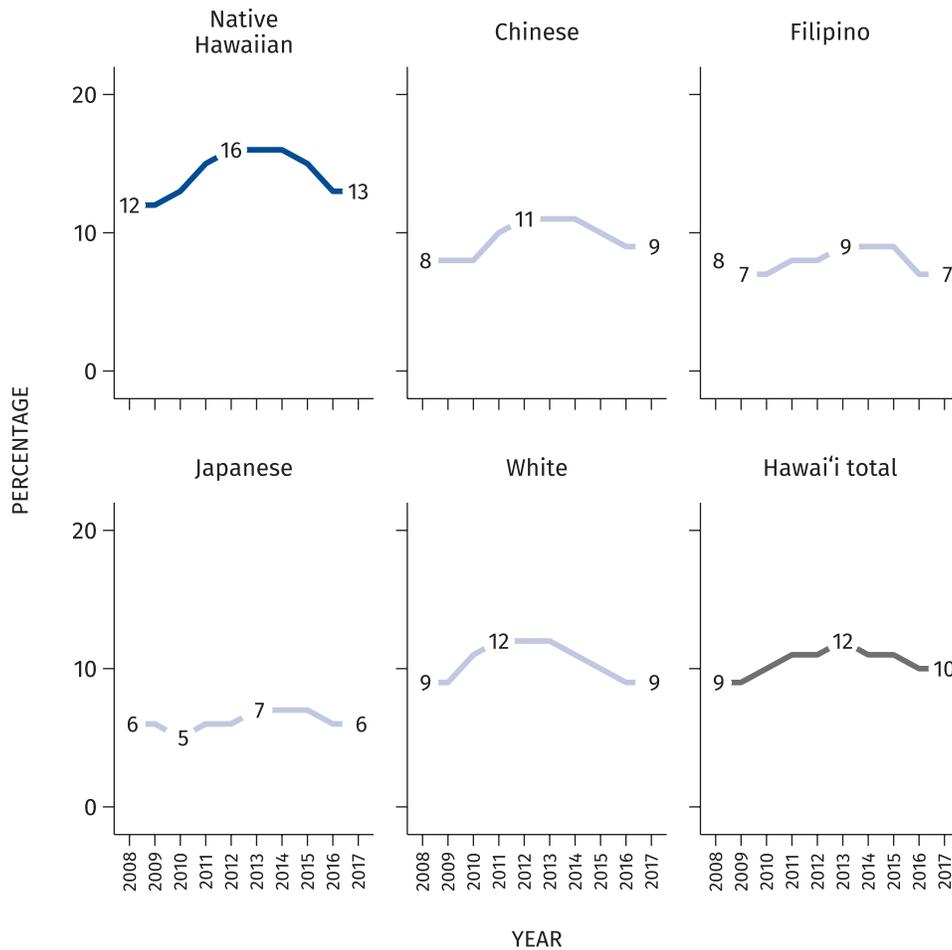
*Data source:* US Census Bureau, American Community Survey, Public Use Microdata Sample 5-year file

Note 1: The designation "White" in this chart refers to non-Hispanic Whites, alone or in combination with other ethnicities, as defined by the American Community Survey.

Note 2: These calculations exclude people who are institutionalized, in military group quarters, in college dormitories, and unrelated individuals younger than age fifteen.

- Among Native Hawaiian individuals, one in seven (14 percent) lives in poverty—the highest percentage among all major ethnicities in Hawai'i.
- Japanese have the lowest poverty rate (6 percent) among the major ethnicities in Hawai'i.
- For the Hawai'i total, one in nine individuals (11 percent) is in poverty.

**FIGURE 1.35 Trends in individuals in poverty**  
 [as a percentage of individuals, by ethnicity, Hawai'i, 2008 to 2017]

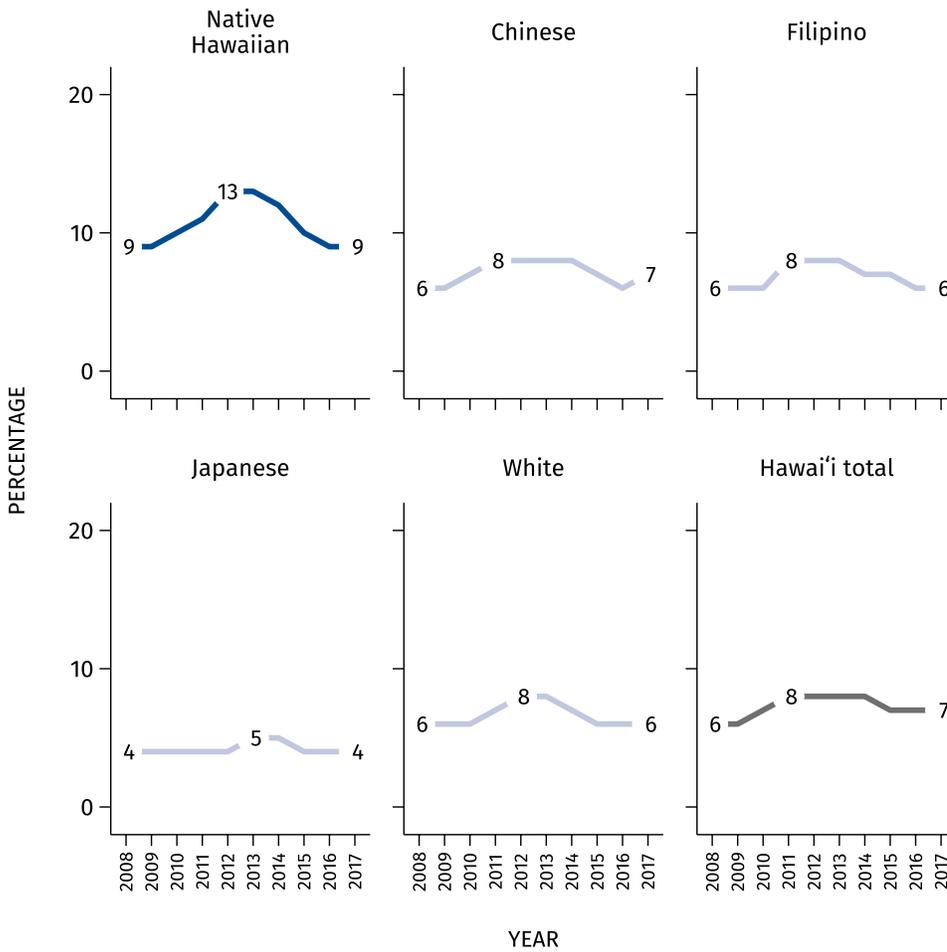


*Data source:* US Census Bureau, American Community Survey, Public Use Microdata Sample 1-year files  
 Note 1: The designation “White” in this chart refers to non-Hispanic Whites, alone or in combination with other ethnicities, as defined by the American Community Survey.  
 Note 2: These calculations exclude people who are institutionalized, in military group quarters, in college dormitories, and unrelated individuals younger than age fifteen.  
 Note 3: Data labels are presented for the first and last points, the maximum and minimum points, and some inflection points where the trend changes.

- Comparing 2008 and 2017, poverty rates for Native Hawaiian individuals—and for the Hawai'i total—did not change significantly.
- Over a six-year period, the poverty rate among Native Hawaiians increased more than that of other major ethnicities in Hawai'i—from 12 to 16 percent between 2008 and 2013.
- From 2008 to 2013, individual poverty rates increased among all of Hawai'i's major ethnic groups (except Filipinos, where the increase was not statistically significant).
- Starting in 2013, poverty rates decreased for all major ethnicities in Hawai'i; among Native Hawaiians, the poverty rate decreased from 16 to 13 percent between 2014 and 2017.

Among Native Hawaiian family households, the poverty rate was the same in 2017 as it was in 2008 (fig. 1.36). However, there was a 4 percent increase in poverty between 2009 and 2013, likely due to the impacts of the 2008 recession.

**FIGURE 1.36** Trends in family households in poverty  
[as a percentage of family households, by household ethnicity, Hawai'i, 2008 to 2017]



Data source: US Census Bureau, American Community Survey, Public Use Microdata Sample 1-year files

Note 1: A family household consists of a family and may also include people not related to the householder.

Note 2: The designation "White" in this chart refers to non-Hispanic Whites, alone or in combination with other ethnicities, as defined by the American Community Survey.

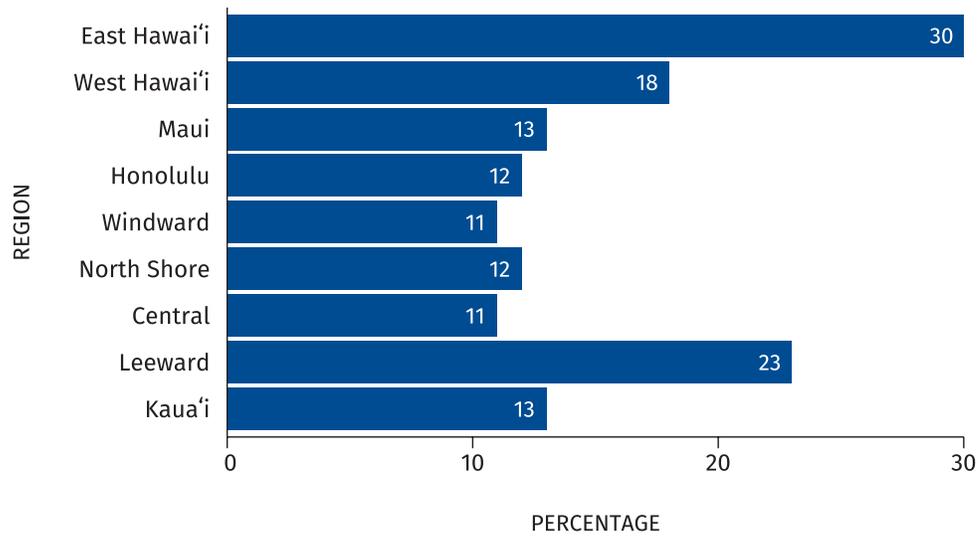
Note 3: Data labels are presented for the first and last points, the maximum and minimum points, and some inflection points where the trend changes.

- Looking at the decade spanning 2008 to 2017, poverty rates of Native Hawaiian family households (9 percent) did not change.
- From 2009 to 2013, poverty rates of Native Hawaiian family households climbed 4 percentage points—a greater increase than that of any other major ethnicity in Hawai'i.
- From 2013 to 2016, family household poverty rates declined for all major ethnicities in Hawai'i (except Japanese, where the decrease was not statistically significant).
- Poverty rates for Japanese family households did not change significantly between 2008 and 2017.

### **Poverty—Regional Highlights**

The section above summarizes patterns of poverty among Native Hawaiians and other ethnic groups across Hawai'i as a whole. These data tend to track closely with data for urban Honolulu, due to its relatively high population. However, when taking a regional perspective, differences among Native Hawaiians in poverty emerge, both at the individual and household level. For example, the highest percentages of Native Hawaiian individuals living in poverty are in East Hawai'i (30 percent), Leeward (23 percent), and West Hawai'i (18 percent). Conversely, Native Hawaiians in the Windward and Central regions have the lowest poverty rates (11 percent) (fig. 1.37). Looking at the years spanning 2010 to 2015, data show an increase in the percentage of Native Hawaiian individuals in poverty in Kaua'i and West Hawai'i (fig. 1.38).

**FIGURE 1.37** Native Hawaiians in poverty—regional comparison  
[as a percentage of Native Hawaiians, by region, Hawai'i, 2015]

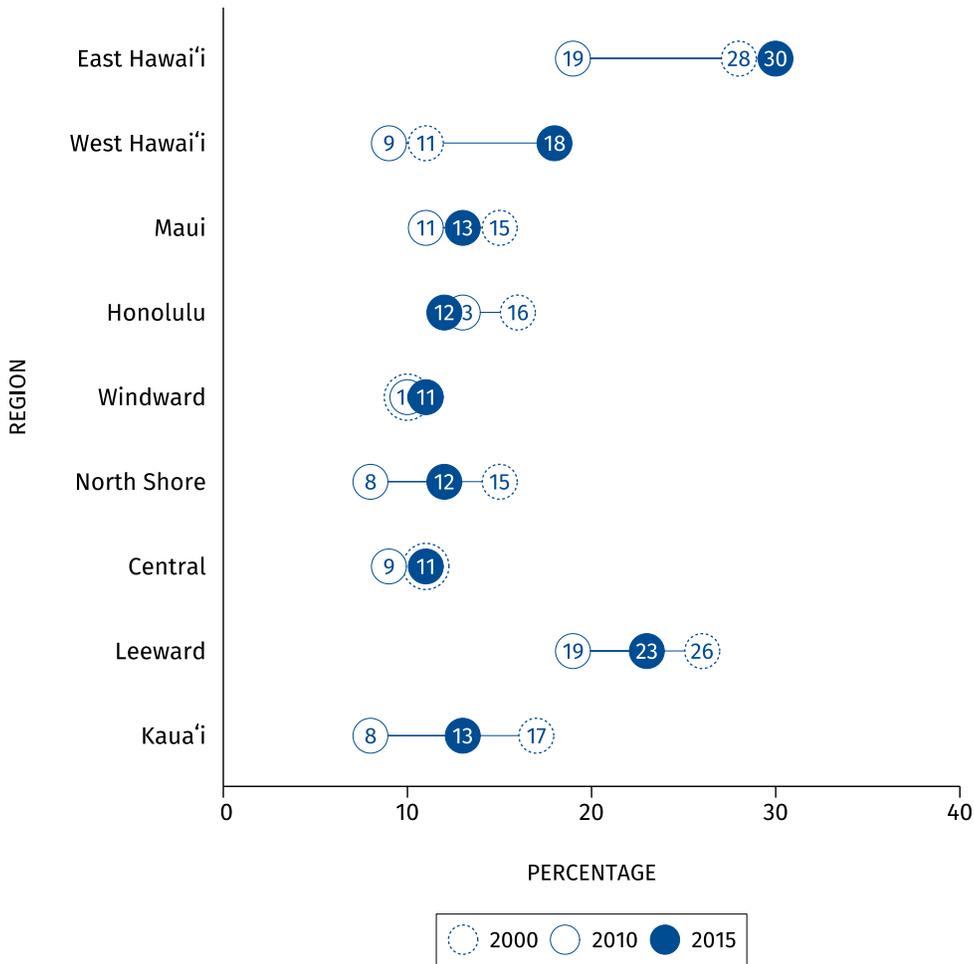


*Data source:* US Census Bureau, American Community Survey, Selected Population Tables

Note 1: These calculations exclude people who are institutionalized, in military group quarters, in college dormitories, and unrelated individuals younger than age fifteen.

- Across regions, poverty rates among Native Hawaiians are highest in East Hawai'i (30 percent), Leeward (23 percent), and West Hawai'i (18 percent).
- The Native Hawaiian poverty rates in Maui, Honolulu, Windward, North Shore, Central, and Kaua'i regions are not significantly different from each other.

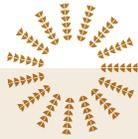
**FIGURE 1.38** Trends in Native Hawaiians in poverty—regional comparison  
 [as a percentage of Native Hawaiians, by region, Hawai'i; 2000, 2010, 2015]



*Data source:* US Census Bureau, 2011–2015 American Community Survey, Selected Population Tables; US Census Bureau, 2006–2010 American Community Survey, Selected Population Tables; Census 2000, Summary File 4  
 Note 1: These calculations exclude people who are institutionalized, in military group quarters, in college dormitories, and unrelated individuals younger than age fifteen.

- Among Native Hawaiians in West Hawai'i, the individual poverty rate increased 7 percentage points, rising from 11 to 18 percent between 2010 and 2015.
- Individual poverty rates also increased significantly among Native Hawaiians in the Kaua'i region—from 8 to 13 percent between 2010 and 2015.
- Maui, Honolulu, Windward, North Shore, and Central regions had relatively consistent rates of poverty between 2010 and 2015.

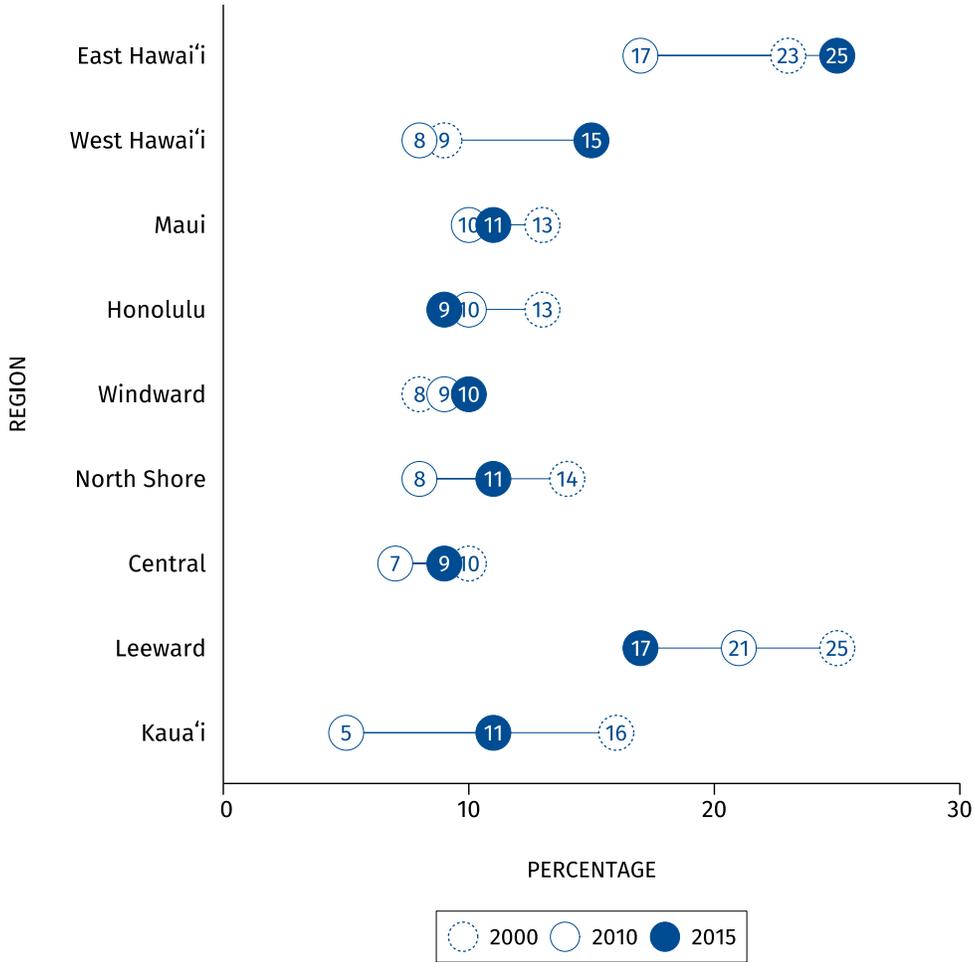
Regional differences in poverty rates are also evident among Native Hawaiian family households. For example, between 2000 and 2015, the Leeward region saw a downward trend in poverty rates for Native Hawaiian family households, declining from 25 to 17 percent. However, during the same period, Native Hawaiian households on Hawai'i Island saw increases in family poverty, with a large jump in West Hawai'i (fig. 1.39).



In the Leeward region, poverty rates for Native Hawaiian family households decreased from 25 to 17 percent between 2000 and 2015.



**FIGURE 1.39** Trends in Native Hawaiian family households in poverty—regional comparison  
 [as a percentage of households headed by a Native Hawaiian, by region, Hawai'i; 2000, 2010, 2015]



*Data source:* US Census Bureau, 2011–2015 American Community Survey, Selected Population Tables; US Census Bureau, 2006–2010 American Community Survey, Selected Population Tables; Census 2000, Summary File 4  
 Note 1: A family household consists of a family and may also include people not related to the householder.

- From 2010 to 2015, poverty rates of family households headed by a Native Hawaiian increased significantly in East Hawai'i (17 to 25 percent), West Hawai'i (8 to 15 percent), and Kaua'i (5 to 11 percent).
- From 2000 to 2015, the Leeward region saw a downward trend in the poverty rate among family households headed by a Native Hawaiian.
- In the Maui, Honolulu, Windward, North Shore, Central, and Leeward regions, poverty rates of family households headed by a Native Hawaiian did not change significantly from 2010 to 2015.

## PUBLIC ASSISTANCE

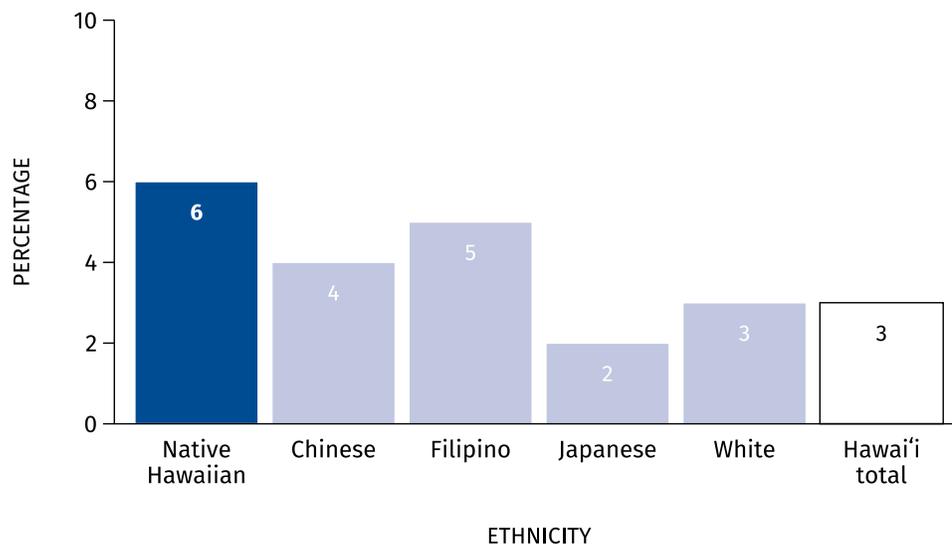
Among Native Hawaiians, the general profile of those receiving public assistance is similar to those who are in poverty: female, young, and working relatively few hours (Kamehameha Schools 2019). In addition, Native Hawaiians receiving public assistance are likely to live in single-female families with children.

In this section, we present data on two key federal programs in Hawai'i: public assistance income and food stamps reciprocity.

### Public Assistance Income

Public assistance income includes cash benefits for basic needs and essentials, as well as temporary assistance to needy families (TANF), which is a time-limited welfare reform program for adults with children. In Hawai'i, Native Hawaiian households are more likely than households of other ethnicities to receive public assistance income (fig. 1.40).

**FIGURE 1.40** Households with public assistance income  
[as a percentage of households, by household ethnicity, Hawai'i, 2017]



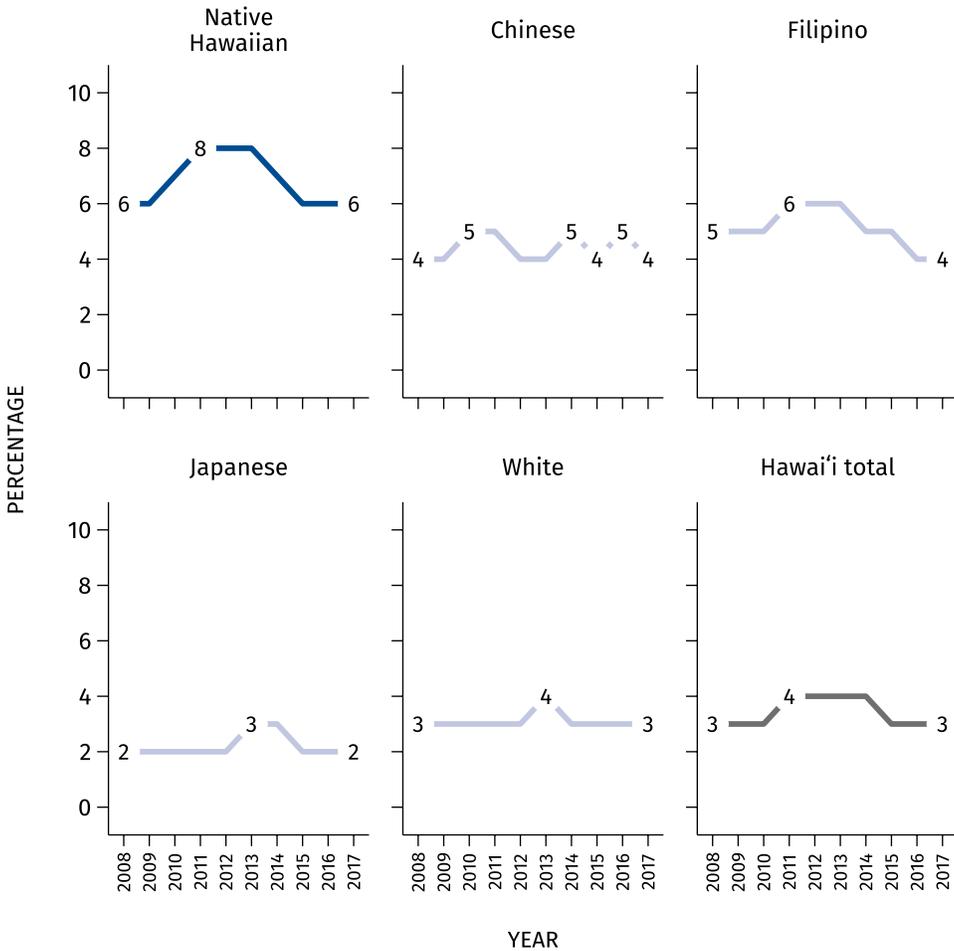
*Data source:* US Census Bureau, American Community Survey, Public Use Microdata Sample 5-year file

*Note 1:* The designation "White" in this chart refers to non-Hispanic Whites, alone or in combination with other ethnicities, as defined by the American Community Survey.

- Among Native Hawaiian households, approximately one in seventeen (6 percent) receives public assistance income—twice the rate of the Hawai'i total (3 percent).

Trends for Native Hawaiian households receiving public assistance income indicate little change over the past decade. Despite increased rates following the 2008 recession,<sup>8</sup> the proportion of Native Hawaiians receiving public assistance income in 2017 returned to a similar rate as it was in 2008 (fig. 1.41). Still, when compared with other ethnicities and the Hawai'i total, Native Hawaiian households were more likely to receive public assistance income.

**FIGURE 1.41** Trends in households with public assistance income  
[as a percentage of households, by household ethnicity, Hawai'i, 2008 to 2017]



Data source: US Census Bureau, American Community Survey, Public Use Microdata Sample 1-year files

Note 1: The designation “White” in this chart refers to non-Hispanic Whites, alone or in combination with other ethnicities, as defined by the American Community Survey.

Note 2: Data labels are presented for the first and last points, the maximum and minimum points, and some inflection points where the trend changes.

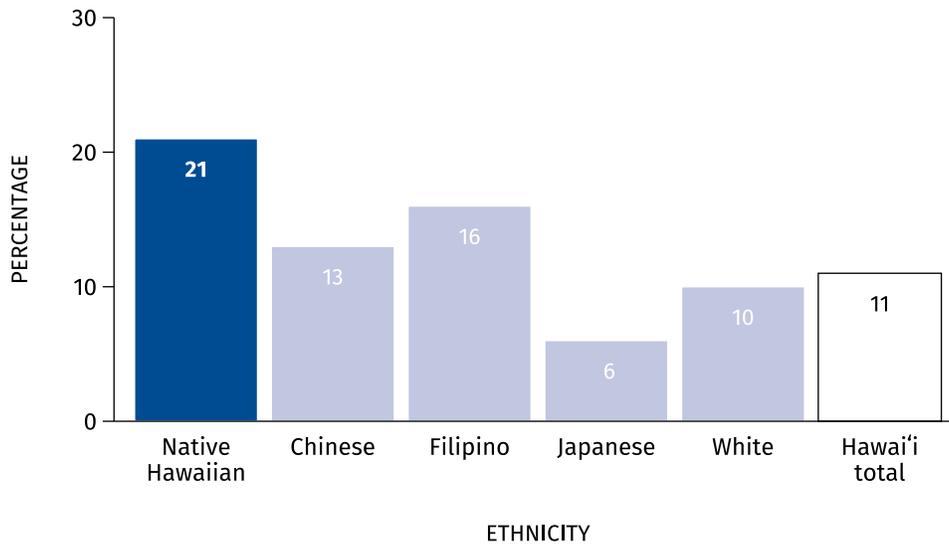
<sup>8</sup> From about 2007 to 2011, there were large increases nationwide in the number of low-income households that qualified for help due to rising unemployment rates, as well as the number of already eligible households that signed up for assistance. At the same time, safety net programs saw significant spending (e.g., SNAP funding increased significantly as part of the Recovery Act).

- By 2017, the percentage of Native Hawaiian households receiving public assistance was the same as it was in 2008 (6 percent).
- In the years following the recession, there was an increase in public assistance reciprocity among Native Hawaiian households, going from 6 to 8 percent between 2008 and 2011.
- From 2008 to 2011, public assistance reciprocity increased 1 percentage point for the Hawai'i total—a small but significant difference.
- By 2017, rates of public assistance reciprocity for all households in Hawai'i had returned to their 2008 levels.

### **Food Stamps**

Food stamps are part of the Supplemental Nutrition Assistance Program (SNAP). As with public assistance income, food stamp reciprocity is higher among Native Hawaiian households than it is among other ethnicities (fig. 1.42).

**FIGURE 1.42** Households receiving food stamps  
[as a percentage of households, by household ethnicity, Hawai'i, 2017]



*Data source:* US Census Bureau, American Community Survey, Public Use Microdata Sample 5-year file

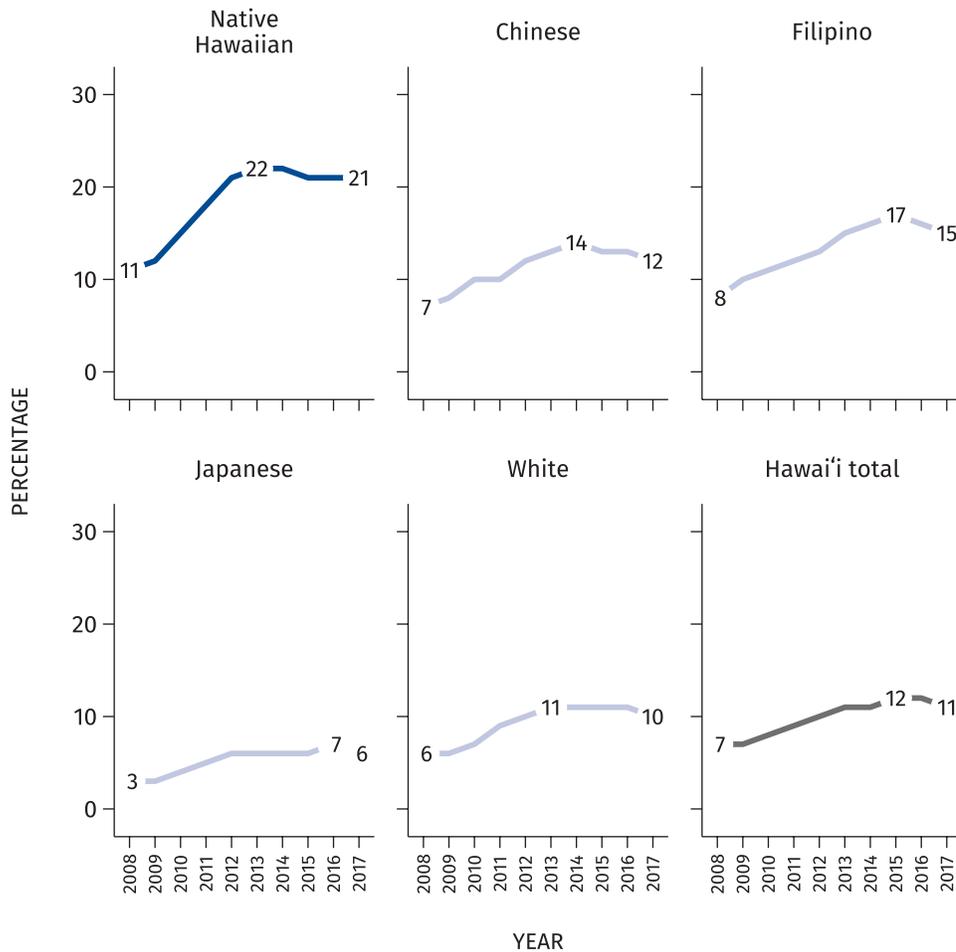
Note 1: Food stamps are part of the Supplemental Nutrition Assistance Program (SNAP).

Note 2: The designation "White" in this chart refers to non-Hispanic Whites, alone or in combination with other ethnicities, as defined by the American Community Survey.

- About one in five Native Hawaiian households (21 percent) receives food stamps—nearly twice the rate of the Hawai'i total (11 percent).
- There is a significant difference from ethnicity to ethnicity in the proportion of households receiving food stamps, with Native Hawaiian households being the most likely to receive such assistance.

Trend data reveal a significant increase in the proportion of Native Hawaiian households receiving food stamps, nearly doubling from 2008 to 2017 (fig. 1.43).

**FIGURE 1.43** Trends in households receiving food stamps  
[as a percentage of households, by household ethnicity, Hawai'i, 2008 to 2017]



Data source: US Census Bureau, American Community Survey, Public Use Microdata Sample 1-year files

Note 1: Food stamps are part of the Supplemental Nutrition Assistance Program (SNAP).

Note 2: The designation "White" in this chart refers to non-Hispanic Whites, alone or in combination with other ethnicities, as defined by the American Community Survey.

Note 3: Data labels are presented for the first and last points, the maximum and minimum points, and some inflection points where the trend changes.

- From 2008 to 2017, the proportion of Native Hawaiian households receiving food stamps increased significantly, going from 11 to 21 percent over a ten-year period.
- Among Native Hawaiian households, the food stamp reciprocity rate has remained at an elevated level since 2013.
- In 2017, the proportion of Native Hawaiian households that received food stamps (21 percent) was almost double that of the Hawai'i total (11 percent).
- Between 2008 and about 2014, food stamp reciprocity increased significantly among all of Hawai'i's major ethnicities.

It is important to acknowledge that program structure and policy changes from 2000 to 2015 may be the cause of some of the changes reflected in the preceding public assistance data. For example, during the 2008 recession, some public assistance programs responded to families in need more adequately than others did. While SNAP benefited an estimated 8.4 million people (likely due to flexible eligibility requirements), TANF benefited 1.3 million people. Some scholars conclude that TANF was not designed to support extreme economic hardship due to its block grant structure that limited access and its work requirements, which were difficult to meet given the lack of available jobs (Hall 2015; Pavetti, Trisi, and Schott 2011). In late 2008, an additional stipulation was added, requiring applicants to undergo a compliance period before benefits approval (Kamehameha Schools 2019).

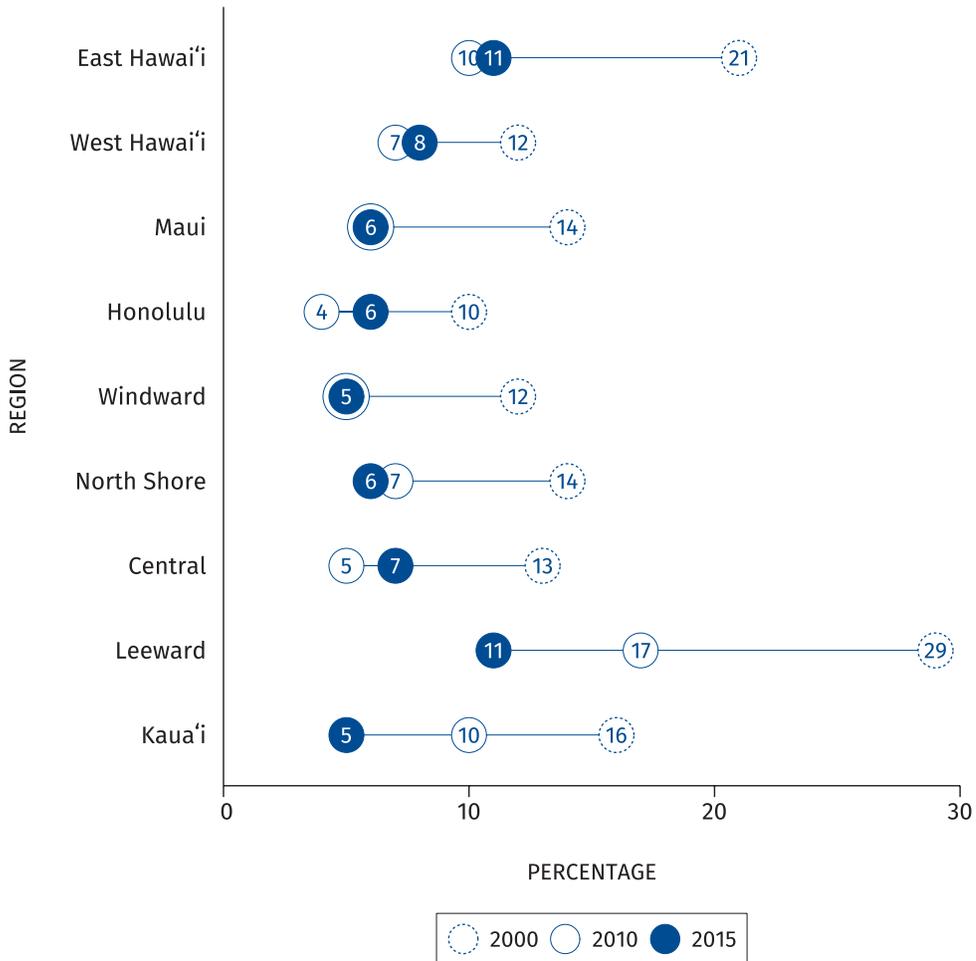
The resulting impact was that some families benefited more from public assistance programs than others did. For instance, between 2004 and 2010, poor, single-mother households received, on average, 25 percent more in assistance, while those with slightly higher incomes received, on average, 54 percent more in assistance (Moffitt 2014).

### **Public Assistance—Regional Highlights**

American Community Survey data from 2000 to 2015 highlight regional trends in the prevalence of Native Hawaiian-headed households receiving public assistance income. On the whole, the percentage of Native Hawaiian-headed households receiving public assistance decreased in all regions between 2000 and 2015. The greatest decrease was in the Leeward region, which declined from 29 to 11 percent between 2000 and 2015. During the same period, Honolulu had the smallest decrease (4 percentage points) in Native Hawaiian-headed households receiving public assistance (fig. 1.44).

Given the upward trend in poverty rates among Native Hawaiian households in several regions during the same period (see [fig. 1.39](#)), the decrease in public assistance income may not necessarily translate to improved economic status. One possible reason for this is related to the percentage of households headed by a single mother. Households headed by a single mother, compared with married-couple households, generally have higher poverty rates (Danziger, Chavez, and Cumberworth 2012) and received less public assistance during the 2008 recession due to TANF restrictions. Our data suggest that regions such as East Hawai'i and Leeward, which have the highest poverty rates compared with other regions (see [fig. 1.39](#)), also have higher proportions of Native Hawaiian family households led by a single mother (see [fig. 1.15](#)).

**FIGURE 1.44** Trends in Native Hawaiian-headed households with public assistance income—regional comparison  
[as a percentage of households headed by a Native Hawaiian, by region, Hawai'i; 2000, 2010, 2015]

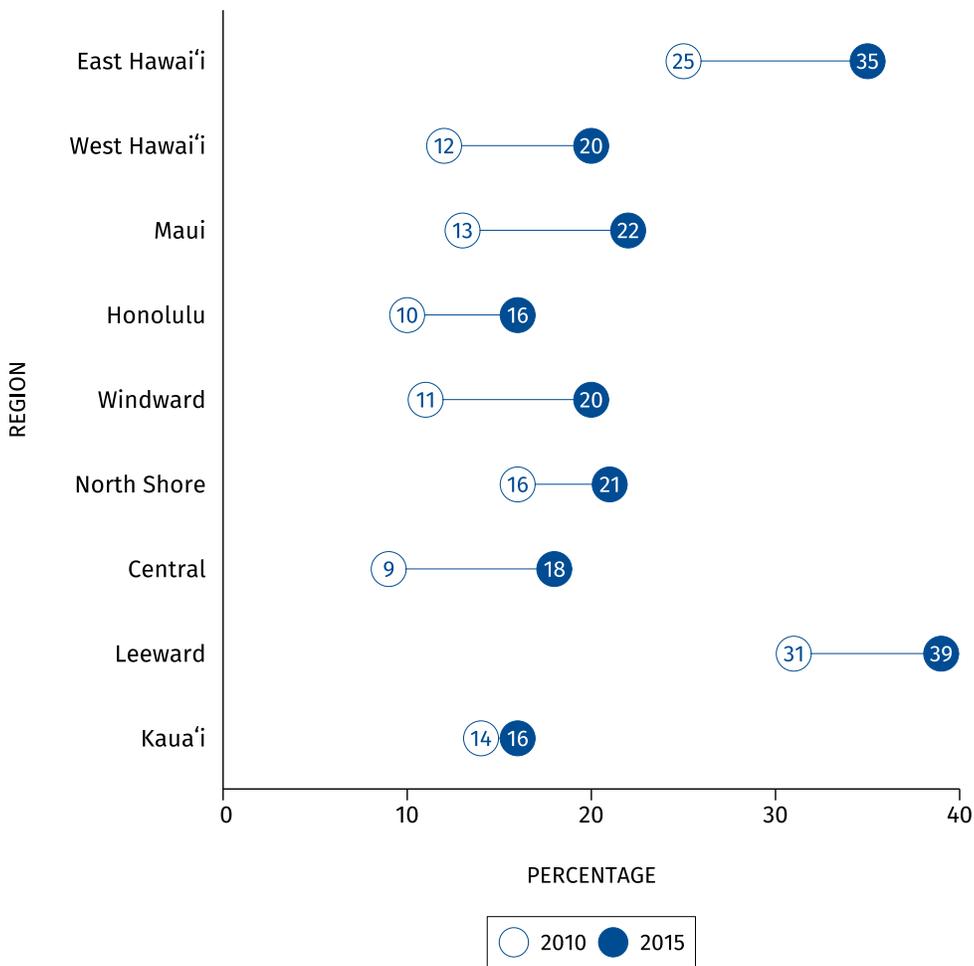


*Data source:* US Census Bureau, 2011–2015 American Community Survey, Selected Population Tables; US Census Bureau, 2006–2010 American Community Survey, Selected Population Tables; Census 2000, Summary File 4

- Since 2000, the percentage of Native Hawaiian-headed households receiving public assistance income has decreased in all regions.
- The Leeward region had the largest decline in the proportion of Native Hawaiian-headed households with public assistance income—decreasing from 29 to 11 percent between 2000 and 2015.
- From 2010 to 2015, the percentage of Native Hawaiian-headed households receiving public assistance increased significantly in Honolulu but decreased significantly in Leeward and Kaua'i.
- In 2010 and 2015, the Maui, Honolulu, Windward, North Shore, and Central regions all had similar rates of public assistance reciprocity among households headed by a Native Hawaiian.

In contrast to declining rates of public assistance income across regions, the proportion of Native Hawaiian-headed households receiving food stamps increased in all regions from 2010 to 2015, in many cases by 7 to 10 percent. North Shore and Kaua'i were the only regions where the increase was not statistically significant (fig. 1.45).

**FIGURE 1.45** Trends in Native Hawaiian-headed households receiving food stamps—regional comparison  
 [as a percentage of households headed by a Native Hawaiian, by region, Hawai'i; 2010, 2015]



Data source: US Census Bureau, 2015 American Community Survey (years 2011 to 2015 combined), Selected Population Tables; US Census Bureau, 2010 American Community Survey (years 2006 to 2010 combined), Selected Population Tables

Note 1: Food stamps are part of the Supplemental Nutrition Assistance Program (SNAP).

- From 2010 to 2015, the percentage of Native Hawaiian-headed households receiving food stamps increased significantly in all regions except North Shore and Kauaʻi.
- Comparing 2010 with 2015, East Hawaiʻi experienced an increase of 10 percentage points in the proportion of Native Hawaiian-headed households receiving food stamps.
- The East Hawaiʻi and Leeward regions had the greatest proportions of Native Hawaiian-headed households receiving food stamps in both 2010 and 2015.

## Housing

Housing is a centerpiece of a family’s material well-being. When housing needs are met, families are better able to provide safe, stable environments that allow children and other members of the ‘ohana to develop. As stated by the Hawaiʻi Department of Business, Economic Development and Tourism (2018), homeownership allows individuals to “pass their homes on to their children, creating wealth opportunities for multiple generations of families” (14).

The cost of housing continues to escalate in Hawaiʻi, where the 2019 median price of a single-family home on Oʻahu was \$835,000 (Hawaiʻi News Now 2019). The inflated cost of living in Hawaiʻi translates into housing challenges for many residents. Rents and property values continue to rise, and homeownership is often out of reach, even for those with a living wage. Income is a key factor in homeownership. For example, among Native Hawaiians, the median income of owner-occupied households is nearly twice that of renter-occupied households (Kamehameha Schools 2019).

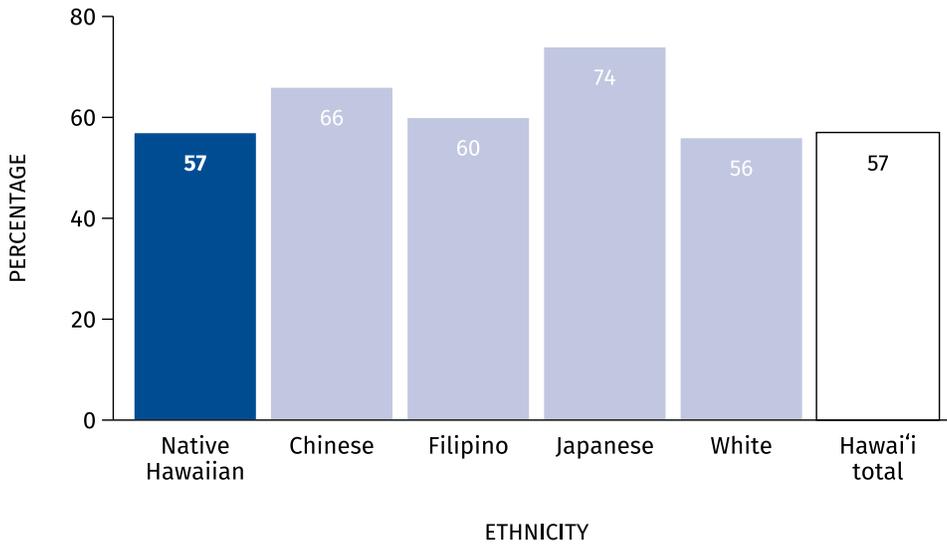
In addition to high home prices, other issues such as the availability of jobs, the quality of schools, and the affordability of childcare have an impact on where Native Hawaiians live. It is likely that people are increasingly residing where they can afford to live—rather than where they would choose to live—because of prohibitively high socioeconomic barriers.

For Native Hawaiians, the Department of Hawaiian Home Lands also plays an important role in homeownership. Of the 38,088 Native Hawaiian owner-occupied households in Hawaiʻi, 5,643 (15 percent) are part of the Hawaiian Home Lands program (Kamehameha Schools 2019).

To determine trends in homeownership among various ethnic groups, a commonly referenced measure is “owner-occupied households” from US Census data. Among Native Hawaiian households, the owner-occupancy rate is 57 percent—the same as the Hawaiʻi total (fig. 1.46)—a percentage that has not changed significantly for Native Hawaiians over the recent decade (fig. 1.47).

**FIGURE 1.46** Owner-occupied households

[as a percentage of households, by household ethnicity, Hawai'i, 2017]



Data source: US Census Bureau, American Community Survey, Public Use Microdata Sample 5-year file

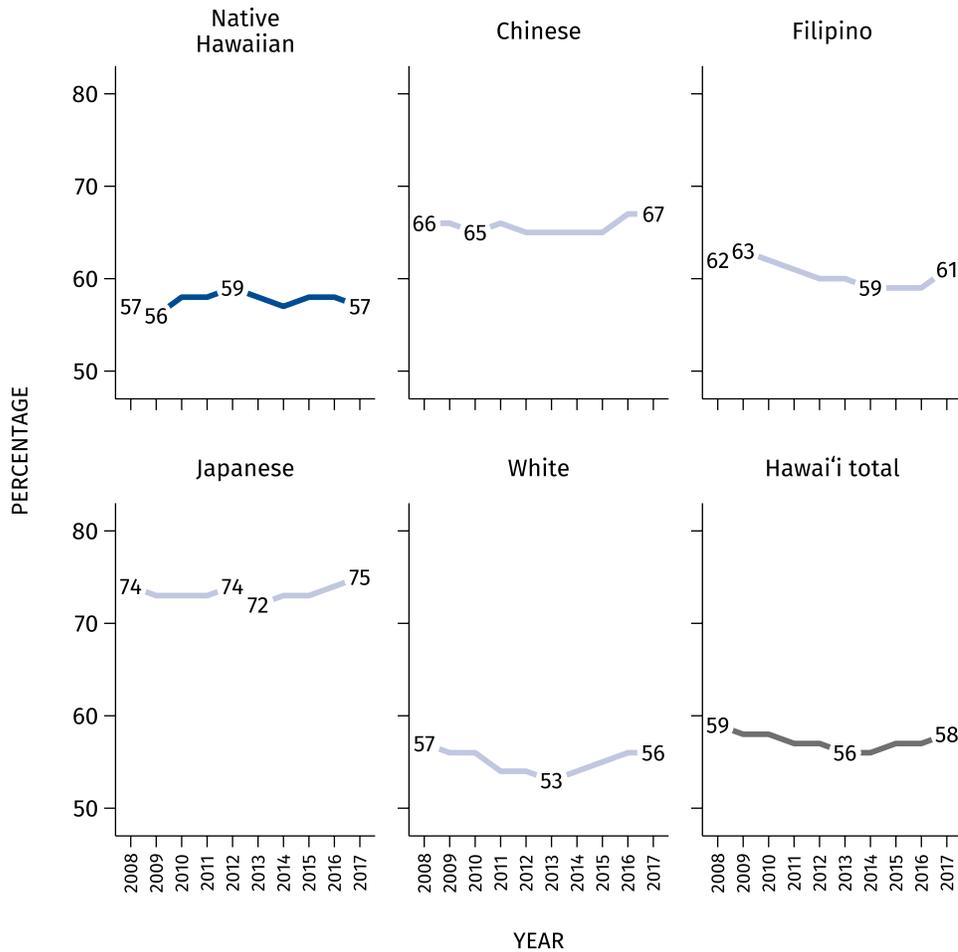
Note 1: The designation "White" in this chart refers to non-Hispanic Whites, alone or in combination with other ethnicities, as defined by the American Community Survey.

- The owner-occupancy rate among Native Hawaiian households is equivalent to the Hawai'i total (57 percent) and is similar to that of Whites (56 percent).
- Japanese households have the highest owner-occupancy rates in Hawai'i (74 percent).
- There is a difference of 18 percentage points in the proportion of owner-occupied Japanese households (74 percent) and owner-occupied White households (56 percent).



Across regions, Kaua'i has the highest owner-occupancy rate (66 percent) among Native Hawaiians and was the only region with a significant increase in recent years, rising from 58 to 66 percent between 2010 and 2015 (see page 130).

**FIGURE 1.47** Trends in owner-occupied households  
[as a percentage of households, by household ethnicity, Hawai'i, 2008 to 2017]



Data source: US Census Bureau, American Community Survey, Public Use Microdata Sample 1-year files

Note 1: The designation "White" in this chart refers to non-Hispanic Whites, alone or in combination with other ethnicities, as defined by the American Community Survey.

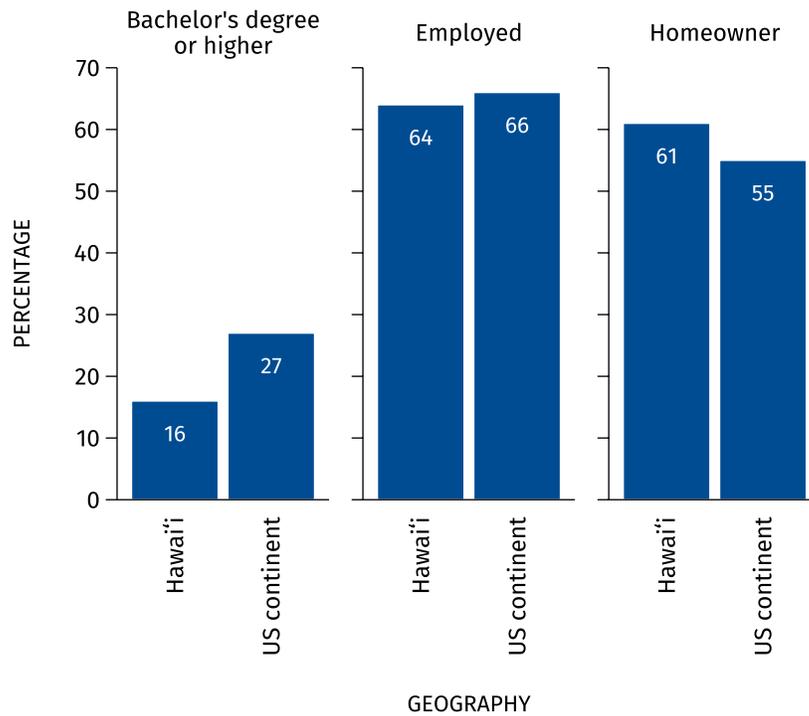
Note 2: Data labels are presented for the first and last points, the maximum and minimum points, and some inflection points where the trend changes.

- From 2008 to 2017, there has been no significant difference in the owner-occupancy rate of Native Hawaiian households.
- The owner-occupancy rate of Native Hawaiian, Chinese, and Japanese households was relatively consistent from 2008 to 2017.
- For the Hawai'i total, the rate of owner-occupied households decreased significantly from 2008 to 2013, before recovering in 2017.
- During this time, the owner-occupancy rate of Native Hawaiian households was similar to the Hawai'i total.

Data further show that Native Hawaiians who live in Hawai'i have higher rates of homeownership (perhaps facilitated through access to homestead lands), compared with Native Hawaiians who live on the US continent (61 percent versus 55 percent) (fig. 1.48). This may seem counterintuitive, given that many Native Hawaiians and other residents are known to leave Hawai'i due to the high cost of living. Also, a greater proportion of Native Hawaiians on the US continent have a bachelor's degree or higher, compared with those living in Hawai'i. However, the data may also suggest another possibility to explain migration patterns: Homeownership—once acquired or inherited—might serve as a reason for staying in Hawai'i (Pagud, Kekahio, and Kana'iaupuni, forthcoming). Taken together, these data highlight how economic factors, including homeownership, can influence Native Hawaiians' decisions to leave or stay in Hawai'i.

**FIGURE 1.48** College degree, employment, and homeownership status among Native Hawaiians in Hawai'i and on the US continent

[as a percentage of the civilian Native Hawaiian population ages 25 and older not enrolled in school, by location, United States, 2017]



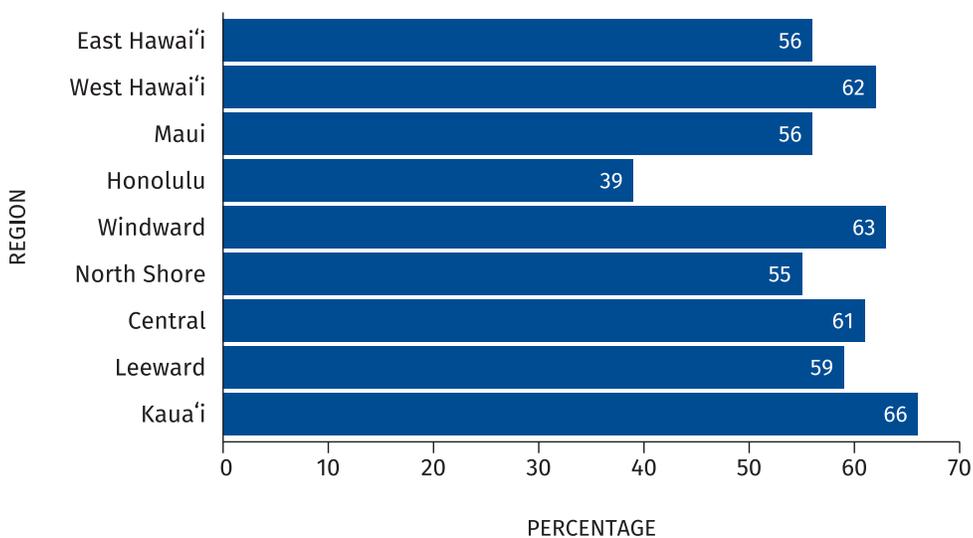
Data source: US Census Bureau, American Community Survey, Public Use Microdata Sample 5-year file

- The proportion of Native Hawaiians ages twenty-five and older who have a bachelor's degree or higher is greater on the US continent (27 percent) than it is in Hawai'i (16 percent).
- Among Native Hawaiians ages twenty-five and older, those living on the continent are slightly more likely to be employed (66 percent) than are those living in Hawai'i (64 percent).
- For Native Hawaiians ages twenty-five and older, the homeownership rate is higher among those living in Hawai'i (61 percent), compared with those living on the continent (55 percent).

## HOUSING—REGIONAL HIGHLIGHTS

Across regions, Kaua'i has the highest owner-occupancy rate (66 percent) among households headed by a Native Hawaiian, and Honolulu has the lowest rate (39 percent). All regions, except Honolulu, have Native Hawaiian owner-occupancy rates that exceed 50 percent (fig. 1.49).

**FIGURE 1.49** Owner-occupied Native Hawaiian households—regional comparison  
[as a percentage of households headed by a Native Hawaiian, by region, Hawai'i, 2015]

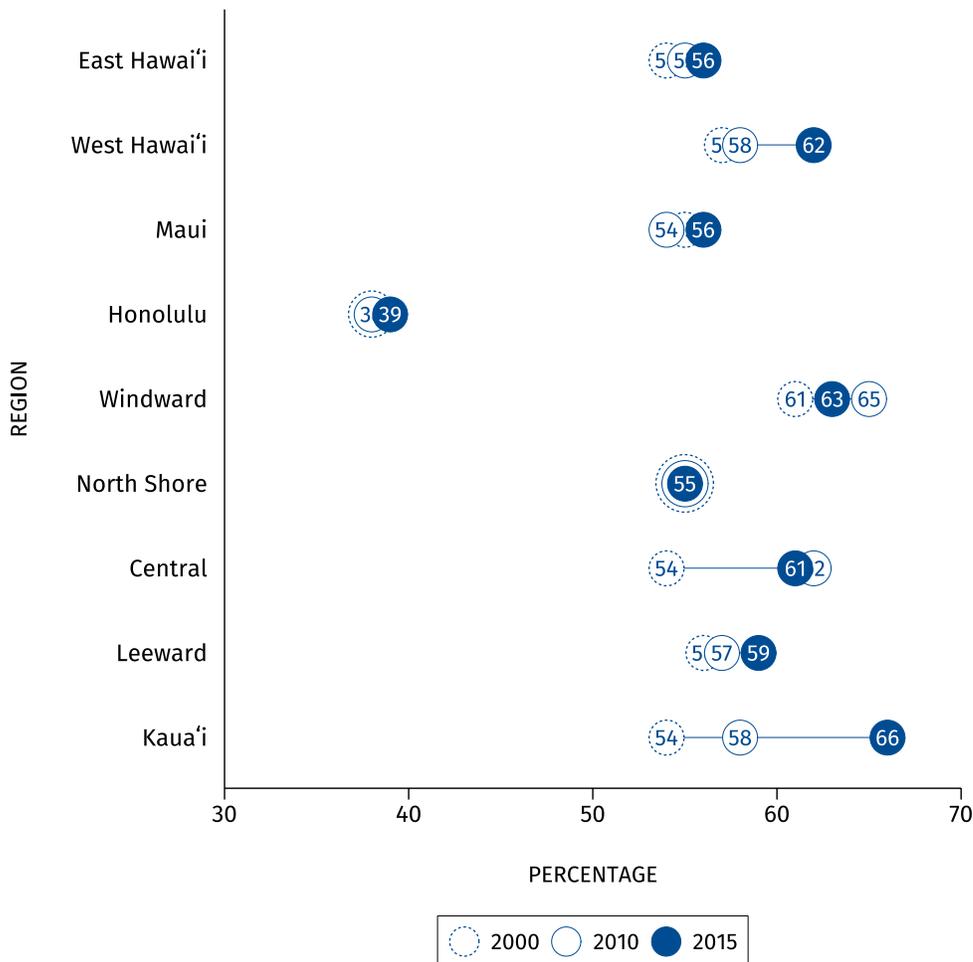


Data source: US Census Bureau, American Community Survey, Selected Population Tables

- Among Native Hawaiian households, the owner-occupancy rates are highest in Kaua'i (66 percent), Windward (63 percent), and West Hawai'i (62 percent).
- Honolulu has the lowest owner-occupancy rate (39 percent) among Native Hawaiian households—22 percentage points lower than that of the neighboring Central region (61 percent).
- In all regions except Honolulu, the rates of owner-occupied Native Hawaiian households are above 50 percent.

When examining data from 2000 to 2015, regional trends emerge regarding Native Hawaiian owner-occupied households. During this period, Kaua'i had the greatest increase (12 percentage points) in owner-occupancy rates among Native Hawaiians, followed by Central, West Hawai'i, and Leeward. Honolulu and North Shore realized the smallest increases relative to other regions (fig. 1.50).

**FIGURE 1.50** Trends in Native Hawaiian owner-occupied households—regional comparison  
[as a percentage of households headed by a Native Hawaiian, by region, Hawai'i; 2000, 2010, 2015]



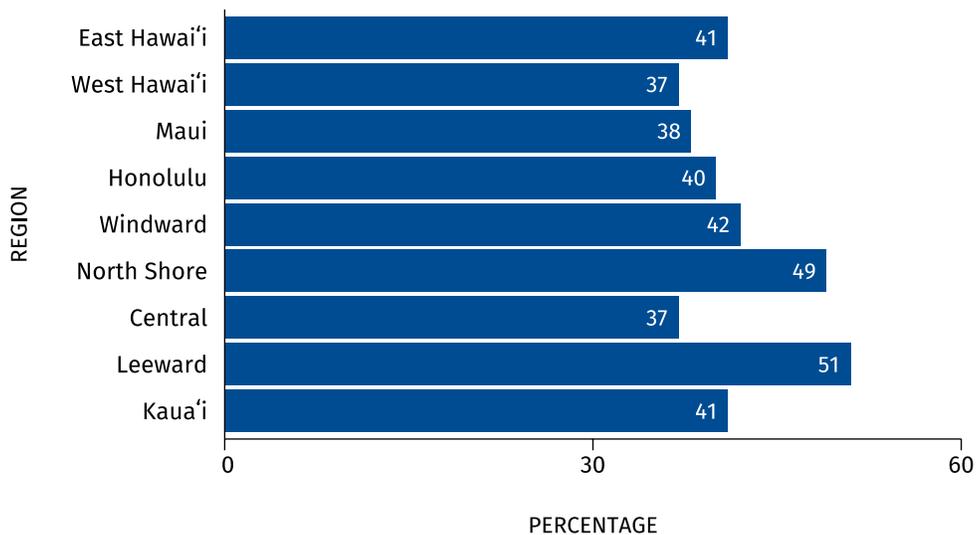
*Data source:* US Census Bureau, 2011–2015 American Community Survey, Selected Population Tables; US Census Bureau, 2006–2010 American Community Survey, Selected Population Tables; Census 2000, Summary File 4

Note 1: This chart includes overlapping and sometimes obscured data points. The most recent data points are all visible; older data points that are not discernible suggest little or no change over time.

- Between 2010 and 2015, Kaua'i was the only region with a significant increase (8 percentage points) in owner-occupied Native Hawaiian households, rising from 58 to 66 percent.
- In the Central, West Hawai'i, and Leeward regions, there was an upward trend in the proportion of owner-occupied Native Hawaiian households between 2000 and 2015.
- Relative to other regions, Honolulu and North Shore had the smallest increases in the proportion of owner occupancy among Native Hawaiian households.

Where it is cost prohibitive to purchase a home, families often choose to rent. With Hawai'i's high housing costs, many Native Hawaiian households direct more than 35 percent of their income toward rent, which places a strain on family budgets. This in turn, leads to difficulties affording necessities (Office of Hawaiian Affairs, n.d.[b]) and may contribute to higher stress levels. In the Leeward and North Shore regions, approximately half of Native Hawaiian renter-occupied households spend 35 percent or more of their income on rent, while such households in West Hawai'i and Central are less likely to do so (fig. 1.51).

**FIGURE 1.51** Native Hawaiian households that spend 35 percent or more of income on rent—regional comparison  
[as a percentage of renter-occupied households headed by a Native Hawaiian, by region, Hawai'i, 2015]



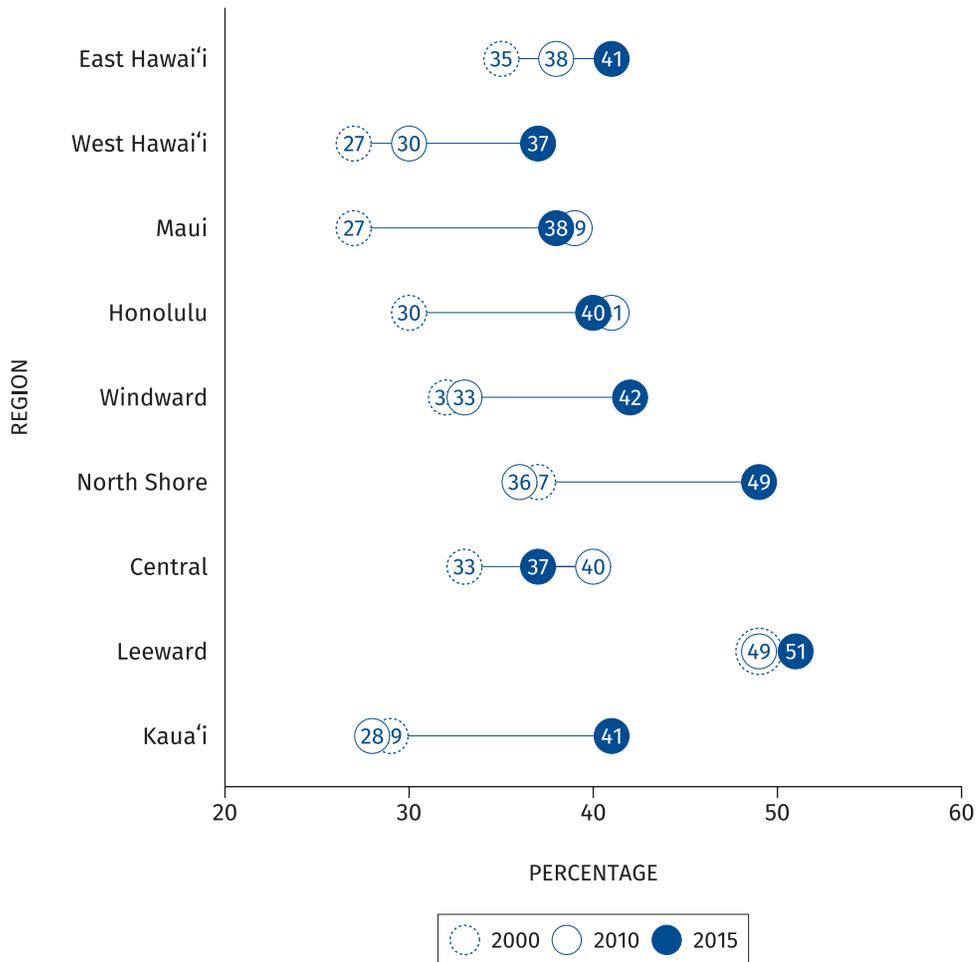
Data source: US Census Bureau, American Community Survey, Selected Population Tables

- In the Leeward and North Shore regions, approximately half of the renter-occupied households headed by a Native Hawaiian spend 35 percent or more of their income on rent.

A few trends can be observed for Native Hawaiian renter-occupied households from 2000 to 2015. During that time, all regions experienced an upward trend in the proportion of Native Hawaiian renter-occupied households that spend more than 35 percent of their income on rent. Changes in the proportion of such households were also apparent from 2010 to 2015, but these changes are not statistically significant (fig. 1.52).

**FIGURE 1.52** Trends in Native Hawaiian households that spend 35 percent or more of income on rent—regional comparison

[as a percentage of renter-occupied households headed by a Native Hawaiian, by region, Hawai'i; 2000, 2010, 2015]



*Data source:* US Census Bureau, 2011–2015 American Community Survey, Selected Population Tables; US Census Bureau, 2006–2010 American Community Survey, Selected Population Tables; Census 2000, Summary File 4

*Note 1:* This chart includes overlapping and sometimes obscured data points. The most recent data points are all visible; older data points that are not discernible suggest little or no change over time.

- Comparing 2000 with 2015, all regions experienced an increase in the proportion of renter-occupied households headed by a Native Hawaiian where rent was 35 percent or more of household income.

Much work remains to attain a state of strong economic well-being such that Native Hawaiians will have housing options within sustainable community and 'āina systems. Similarly, more progress is needed so that Native Hawaiians will have fulfilling jobs within an economic landscape supportive of and led by Native Hawaiians. Significant economic barriers persist among some Native Hawaiians, including high levels of poverty, low rates of homeownership, and relatively low prevalence of high-paying jobs, even for those with higher levels of education.

However, at the time of this writing, rates of livable income are trending upward among Native Hawaiians. We also note the impact of agencies like the Department of Hawaiian Home Lands in providing homes for Native Hawaiians. Stronger material and economic well-being for Native Hawaiian families and communities will require building on these opportunities while at the same time moving the overall job and industry landscape to reflect Native Hawaiian concepts of waiwai.

As the COVID-19 pandemic has highlighted, Hawai'i must diversify its economy in ways that produce a more resilient and sustainable future for our children. Native Hawaiian values and people must be a part of this equation. Fulfilling jobs that align to a strong sense of community and 'āina will result in a thriving Native Hawaiian workforce and better outcomes for all of Hawai'i.



Native Hawaiian innovation, social entrepreneurship, and aloha 'āina initiatives acknowledge economic disparities and are accelerating efforts to make the Hawai'i economic landscape stronger and more diversified.



## PHYSICAL WELL-BEING

Hawaiian tradition has long understood physical health to be broader than the absence or presence of physical ailments. Physical health is indistinguishable from ecosystems and is based on sustainability, perpetuity, and *lōkahi* (harmony) among all facets of well-being. This view differs from mainstream notions of physical health that prioritize a “healthy body” (Global Wellness Institute, n.d.).

“Without *lōkahi*, there is illness” (Hilgenkamp and Pescaia 2003, 35). Examples of this holistic perspective of health can be found throughout Hawaiian cultural traditions and practices. It is also captured in the *‘ōlelo no‘eau* (wise saying, proverb) “*Ka lā i ka Mauiola—The sun at the source of life*” (Pukui 1983, 154), reflecting the interrelationship of people, *‘āina*, natural elements, and spirituality as integral to health and well-being.

For many Native Hawaiians who continue to experience ongoing disparities in well-being, the pathway to optimal physical health has been challenging. Still, there are signs of progress. One area of progress in physical wellness is trend data that show an increase in the proportion of Native Hawaiians who have health insurance. Our findings also indicate that there has been a decrease in recent years in the proportion of Native Hawaiians who missed a doctor’s visit because of cost. Additionally, smoking and alcohol consumption have declined, and Native Hawaiians have the second-lowest rates of high cholesterol among the major ethnicities in Hawai‘i. Native Hawaiians, compared with other major ethnic groups in Hawai‘i, are also among the most likely to engage in muscle-strengthening activities.

Despite these areas of progress, many alarming health conditions persist. For example, compared with Hawai‘i’s other major ethnicities, Native Hawaiians continue to lead in rates of obesity, smoking (despite a decline in recent years), high blood pressure, disability, diabetes, and heart disease. Native Hawaiians also are more likely than other major ethnicities in Hawai‘i to be in poor physical health, despite a slight decline between 2013 and 2015. Such health challenges can be more prevalent in certain geographies. For instance, in Hawai‘i county there is a concerning uptick among Native Hawaiian adults experiencing poor health, diabetes, heart attacks, and obesity.

The causes of these health disparities stem from outside influences in previous centuries, when foreign disease decimated the Native population in Hawai‘i, triggering historical trauma and a resulting wave of negative health outcomes. Health disparities among Indigenous people are also tied to resource alienation, political oppression, racism and discrimination, and socioeconomic disadvantage.

Resource alienation refers to the degradation of, and inaccessibility to, 'āina and all of its natural resources, which impacts cultural, spiritual, and physical wellness. Political oppression speaks to how “loss of sovereignty along with dispossession (of lands, waterways, customary laws) has created a climate of material and spiritual oppression with increased susceptibility to disease and injury” (Durie 2003). Studies regarding racism and discrimination and their impact on physical health have found associations in symptoms such as high blood pressure, high cortisol (Kaholokula 2014), and obesity (McCubbin and Antonio 2012)—which can be risk factors for long-term health ailments such as heart disease, stroke, and diabetes. Additionally, “The impact of historical trauma may be community-wide depression” (Liu and Alameda 2011). Socioeconomic disadvantage posits that physical health shapes and is shaped by one’s environment, educational attainment, income, and other factors impacting lifestyle.

Finally, physical well-being may also be related to differing cultural backgrounds among physicians, the prevalence of Western medical practices, and the effects of Western compartmentalizations of physical wellness measures that often rely on deficits. These Western measures, though far from ideal for gauging the physical well-being of Native Hawaiians, are relatively abundant and form the majority of our analysis in this section.

It is clear that improving physical health outcomes requires a shift from mainstream Western medical paradigms toward the concept of holistic wellness—'ike our ancestors have always known. Doing so suggests the need to acknowledge the social and cultural conditions of one’s life (Artiga and Hinton 2018), which can affect physical health, including the way one’s genetics work (Centers for Disease and Control 2019b). A framework based on social determinants of health (US Department of Health and Human Services 2020d; Centers for Disease Control and Prevention 2020f; World Health Organization, n.d.) reinforces this notion, positing that a person’s physical health outcomes are impacted by genetic history, mental health, physical environment, housing conditions, social relationships, historical connections, lifestyle, educational attainment, and access to quality healthcare. More importantly, the framework highlights the interconnectedness of health and the ways in which social, political, cultural, and environmental conditions—particularly for disadvantaged populations—can predispose individuals and communities to disease and injury.

The following section addresses the physical well-being of Native Hawaiian adults, families, and communities by examining four health indicators: access to healthcare and preventative care; nutrition, physical activity, and obesity; substance abuse; and disease and disability. Consistent with the aims of the social determinants of health framework, we also analyze the relationship between select health outcomes, educational attainment, and income.<sup>9</sup>

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<sup>9</sup> Because *Ka Huaka'i* is an educational assessment, this section includes figures that illustrate the relationship between health and educational attainment; income associations are generally articulated in the narrative but not in charts.

## Access to Healthcare and Preventative Care

Research has shown that Native Hawaiians face ongoing barriers in accessing quality healthcare and health services (Morisako et al. 2017, Ambrose et al. 2012). Increasing access to healthcare is a vital step toward improving health outcomes. Access to quality healthcare is important for promoting and maintaining health, as well as preventing, maintaining, and reducing the likelihood of disease and disability (US Department of Health and Human Services 2020a).

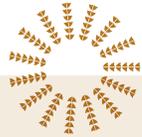
Access to healthcare takes a number of factors into account, such as health insurance coverage, services, timeliness, and workforce (e.g., a competent, qualified, and culturally relevant provider) (US Department of Health and Human Services 2020a). For Native Hawaiians, connecting with a physician on a cultural level and having access to traditional Hawaiian healing practices (e.g., lā'au lapa'au) provides Native Hawaiians with multiple options to have “an active role in planning their plan of treatment and prevention programs” (Hilgenkamp and Pescaia 2003, 38). Providing options is key for strengthening agency (i.e., self-determination) as a means to address health disparities (Harfield et al. 2018).

In the analysis below, we examine two dimensions of access to healthcare: health insurance coverage and missed doctor visits due to cost.

### HEALTH INSURANCE COVERAGE

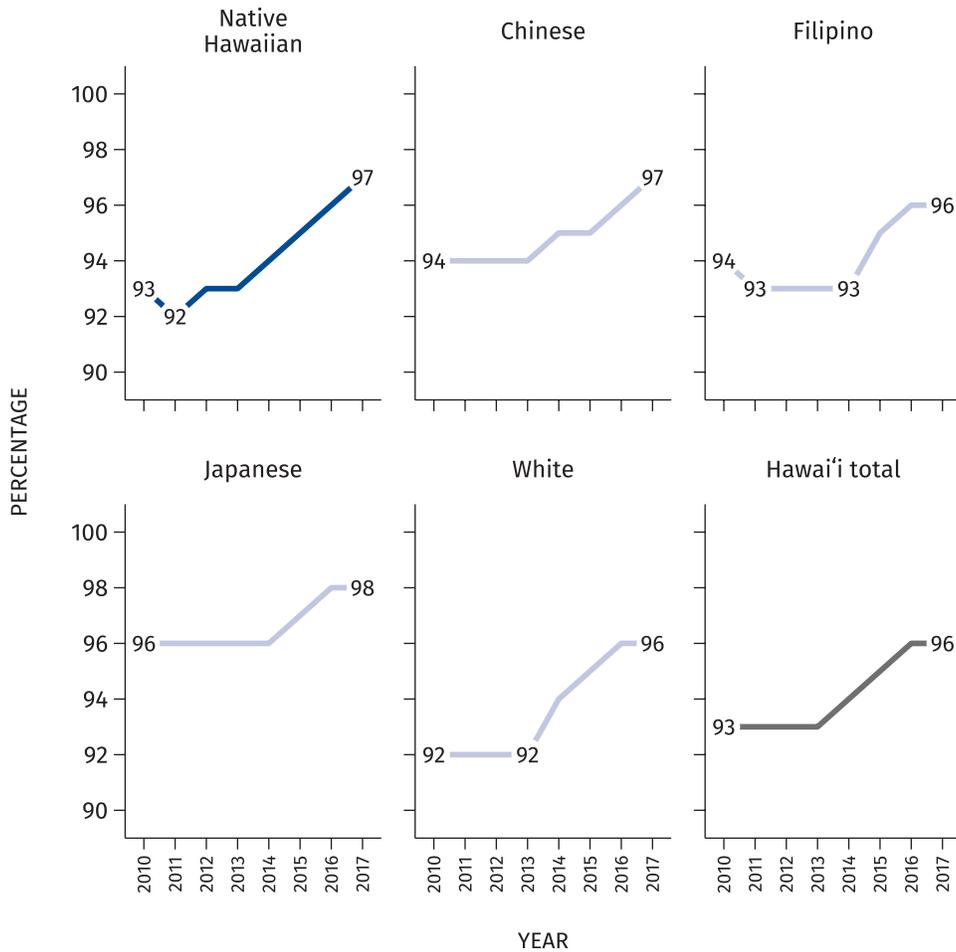
Health insurance coverage is a critical factor in maintaining well-being. It guards against unplanned medical costs, assists with preventative care, and alleviates financial burden that can accompany disease and illness. Research links uninsured individuals to less access to medical care and, therefore, a higher likelihood of negative health outcomes (US Department of Health and Human Services 2020a).

Trend data show that the insured rate among Native Hawaiian individuals increased from 93 to 97 percent between 2010 and 2017 (fig. 1.53), which is on par with the Hawai'i total. However, a separate analysis shows comparatively lower levels of health coverage for Native Hawaiians living in poverty (Kamehameha Schools 2019).



Between 2010 and 2017, the insured rate of Native Hawaiian individuals increased from 93 to 97 percent, making health insurance coverage for Native Hawaiians on par with the Hawai'i total.

**FIGURE 1.53** Trends in individuals with health insurance coverage  
 [as a percentage of individuals, by ethnicity, Hawai'i, 2010 to 2017]



Data source: US Census Bureau, American Community Survey, Public Use Microdata Sample 1-year files

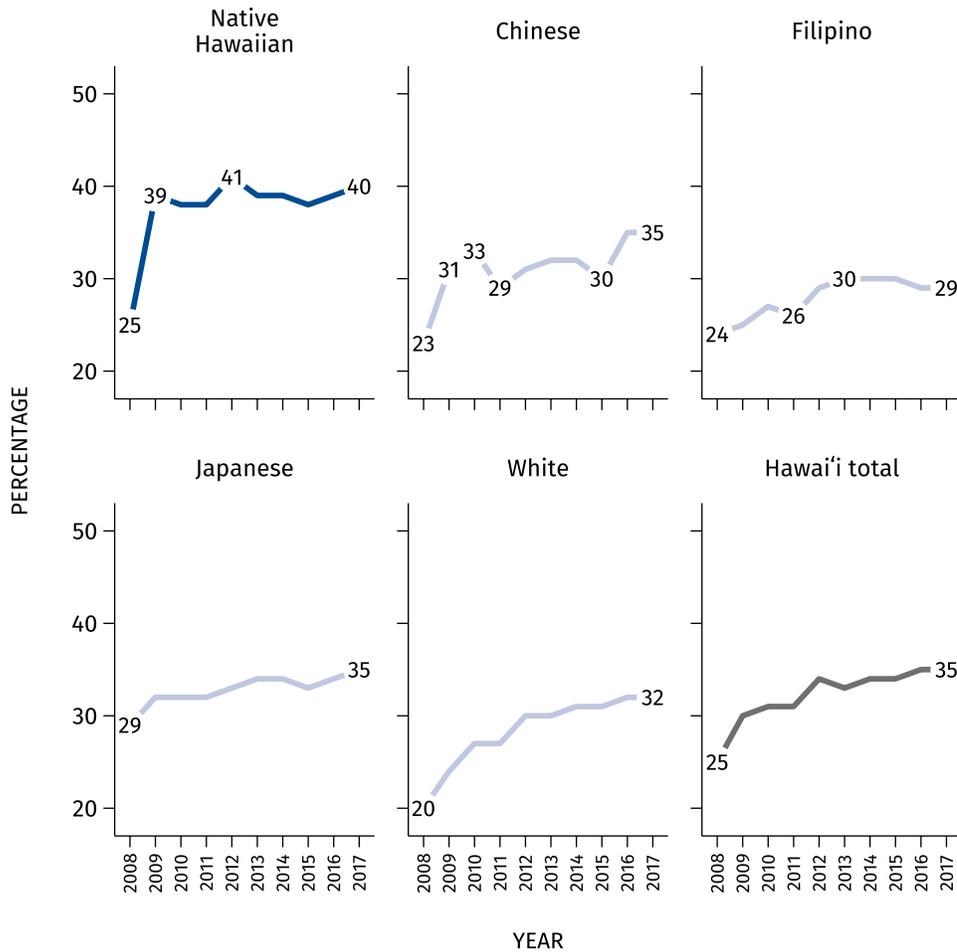
Note 1: The designation "White" in this chart refers to non-Hispanic Whites, alone or in combination with other ethnicities, as defined by the American Community Survey.

Note 2: Data labels are presented for the first and last points, the maximum and minimum points, and some inflection points where the trend changes.

- From 2010 to 2017, the rate of health insurance coverage increased among all of Hawai'i's major ethnic groups.
- Among Native Hawaiians, the percentage of individuals covered by health insurance increased from 93 to 97 percent between 2010 and 2017—an increase of 4 percentage points.
- For the Hawai'i total, the rate of individual health coverage increased from 93 percent between 2010 and 2017.

Among Native Hawaiians who had health insurance in 2017, four in ten (40 percent) had public health coverage (e.g., Medicaid), which is subsidized by the government and is available to individuals and families demonstrating financial need (fig. 1.54).

**FIGURE 1.54** Trends in individuals with public health coverage  
 [as a percentage of individuals with health insurance coverage, by ethnicity, Hawai'i, 2008 to 2017]



Data source: US Census Bureau, American Community Survey, Public Use Microdata Sample 1-year files

Note 1: The designation “White” in this chart refers to non-Hispanic Whites, alone or in combination with other ethnicities, as defined by the American Community Survey.

Note 2: Data labels are presented for the first and last points, the maximum and minimum points, and some inflection points where the trend changes.

- In Hawai'i, the rates of public health coverage increased dramatically between 2008 and 2009—particularly among Native Hawaiians, who saw an increase of 15 percentage points.
- In 2008, the rate of public health coverage among Native Hawaiians was equivalent to the Hawai'i total (25 percent); by 2017, public health coverage among insured Native Hawaiians had reached 40 percent, compared with the Hawai'i total of 35 percent.
- The rate of public health coverage among insured Native Hawaiians has remained relatively steady since 2009; during the same time period, the rate of public health coverage across Hawai'i has risen steadily.

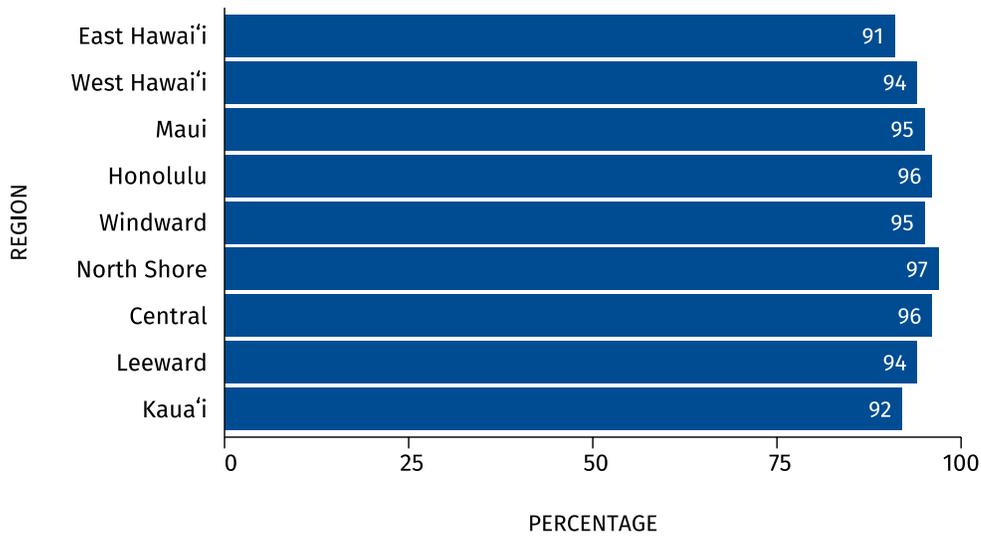
The proportion of Native Hawaiians receiving public health coverage is higher than that of Hawai'i's major ethnic groups and, with the exception of 2008, has been relatively consistent in recent years. The higher rates of public health coverage in Hawai'i as a whole are perhaps attributable to the Affordable Care Act (Obamacare), leading to significant expansion of health coverage for low-income Asian American, Native Hawaiian, and Pacific Islander adults (Park et al. 2018).

On one hand, the relatively high prevalence of public insurance among Native Hawaiians may be viewed as unfavorable because of socioeconomic implications and perceptions about overreliance on the government. However, public health coverage can also be seen as beneficial, as it provides an opportunity for some Native Hawaiians to receive healthcare that otherwise might not be available. Research identifies significant gains from expanding public health insurance, such as increased coverage for low-income, high-risk individuals, improved access to affordable care and services, financial security, positive health outcomes, and economic savings and growth (Antonisse et al. 2018). Other studies suggest that expanding public health coverage to low-income parents increases the number of insured children (Dubay and Kenney 2003; Hudson and Moriya 2017) and improves health outcomes for children (Venkataramani, Pollack, and Roberts 2017; Wherry, Kenney, and Sommers 2016). More research is needed to better understand the impact of public health insurance on Native Hawaiian families and communities.

### **Health Insurance Coverage—Regional Highlights**

Looking across the islands, the regions where Native Hawaiians have the highest rates of health insurance coverage are North Shore (97 percent), Central and Honolulu (96 percent) and Windward and Maui (95 percent). Regions with the lowest proportion of Native Hawaiians covered by health insurance are East Hawai'i (91 percent) and Kaula'i (92 percent) (fig. 1.55).

**FIGURE 1.55** Native Hawaiians with health insurance coverage—regional comparison  
[as a percentage of civilian noninstitutionalized Native Hawaiians, by region, Hawai‘i, 2015]



Data source: US Census Bureau, American Community Survey, Selected Population Tables

- Looking across regions, East Hawai‘i has the lowest percentage of Native Hawaiians with health insurance coverage (91 percent), while North Shore has the highest percentage (97 percent).
- Although there is regional variation in the percentage of health insurance coverage among Native Hawaiians, the differences are not statistically significant.

While the proportion of Native Hawaiians covered by health insurance is generally similar across regions (ranging from 91 to 97 percent), rates of public health coverage differ significantly. For example, East Hawai‘i and Leeward have the highest rates of public health coverage among Native Hawaiians (47 percent and 46 percent, respectively) (not shown). Conversely, 26 percent of Native Hawaiians in the North Shore region have public health coverage—the lowest rate among regions (not shown). These findings are generally consistent with regional differences in income (see [fig. 1.26](#)), which show East Hawai‘i as having the highest percentage of Native Hawaiian-headed family households making \$49,999 or less per year, while North Shore has the highest percentage of households in the \$100,000 to \$149,999 category.

## DOCTOR VISITS

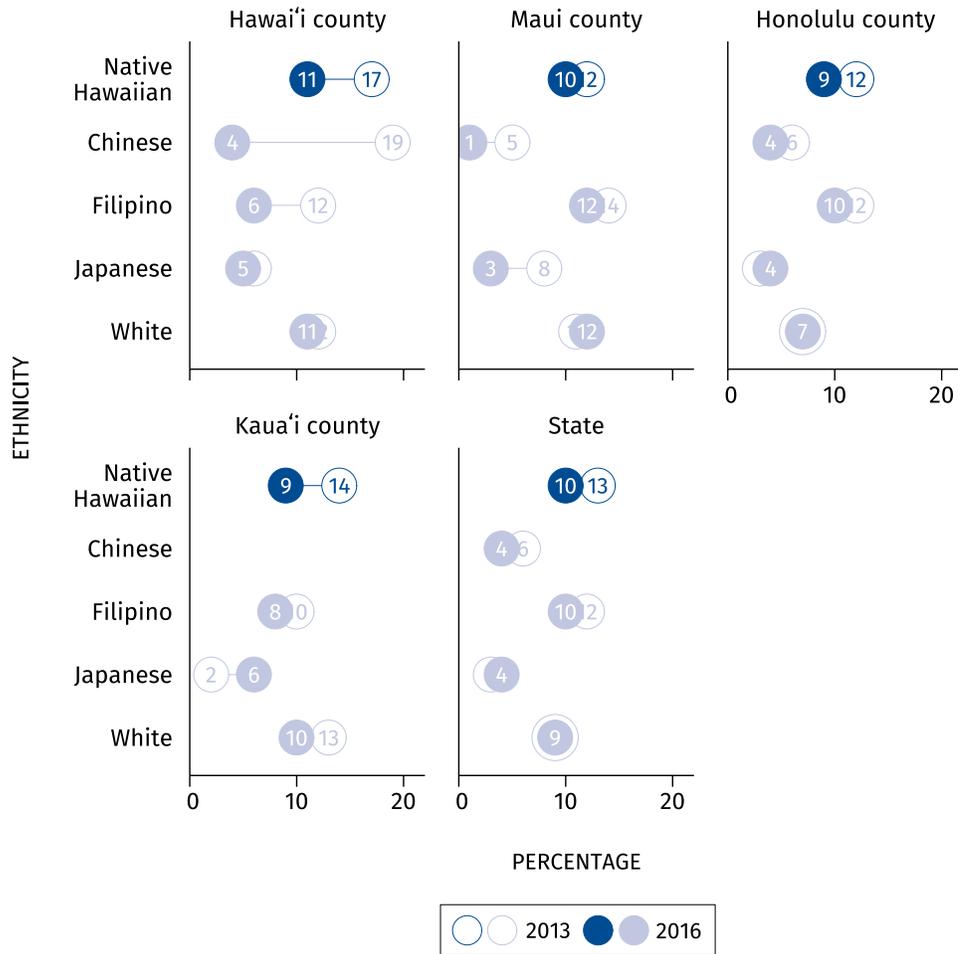
Regular doctor visits are a vital component of physical wellness. Doctor visits are a means to identifying risk factors, providing preventative care, and diagnosing illnesses before they become serious. For Kānaka Maoli, visits with a Native Hawaiian doctor can be a venue to access both healing and cultural exchange (Cruz 2019; Goodyear-Ka'ōpua 2019). Although the exact number of Kānaka Maoli who are doctors is not known, the proportion of Native Hawaiian doctors, relative to all physicians in Hawai'i, is much higher than it was in 1975, when “fewer than 1 percent of the state’s physicians were of Hawaiian ancestry” (Young 2016, 51). A study from 2012 reported that “Native Hawaiian physicians make up 3.4 percent of the total physician workforce” (Ambrose et al. 2012, 15). More recently, in 2019, twelve Native Hawaiian kauka 'ōpio (young doctors) graduated from the University of Hawai'i John A. Burns School of Medicine, doubling the number of kauka 'ōpio who graduated in 2018 and setting a new record for the university (Dimaya 2019; Dimaya 2018).

Recent data show positive trends in the ability of Native Hawaiians to access healthcare, which may correspond with increased health insurance coverage (see [fig. 1.53](#)). For example, at the state level there was a significant decrease in the proportion of Native Hawaiians who missed a needed doctor’s visit because of cost, declining from 13 to 10 percent between 2013 and 2016. A similar pattern occurred across all counties, with significant improvement in Hawai'i county ([fig. 1.56](#)).

However, compared with other major ethnicities across Hawai'i, Native Hawaiians were among the most likely not to visit a doctor because of cost. This finding may seem counterintuitive, given that 97 percent of Native Hawaiians have health insurance (see [fig. 1.53](#)). Possible reasons for this discrepancy may include high out-of-pocket expenses or deductibles, needed services not being covered by the insurance plan, or other expenses related to getting to a doctor’s appointment (e.g., transportation).

Transportation issues are related to the distribution of practicing physicians in Hawai'i. For example, many practicing physicians are centered in urban O'ahu; Native Hawaiians and other Pacific Islanders residing in rural communities and on neighbor islands must travel beyond their communities to see a doctor (Ambrose et al. 2012). Telehealth and virtual care, which have seen an uptick in utilization due to the COVID-19 pandemic, may help to address travel concerns and costs among Native Hawaiians. However, while telehealth can provide increased access, known barriers include clinician willingness, appropriate funding and reimbursement, digital equity and infrastructure, and integration into healthcare systems (Smith et al. 2020; Wosik et al. 2020).

**FIGURE 1.56** Adults who did not visit the doctor because of cost—county comparison  
 [as a percentage of adults ages 18 and older, by ethnicity, county, and year, Hawai'i, 2013 and 2016]



Data source: Hawai'i Behavioral Risk Factor Surveillance System, 2013 (years 2011 to 2013 combined) and 2016 (years 2014 to 2016 combined), Hawai'i Department of Health

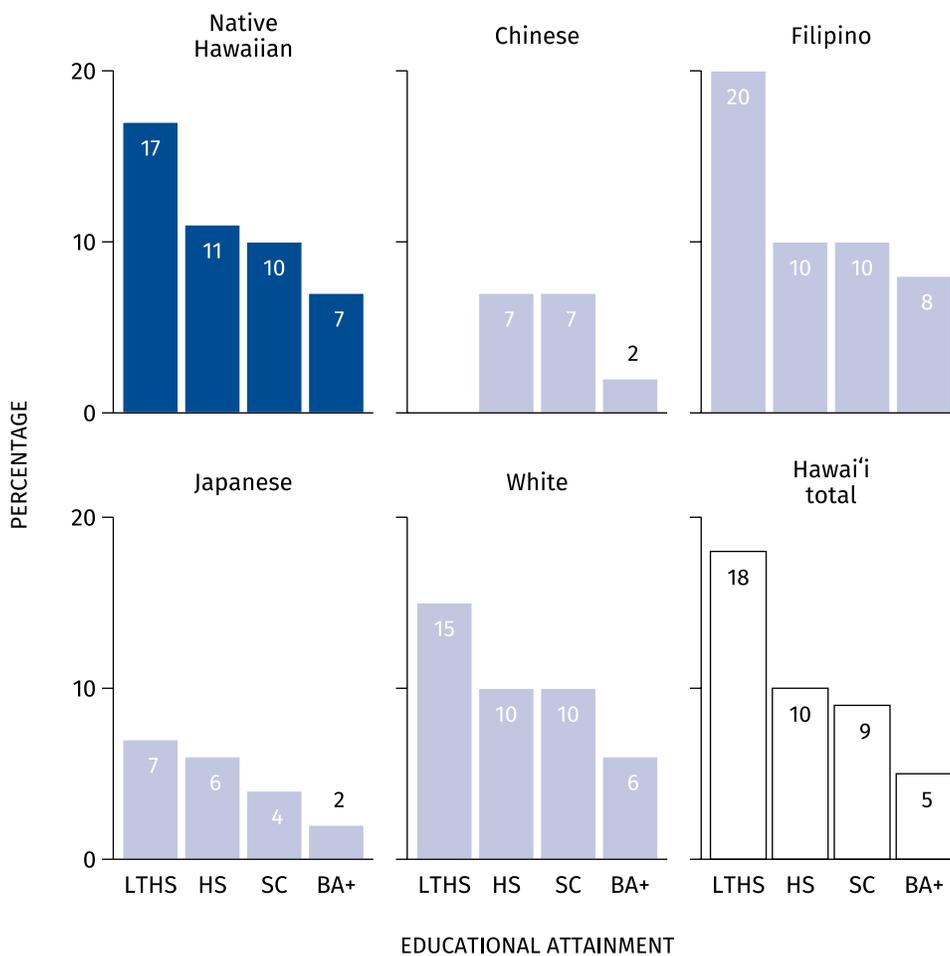
Note 1: This chart includes overlapping and sometimes obscured data points. The most recent data points are all visible; older data points that are not discernible suggest little or no change over time.

Note 2: Missing circles indicate data that are unavailable, not applicable, or suppressed due to small sample size.

- In 2016, at the state level, 10 percent of Native Hawaiian adults did not visit the doctor because of cost—down from 13 percent in 2013.
- Hawai'i county made significant improvement in the proportion of Native Hawaiian adults who did not visit the doctor due to cost, decreasing from 17 to 11 percent between 2013 and 2016.
- In 2016, there was no significant difference from county to county in the proportion of Native Hawaiian adults who did not visit the doctor because of cost.
- Compared with other major ethnicities in Hawai'i, Native Hawaiian adults are the most likely (along with Filipinos) not to visit the doctor because of cost.

Further analysis shows that income and educational attainment are correlated with the likelihood of making a needed visit to the doctor. For example, among Native Hawaiians making less than \$50,000 annually, 15 percent did not visit the doctor because of cost, compared with 5 percent of those earning \$50,000 or more (not shown). Similarly, for Native Hawaiians, the higher the level of educational attainment, the less likely a person will miss a doctor's visit due to cost (fig. 1.57).

**FIGURE 1.57** Adults who could not visit the doctor because of cost, by educational attainment [as a percentage of adults ages 18 and older, by ethnicity and educational attainment, Hawai'i, 2016]



Data source: Hawai'i Behavioral Risk Factor Surveillance System, 2016 (years 2011 to 2016 combined), Hawai'i State Department of Health

Note 1: LTHS = Less than high school; HS = High school; SC = Some college; BA+ = Bachelor's degree or higher.

Note 2: Missing lines or bars indicate data that are unavailable, not applicable, or suppressed due to small sample size.

- Across ethnicities, higher levels of educational attainment are associated with lower likelihood of missing a doctor's visit due to cost.
- Among Native Hawaiians with a bachelor's degree or higher, 7 percent missed a needed visit to the doctor because of cost, compared with 11 percent of Native Hawaiians whose highest degree is a high school diploma.

## Nutrition, Physical Activity, and Obesity

The National Heart, Lung, and Blood Institute notes that “healthy body weight, good nutrition, and physical activity can help prevent or manage serious and chronic cardiovascular diseases, high blood pressure, heart disease, and stroke” (n.d., under “Obesity, Nutrition, and Physical Activity”). These three facets of physical health are highly correlated and reflect genetics, behaviors, and environmental factors.

Unlike genetics, behavioral and environmental influences are considered to be modifiable risk factors. This is consistent with the social determinants of health framework, which posits that modifiable risk factors are aligned “with the social, demographic, environmental, economic, and attributes of the neighborhoods where people live and work” (Yoon et al. 2014, 372). For example, to address risk factors related to nutrition, physical activity, and obesity, environmental modifications could include ensuring access to affordable and healthy foods in schools and communities; safe pathways for walking, biking, exercising, and playing; and parks and recreation centers.

The traditional Native Hawaiian lifestyle included plentiful physical activity and a rich and nutritious diet. Native Hawaiians were routinely engaged in fishing, farming, gathering, paddling, hula, and many other forms of work and recreation (McGregor 2013). The traditional diet consisted of raw or steamed foods, including mostly complex carbohydrates such as kalo (taro), poi (mashed taro), ‘uala (sweet potato), and ‘ulu (breadfruit) (Fujita, Braun, and Hughes 2004).

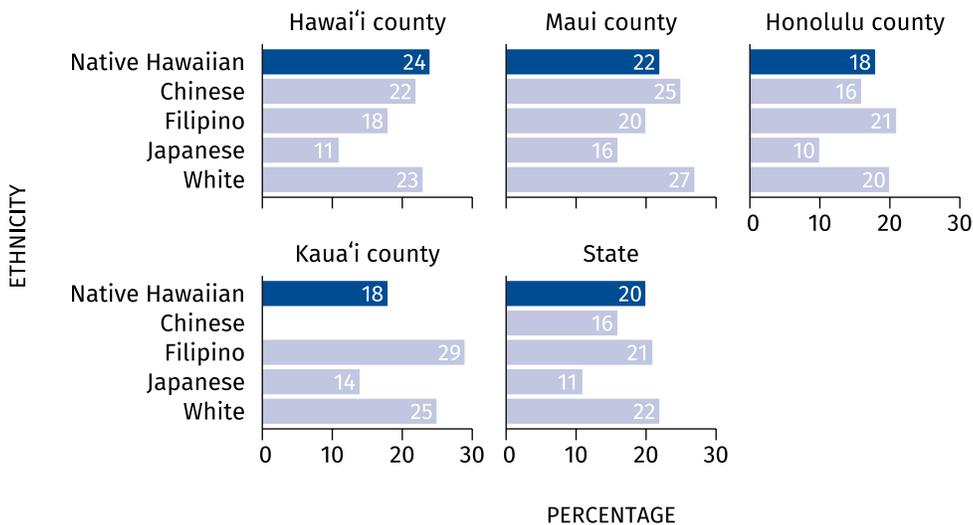
Today, Native Hawaiian communities face disproportionate rates of obesity and diabetes (McCubbin and Antonio 2012; Braden and Nigg 2016). These disparities have been attributed to socioeconomic obstacles (Kaholokula, Nacapoy, and Dang 2009); the adoption of Western lifestyles, including higher availability and consumption of unhealthy foods (Blaisdell 1993a; McEligot et al. 2010; Mau et al. 2008); and limited access to exercise resources (McEligot et al. 2010). The associations between environmental factors and health outcomes reinforce the need to consider various social determinants of health to improve Native Hawaiian wellness.

### FRUITS AND VEGETABLES

Poor diet quality is associated with a number of illnesses and disabilities (Lim et al. 2012). Eating fruits and vegetables is part of an overall healthy diet that can help reduce rates of chronic illness such as heart disease, cancer, diabetes, and obesity. Federal guidelines generally recommend that adults eat at least one and a half to two cups of fruits per day, and two to three cups of vegetables per day (US Department of Agriculture, n.d.), which equates to at least four to five servings of fruit and vegetables daily. Barriers to eating fruits and vegetables include high cost, limited access and availability, and perceived preparation time. Approximately one in ten adults in the United States meets the recommended level of fruit and vegetable consumption (Centers for Disease Control and Prevention 2017c).

At the state level, 20 percent of Native Hawaiian adults eat five or more fruits and vegetables per day—higher than the rates seen among Japanese and Chinese adults. Compared with other counties, Hawai'i county has the largest proportion of Native Hawaiian adults (24 percent) who eat five or more fruits and vegetables daily (fig. 1.58).

**FIGURE 1.58** Adults who eat five or more fruits and vegetables per day—county comparison  
[as a percentage of adults ages 18 and older, by ethnicity and county, Hawai'i, 2015]



Data source: Hawai'i Behavioral Risk Factor Surveillance System, 2015 (years 2011, 2013, 2015 combined), Hawai'i State Department of Health

Note 1: Missing lines or bars indicate data that are unavailable, not applicable, or suppressed due to small sample size.

- Comparing counties, the greatest difference in the proportion of Native Hawaiian adults who eat five or more fruits and vegetables per day is between Hawai'i (24 percent) and Honolulu (18 percent).
- At the state level, Native Hawaiian adults are more likely to eat five or more fruits and vegetables per day (20 percent) than are Chinese (16 percent) and Japanese (11 percent) adults.

While fruit and vegetable consumption is generally higher among Native Hawaiian adults than it is among Chinese and Japanese adults, Native Hawaiians also report relatively higher rates of chronic illnesses such as obesity (see [fig. 1.61](#)) and cardiovascular disease (see [fig. 1.74](#)). This suggests that nutrition alone is not sufficient for preventing illness and must be coupled with holistic approaches and healthy behaviors such as physical activity and sleep.

Our analyses indicate that among Native Hawaiians, factors such as income and educational attainment are not related to the likelihood of eating five or more fruits and vegetables per day.

## PHYSICAL ACTIVITY

Physical activity can have multiple benefits, such as decreasing the incidence of coronary heart disease, high blood pressure, stroke, and other diseases, as well as increasing healthy body mass and composition, which contributes to higher levels of cardiorespiratory and muscular fitness (Centers for Disease Control and Prevention 2020b). Regular physical activity is related to mental and emotional benefits such as improved sleep, energy, and mood. Socially, physical activity can also provide a means of supporting and connecting with others.

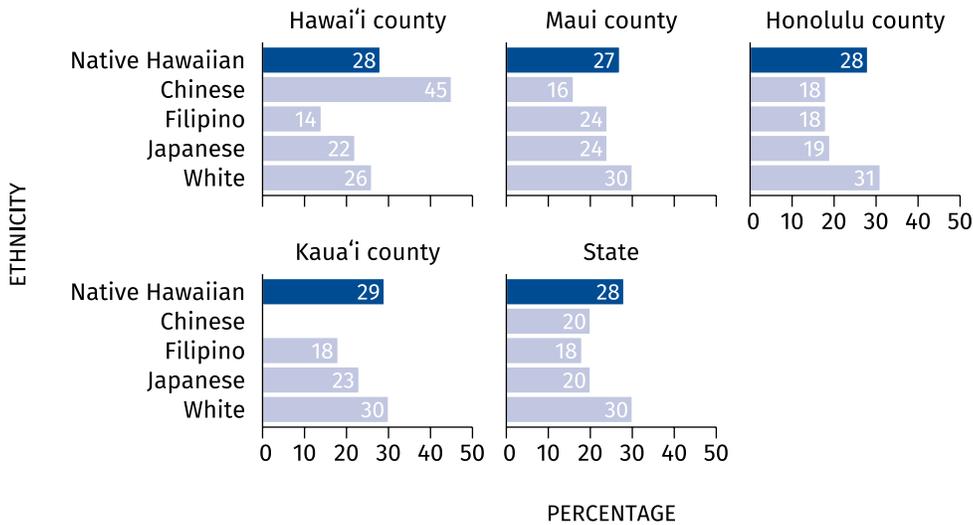
The environment, including built infrastructure, influences levels of physical activity (Humpel, Owen, and Leslie 2002). The presence of walking and cycling paths and recreation centers can encourage physical activity, as can social support from family and friends. Other factors, such as traffic, public transportation, crime, and pollution, can deter activity.

The US Department of Health and Human Services (2018) recommends that adults engage in both muscle-strengthening activities (two or more days per week) and aerobic activity, of moderate intensity (150+ minutes per week) or vigorous intensity (75+ minutes per week). At the state level, the percentage of Native Hawaiian adults who meet this federal guideline for physical activity (28 percent) is among the highest (along with Whites) across ethnic groups (fig. 1.59).



The percentage of Native Hawaiian adults who meet the federal guideline for physical activity (28 percent) is among the highest across Hawai'i's major ethnic groups.

**FIGURE 1.59** Adults who meet the federal guideline for physical activity—county comparison  
 [as a percentage of adults ages 18 and older, by ethnicity and county, Hawai'i, 2015]



Data source: Hawai'i Behavioral Risk Factor Surveillance System, 2015 (years 2011, 2013, 2015 combined), Hawai'i Department of Health

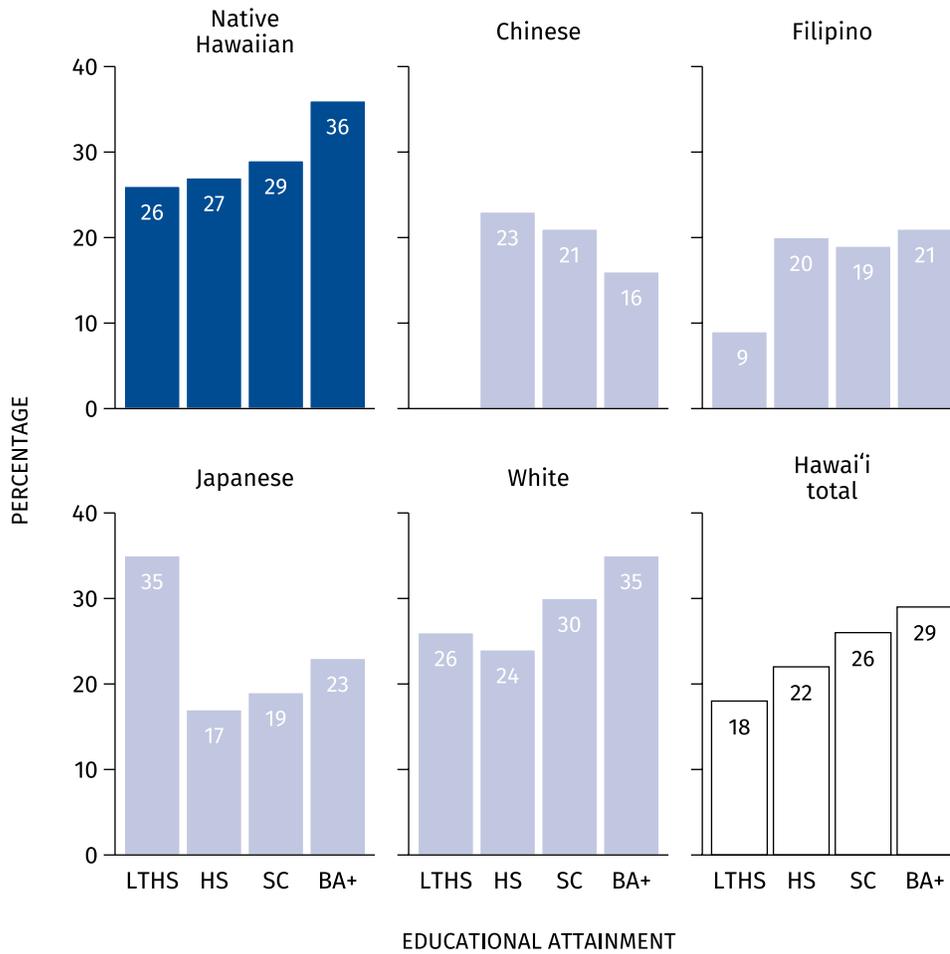
Note 1: Meeting the federal guideline is defined as both engaging in muscle-strengthening activities (2+ days per week) and aerobic physical activity, of moderate intensity (150+ minutes per week) or vigorous intensity (75+ minutes per week).

Note: Missing lines or bars indicate data that are unavailable, not applicable, or suppressed due to small sample size.

- Across counties, a similar proportion of Native Hawaiian adults meet the federal guideline for physical activity.
- At the state level, the percentage of Native Hawaiians who meet the federal guideline for physical activity (28 percent) is among the highest of Hawai'i's major ethnicities.
- Among Native Hawaiian adults across the state, 76 percent engaged in physical activity outside of their work, compared with the Hawai'i total of 79 percent (not shown).

Our analysis shows that levels of educational attainment and income are related to levels of physical activity: Native Hawaiian adults with comparatively higher levels of education (fig. 1.60) and income (not shown) are more likely to meet the federal guideline for physical activity.

**FIGURE 1.60** Adults who meet the federal guideline for physical activity, by educational attainment  
 [as a percentage of adults ages 18 and older, by ethnicity and educational attainment, Hawai'i, 2015]



Data source: Hawai'i Behavioral Risk Factor Surveillance System, 2015 (years 2011, 2013, 2015 combined), Hawai'i Department of Health

Note 1: Meeting the federal guideline is defined as both engaging in muscle-strengthening activities (2+ days per week) and aerobic physical activity, of moderate intensity (150+ minutes per week) or vigorous intensity (75+ minutes per week).

Note 2: LTHS = Less than high school; HS = High school; SC = Some college; BA+ = Bachelor's degree or higher.

Note 3: Missing lines or bars indicate data that are unavailable, not applicable, or suppressed due to small sample size.

- Among Native Hawaiians with a bachelor's degree or higher, 36 percent meet the federal guideline for physical activity, compared with 27 percent of Native Hawaiians whose highest degree is a high school diploma.
- For Native Hawaiian adults, higher educational attainment is correlated with greater likelihood of engaging in physical activity outside of work (not shown).

## OVERWEIGHT OR OBESE

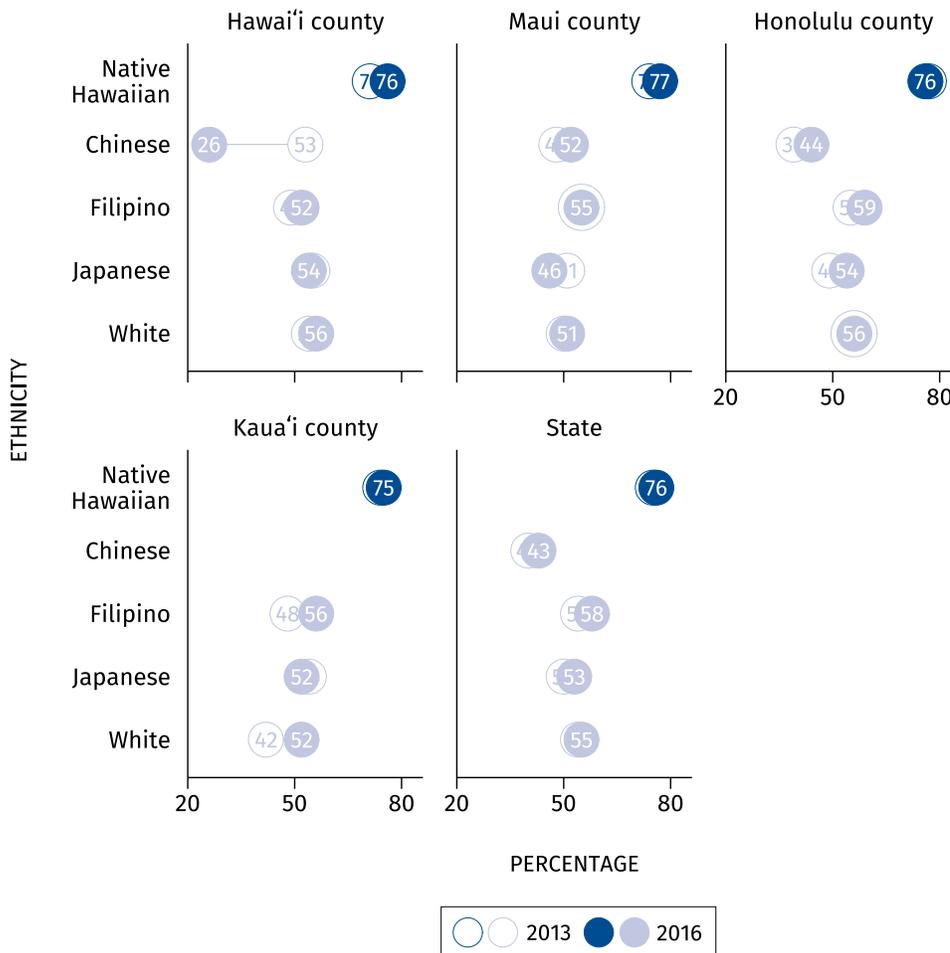
Obesity is a medical condition of having an excess of body fat that can increase the risk of other health problems. Obesity typically results from inherited genetics, environment, and lifestyle activities such as diet and exercise.

Obesity tends to be seen among families due to shared genetic makeup and similar diet and exercise habits. Social connections also play a role, with a higher risk of obesity seen among those whose friends or relatives are obese. Economics and environmental conditions can have an impact on the availability of safe spaces to exercise, access to healthy foods, and time needed for food preparation.

Research has further supported culturally responsive approaches as a means to improve obesity, diabetes, and hypertension among Native Hawaiians and Pacific Islanders. Kaholokula et al. (2018) note the importance of modifying evidence-based practices to include culturally responsive elements such as involving stakeholders throughout all aspects of the research and intervention, employing qualitative methods to collect participant data, and ensuring that curriculum and programming reflect cultural values and beliefs.

The US Department of Health and Human Services (2020c) reported Native Hawaiians and Pacific Islanders are 80 percent more likely than non-Hispanic Whites to be obese. In 2016, approximately three out of four Native Hawaiian adults were overweight or obese, a percentage that is significantly higher than that of other major ethnicities in Hawai'i. For Native Hawaiians in Hawai'i county, the percentage of adults who are overweight or obese increased significantly in recent years, rising from 71 to 76 percent between 2013 and 2016 (fig. 1.61).

**FIGURE 1.61** Adults who are overweight or obese—county comparison  
 [as a percentage of adults ages 18 and older, by ethnicity, county, and year, Hawai‘i, 2013 and 2016]



Data source: Hawai‘i Behavioral Risk Factor Surveillance System, 2013 (years 2011 to 2013 combined) and 2016 (years 2014 to 2016 combined)

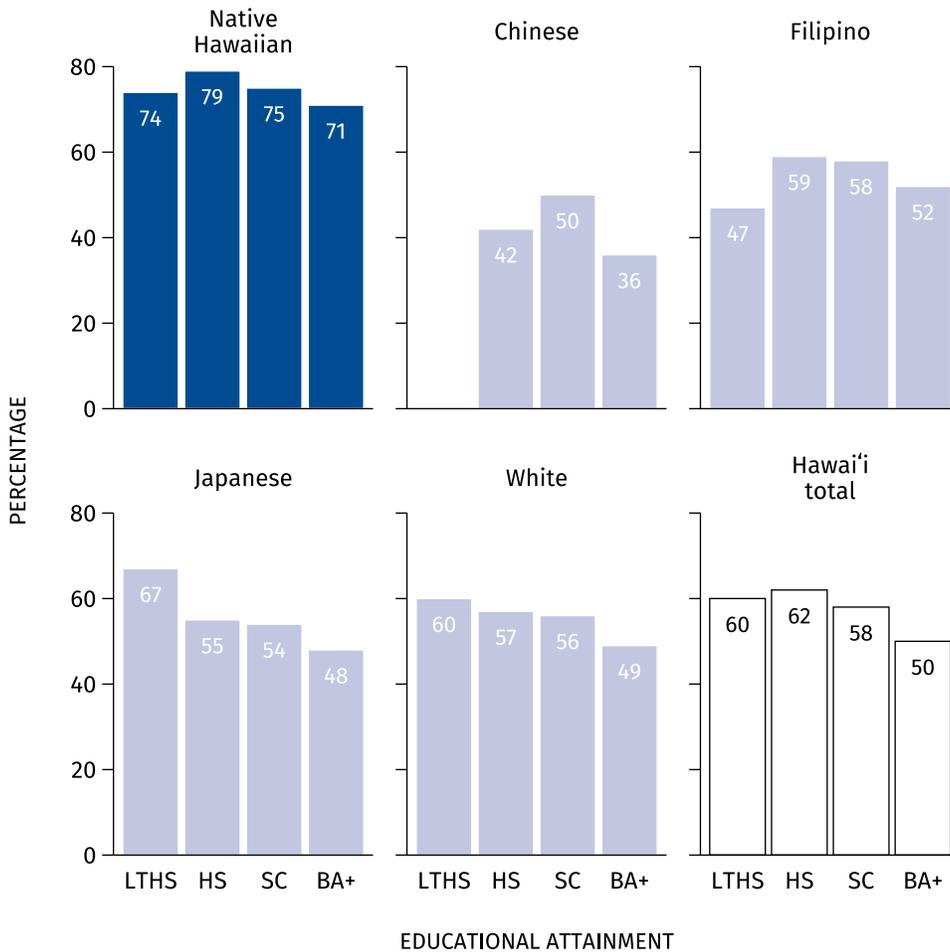
Note 1: This chart includes overlapping and sometimes obscured data points. The most recent data points are all visible; older data points that are not discernible suggest little or no change over time.

Note 2: Missing circles indicate data that are unavailable, not applicable, or suppressed due to small sample size.

- In Hawai‘i county, the percentage of Native Hawaiian adults who are overweight or obese increased significantly from 2013 to 2016.
- In 2016, there was no significant difference from county to county in the proportion of Native Hawaiian adults who are overweight or obese.
- Comparing the major ethnicities across the state, Native Hawaiian adults are the most likely to be overweight or obese.

Our analysis shows a correlation between educational attainment and obesity: Native Hawaiian adults with a bachelor’s degree or higher are less likely than adults without a bachelor’s degree to be obese (fig. 1.62).

**FIGURE 1.62** Adults who are overweight or obese, by educational attainment  
 [as a percentage of adults ages 18 and older, by ethnicity and educational attainment, Hawai'i, 2016]



Data source: Hawai'i Behavioral Risk Factor Surveillance System, 2016 (years 2011 to 2016 combined), Hawai'i Department of Health

Note 1: LTHS = Less than high school; HS = High school; SC = Some college; BA+ = Bachelor's degree or higher.

Note 2: Missing lines or bars indicate data that are unavailable, not applicable, or suppressed due to small sample size.

- On the whole, higher educational attainment is associated with lower incidence of being overweight or obese.
- Among Native Hawaiians, 71 percent of adults with a bachelor's degree or higher are overweight or obese, compared with 79 percent of adults whose highest degree is a high school diploma.

## Substance Abuse

Substance abuse affects all domains of well-being for individuals, families, and communities. For Native Hawaiian adults and youth, substance and illicit drug abuse are associated with violent behavior (Austin 2004), unsafe sexual practices (Edwards, Giroux, and Okamoto 2010), increased rates of suicide and depression (Nishimura et al. 2005), stressful life events and poor academic achievement (Mikini et al. 2001), and high incarceration rates (Office of Hawaiian Affairs 2010).

Risks and causes of substance abuse include factors that are biological (Wu et al. 2013; Sakai, Wang, and Price 2010) as well as social and cultural, such as the effects of historical and cultural trauma (Cook, Withy, and Tarallo-Jensen 2003; Pokhrel and Herzog 2014; Aboriginal Healing Foundation 2004). Other factors include poor social determinants of health (e.g., unfavorable environmental, economic, social, and educational conditions that predispose an individual to developing negative health behaviors) and inadequate access to healthcare (Substance Abuse and Mental Health Services Administration 2015).

Research has also identified protective factors among Native Hawaiians and other Indigenous populations that promote resiliency against negative social behaviors such as substance abuse. These include family cohesion and support (McCubbin et al. 1998; Mikini et al. 2001; Helm et al. 2008; Okamoto et al. 2009), parental educational attainment (Mikini et al. 2001), and ethnic identification and pride (Austin 2004; Kulis, Napoli, and Marsiglia 2001).

Risk and protective factors are often intertwined (Okamoto et al. 2009; Ungar 2004). For example, in a study of drug use among Native Hawaiian rural youth, a participant's brother engaged in smoking and was therefore a risk factor—but he did not want the participant to smoke, thus also serving as a protective factor for his brother (Okamoto et al. 2009). This illustrates the multifaceted influences on social behaviors and health outcomes and reinforces the importance of holistic approaches to addressing substance abuse and physical well-being.

In the following section, we draw on current available data to examine two forms of substance abuse: cigarette smoking and alcohol consumption.

### SMOKING

Cigarette smoking causes nearly one in five deaths in the United States, making it the most preventable cause of death. Smoking harms a person's overall health and increases the risk of illnesses such as heart disease, stroke, and lung cancer (Centers for Disease Control and Prevention 2020e). Hawai'i legislation from 2006 prohibits smoking in enclosed and partially enclosed areas (Hawai'i Department of Health, n.d.). These laws were expanded to include e-cigarettes in 2016.

Of the major ethnicities in Hawai'i, Native Hawaiians are the most likely to smoke (fig. 1.63). Based on 2016 data, more than one-fifth (21 percent) of Native Hawaiian adults smoke—7 percentage points higher than the Hawai'i total (14 percent).

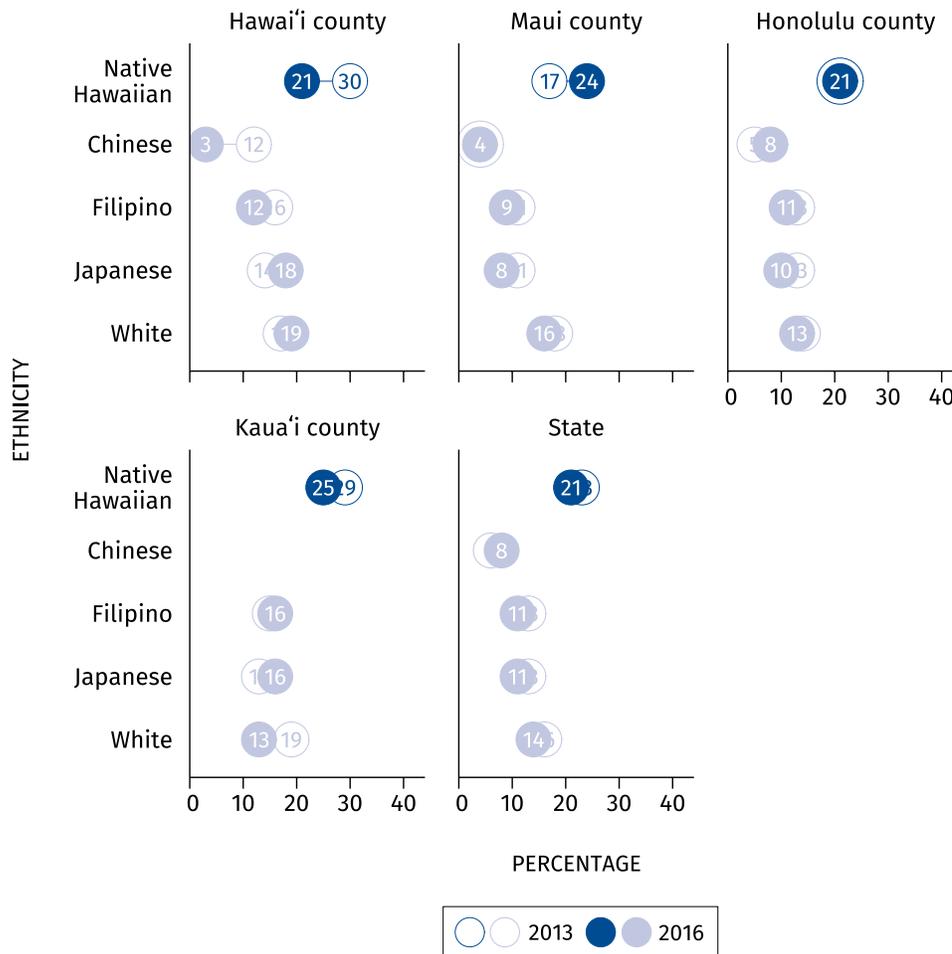
When comparing 2016 findings across counties, the differences in the proportion of Native Hawaiians who smoke are not statistically significant. However, when comparing smoking rates from 2013 to 2016 within particular counties, Hawai'i saw a significant decrease (9 percentage points) in the proportion of Native Hawaiian adults who smoke in that region, while Maui county saw a significant increase (7 percentage points). Both of these findings warrant further research.



In Hawai'i county, the proportion of Native Hawaiian adults who smoke decreased significantly, declining from 30 to 21 percent between 2013 and 2016.



**FIGURE 1.63** Adults who smoke—county comparison  
 [as a percentage of adults ages 18 and older, by ethnicity, county, and year, Hawai'i, 2013 and 2016]



Data source: Hawai'i Behavioral Risk Factor Surveillance System, 2013 (years 2011 to 2013 combined) and 2016 (years 2014 to 2016 combined), Hawai'i Department of Health

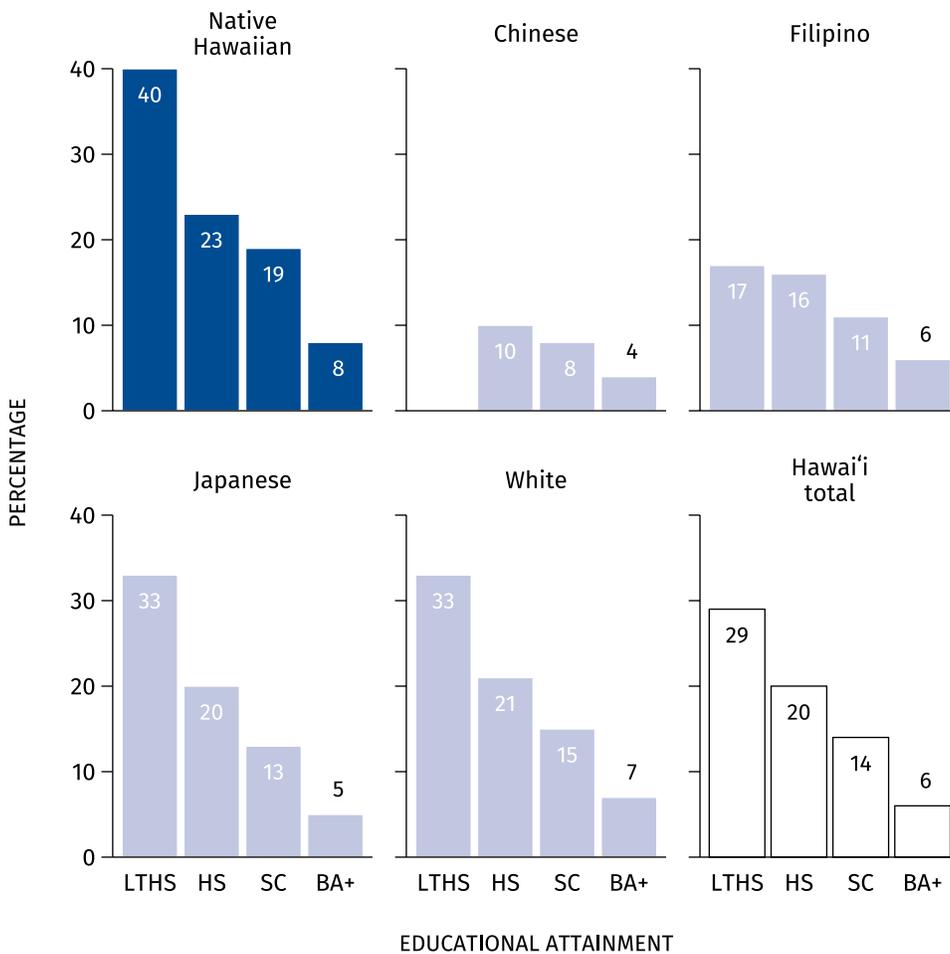
Note 1: This chart includes overlapping and sometimes obscured data points. The most recent data points are all visible; older data points that are not discernible suggest little or no change over time.

Note 2: Missing circles indicate data that are unavailable, not applicable, or suppressed due to small sample size.

- In Hawai'i county, the percentage of Native Hawaiian adults who smoke decreased significantly between 2013 and 2016; however, during the same period, the percentage of Native Hawaiian adults in Maui county who smoke increased significantly.
- Smoking is more prevalent among Native Hawaiians than it is among adults of other major ethnicities in Hawai'i.
- In 2016, there was no significant difference between counties in the percentage of Native Hawaiian adults who smoke.

The prevalence of smoking is associated with educational attainment and income. For example, Native Hawaiian adults whose highest degree is a high school diploma are nearly three times as likely to smoke as are those who have a bachelor's degree or higher (fig. 1.64). Similarly, Native Hawaiian adults who earn less than \$50,000 annually are more than twice as likely as higher earners to smoke (not shown).

**FIGURE 1.64** Adults who smoke, by educational attainment  
 [as a percentage of adults ages 18 and older, by ethnicity and educational attainment, Hawai'i, 2016]



Data source: Hawai'i Behavioral Risk Factor Surveillance System, 2016 (years 2011 to 2016 combined), Hawai'i Department of Health

Note 1: LTHS = Less than high school; HS = High school; SC = Some college; BA+ = Bachelor's degree or higher.

Note 2: Missing lines or bars indicate data that are unavailable, not applicable, or suppressed due to small sample size.

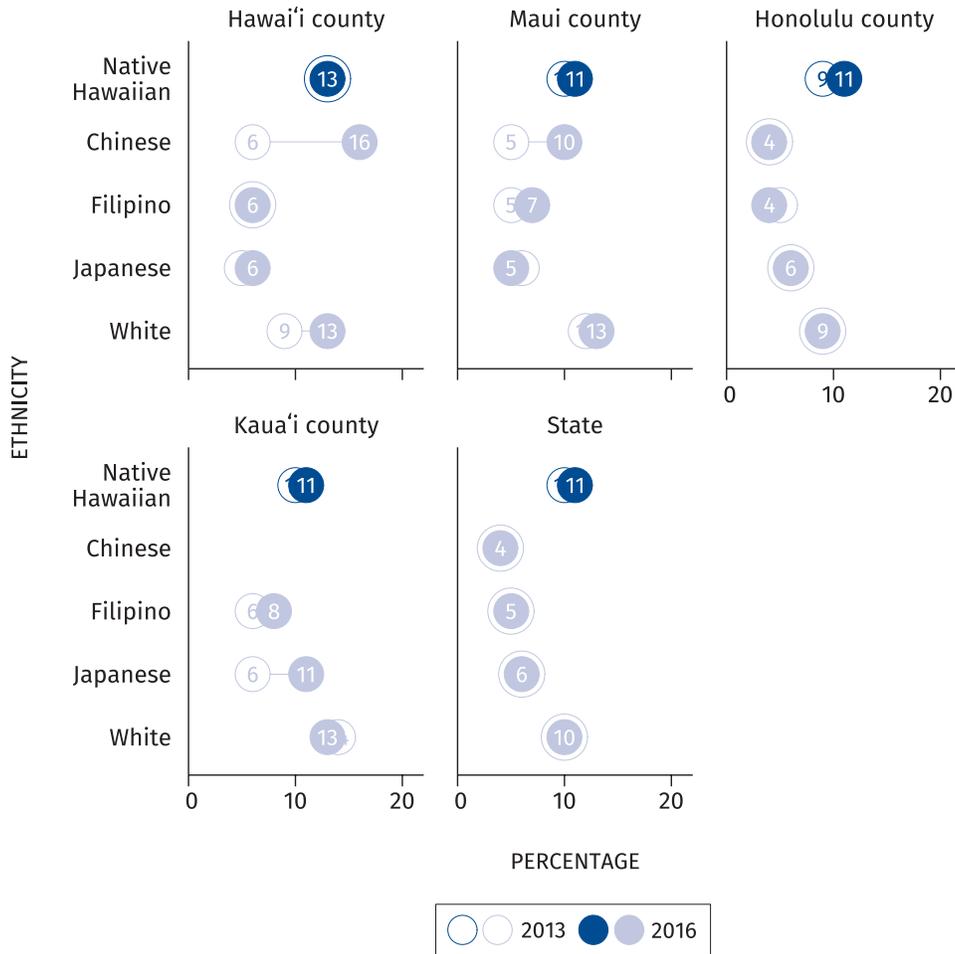
- Overall, higher levels of educational attainment are associated with lower rates of smoking.
- Among Native Hawaiians, adults whose highest degree is a high school diploma are nearly three times as likely to smoke as adults who have a bachelor's degree or higher.
- Across all levels of educational attainment, the percentage of Native Hawaiians who smoke is greater than the Hawai'i total; however, among those with a bachelor's degree or higher, the difference is not statistically significant.

## **DRINKING AND ALCOHOL CONSUMPTION**

Moderate alcohol consumption among adults is generally defined as one drink a day for women and two drinks a day for men (Centers for Disease Control and Prevention 2019a). While moderate alcohol consumption continues to be studied for possible health benefits, heavy drinking can increase the risk of serious health problems. Heavy drinking is generally defined as more than one alcoholic drink per day for women and more than two alcoholic drinks per day for men. Heavy alcohol use can increase the risk of a multitude of health problems including stroke, high blood pressure, suicide, and accidental serious injury or death.

From 2013 to 2016, there was a slight uptick in the prevalence of heavy drinking among Native Hawaiians. At the state level, 11 percent of Native Hawaiian adults are considered heavy drinkers. This proportion is similar to that of White adults and higher than that of other major ethnicities in Hawai'i (fig. 1.65).

**FIGURE 1.65** Prevalence of heavy drinking—county comparison  
 [as a percentage of adults ages 18 and older, by ethnicity, county, and year, Hawai'i, 2013 and 2016]



Data source: Hawai'i Behavioral Risk Factor Surveillance System, 2013 (years 2011 to 2013 combined) and 2016 (years 2014 to 2016 combined), Hawai'i Department of Health

Note 1: Heavy drinking is defined as having more than two alcoholic drinks per day (men) or more than one alcoholic drink per day (women).

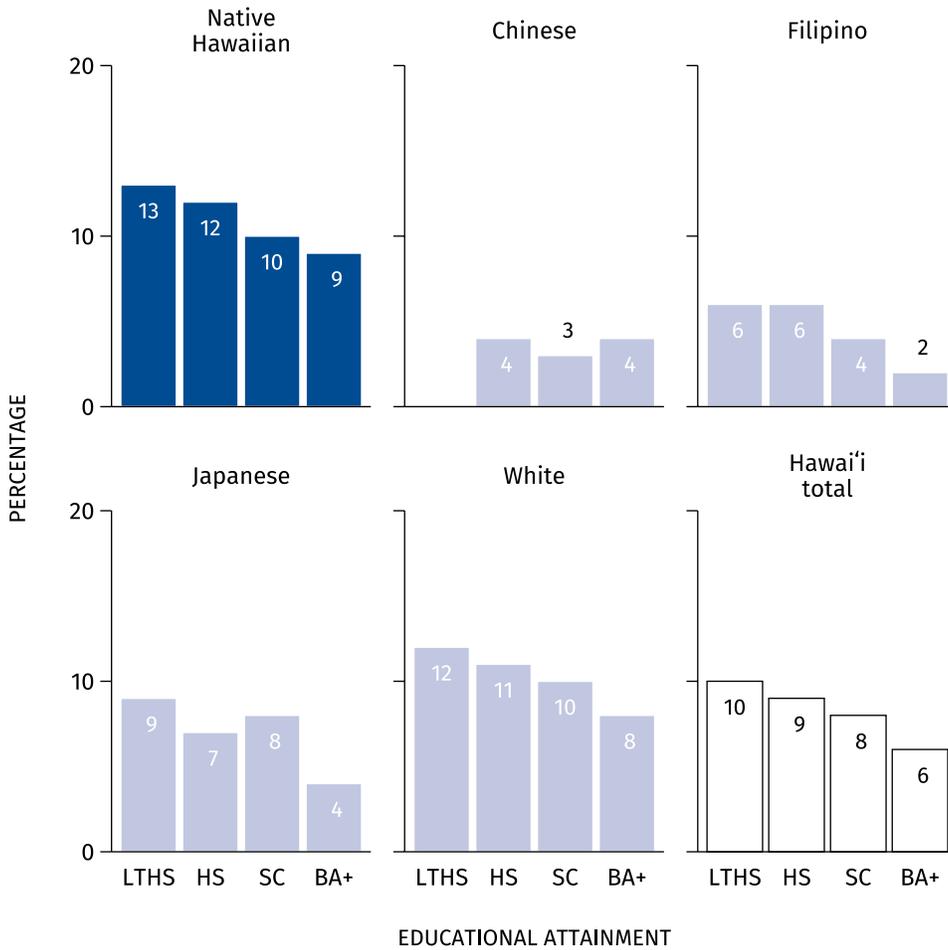
Note 2: Statistically significant findings are called out in the bullets below. Other seemingly noteworthy data points are not statistically significant due to a small sample size or other data limitations.

Note 3: This chart includes overlapping and sometimes obscured data points. The most recent data points are all visible; older data points that are not discernible suggest little or no change over time. Missing circles indicate data that are unavailable, not applicable, or suppressed due to small sample size.

- Overall, the percentage of Native Hawaiian adults who are heavy drinkers is similar to that of White adults and higher than that of Chinese, Filipino, and Japanese adults.
- From 2013 to 2016, there was a significant increase in the prevalence of heavy drinking among White adults in Hawai'i county.
- Apparent increases among other ethnicities in various counties are not statistically significant.

Heavy drinking among Native Hawaiians is not associated with income (not shown). However, higher levels of education are associated with lower prevalence of heavy drinking among Native Hawaiian adults (fig. 1.66). This finding aligns with research suggesting that individuals with lower levels of education are more likely to engage in heavy or binge drinking (Anderson 2006; Huckle, You, and Casswell 2010).

**FIGURE 1.66** Prevalence of heavy drinking, by educational attainment  
 [as a percentage of adults ages 18 and older, by ethnicity and educational attainment, Hawai'i, 2016]



Data source: Hawai'i Behavioral Risk Factor Surveillance System, 2016 (years 2011 to 2016 combined), Hawai'i Department of Health

Note 1: Heavy drinking is defined as having more than two alcoholic drinks per day (men) or more than one alcoholic drink per day (women).

Note 2: LTHS = Less than high school; HS = High school; SC = Some college; BA+ = Bachelor's degree or higher.

Note 3: Missing lines or bars indicate data that are unavailable, not applicable, or suppressed due to small sample size.

- On the whole, the proportion of adults who are heavy drinkers decreases with higher levels of educational attainment.
- Among Native Hawaiians with a bachelor's degree or higher, 9 percent are heavy drinkers, compared with 12 percent of Native Hawaiians whose highest degree is a high school diploma.

At the time of this writing, significant increases in alcohol sales (but not consumption, per se) have been reported by various countries during the COVID-19 pandemic (Chodkiewicz et al. 2020). While still too early to determine the impact of the coronavirus on drinking, previous research shows connections between pandemics or economic crises and alcohol consumption. For example, increased psychological distress is correlated with higher alcohol use, while unemployment and the closing of manufacturing sites—resulting in income reductions—are associated with a decrease in alcohol use (Rehm et al. 2020).

## Disease and Disability

Access to healthcare and positive modifiable health behaviors are important for preventing or reducing the risk of serious health conditions. Serious health conditions, such as obesity, high blood pressure, and high cholesterol are concerning because they serve as “intermediate risk factors” of chronic disease (World Health Organization 2005; Office of Hawaiian Affairs 2015).

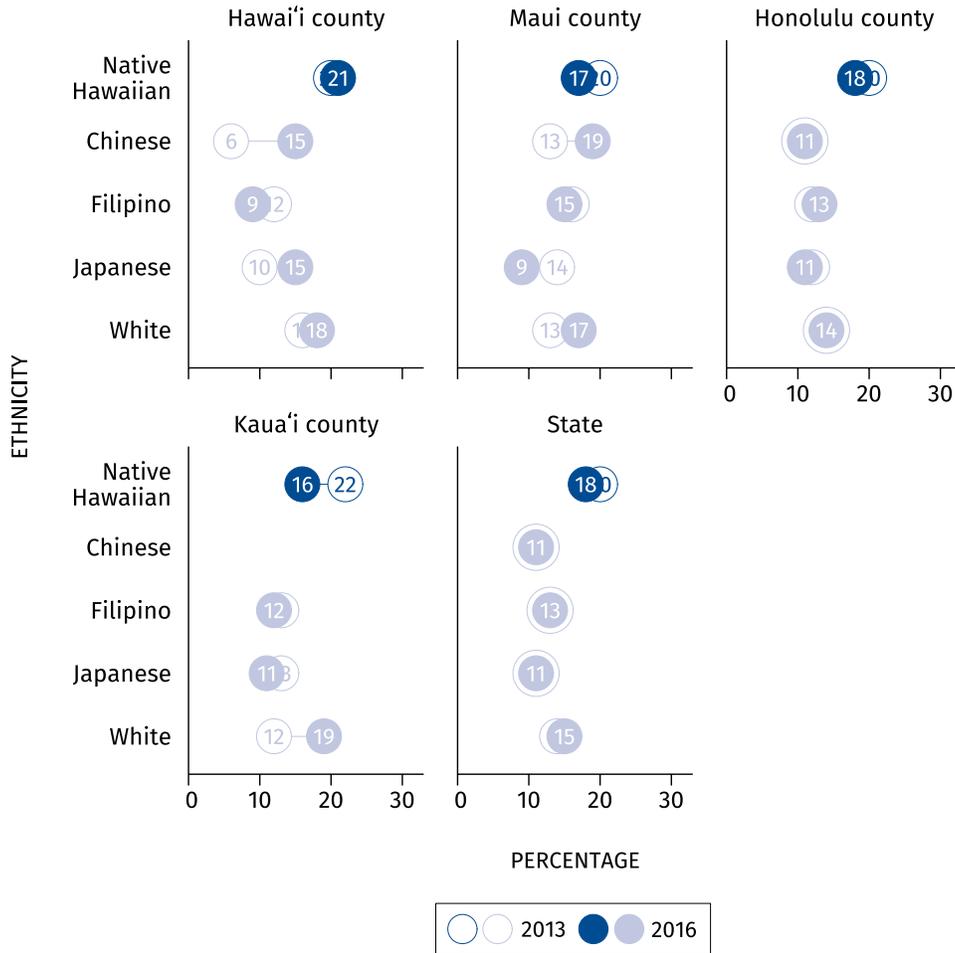
Chronic diseases progress slowly (usually over the course of one year or longer) and are responsible for the majority of deaths and disability in the United States (Centers for Disease Control and Prevention 2020a). Chronic disease is an urgent health issue among Native Hawaiians, who have some of the highest rates of chronic diseases relative to other ethnic groups (Office of Hawaiian Affairs 2015; Look et al. 2013), along with resulting mortality from chronic disease (Healthcare Association of Hawai‘i 2015; Look et al. 2013).

Below, we present data on overall poor physical health, select diseases and associated health conditions, and different forms of disability.

### POOR PHYSICAL HEALTH

Hawai‘i is generally recognized as one of the healthier states in the United States (United Health Foundation 2020). Out of the major ethnic groups in Hawai‘i, Native Hawaiians are the most likely to be in poor physical health (i.e., self-reporting health as being “not good” due to physical illness and injury). In 2016, 18 percent of Native Hawaiians were in poor physical health for at least six days in the previous month, compared with the Hawai‘i total of 14 percent (not shown). The results were more pronounced in Hawai‘i county, where 21 percent of Native Hawaiian adults were in poor health for at least six days (fig. 1.67). Hawai‘i county also saw a similar pattern for longer-term illness, with 16 percent of Native Hawaiian adults reporting that they were in poor health for at least fourteen days of the previous month (not shown).

**FIGURE 1.67** Adults with poor physical health for at least six days in the past month—county comparison  
[as a percentage of adults ages 18 and older, by ethnicity, county, and year, Hawai'i, 2013 and 2016]



Data source: Hawai'i Behavioral Risk Factor Surveillance System, 2013 (years 2011 to 2013 combined) and 2016 (years 2014 to 2016 combined), Hawai'i Department of Health

Note 1: Poor physical health is measured by respondents who self-report their health as being "not good" due to physical illness or injury.

Note 2: This chart includes overlapping and sometimes obscured data points. The most recent data points are all visible; older data points that are not discernible suggest little or no change over time.

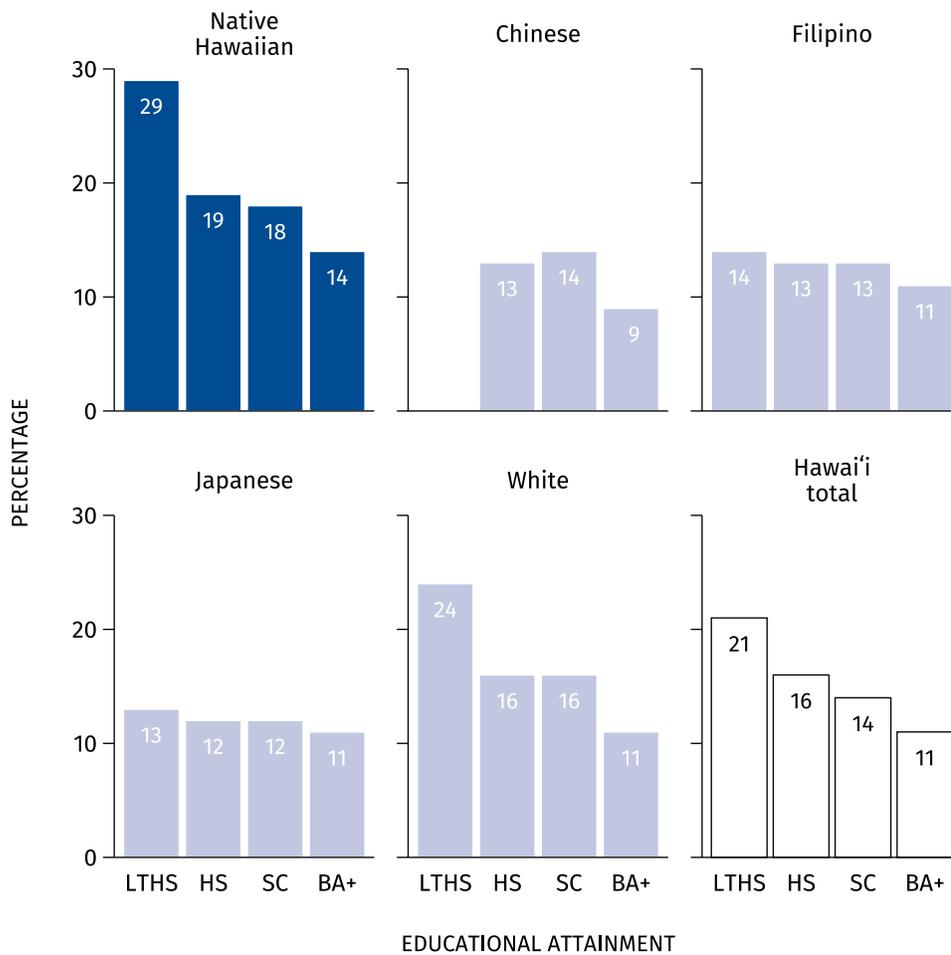
Note 3: Missing circles indicate data that are unavailable, not applicable, or suppressed due to small sample size.

- Across counties, there were changes between 2013 and 2016 in the percentage of Native Hawaiian adults with poor health for at least six days in the past month; however, the differences are not statistically significant.
- Among Native Hawaiians, the percentage of adults with poor health for at least six days in the past month does not differ significantly by county.

For Native Hawaiian adults, higher levels of educational attainment correlate with a lower likelihood of having poor health (fig. 1.68). There is a similar correlation among Native Hawaiian adults with higher levels of income (not shown).

**FIGURE 1.68** Adults with poor physical health for at least six days in the past month, by educational attainment

[as a percentage of adults ages 18 and older, by ethnicity and educational attainment, Hawai'i, 2016]



Data source: Hawai'i Behavioral Risk Factor Surveillance System, 2016 (years 2011 to 2016 combined), Hawai'i Department of Health

Note 1: Poor physical health is measured by respondents who self-report their health as being "not good" due to physical illness or injury.

Note 2: LTHS = Less than high school; HS = High school; SC = Some college; BA+ = Bachelor's degree or higher.

Note 3: Missing lines or bars indicate data that are unavailable, not applicable, or suppressed due to small sample size.

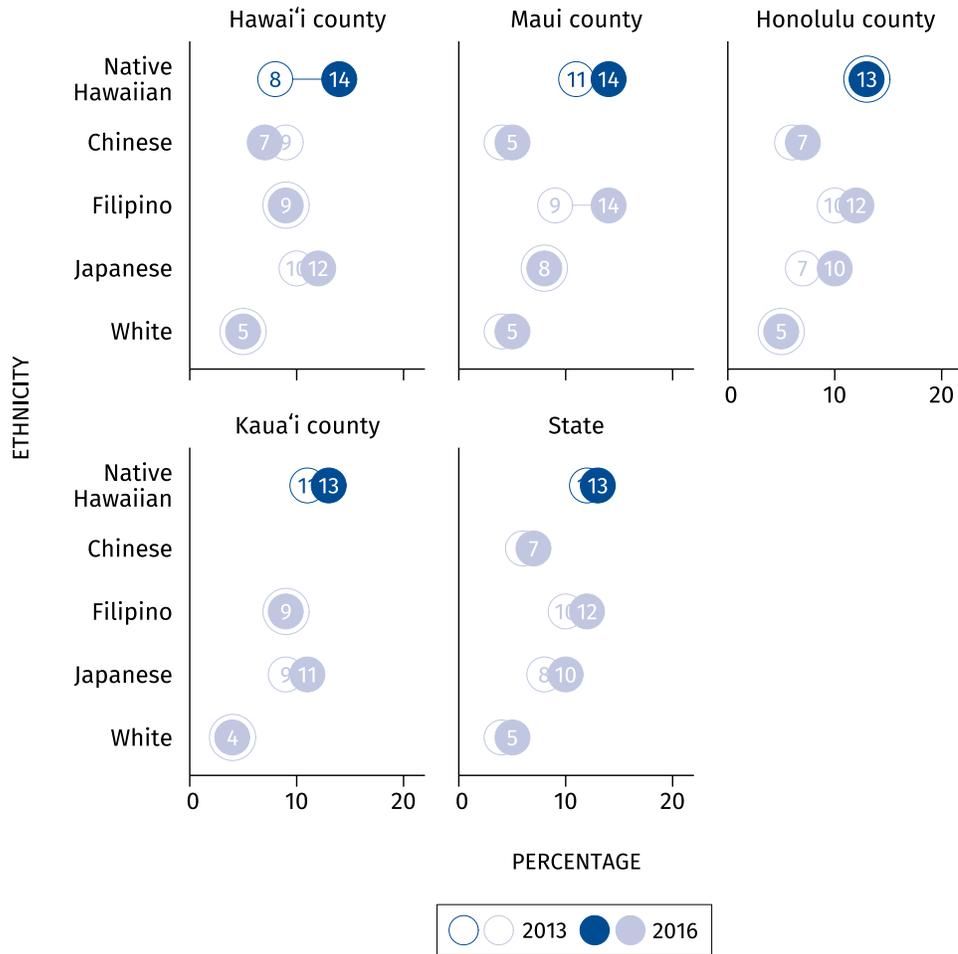
- Higher educational attainment is generally associated with lower likelihood of poor health.
- Among Native Hawaiians with a bachelor's degree or higher, 14 percent report being in poor health for at least six days in the past month, compared with 19 percent of those whose highest degree is a high school diploma.

## DIABETES

Diabetes affects millions of people and is the seventh-leading cause of death in the United States. It is a gateway disease that is correlated with risk of other health problems such as heart disease and stroke. While diabetes is typically a long-lasting condition, it can be managed by lifestyle changes such as losing weight, being active, and changing one's diet (Centers for Disease Control and Prevention 2020h).

The prevalence of diabetes is increasing in Hawai'i, affecting nearly one-tenth (9 percent) of the total adult population (Kamehameha Schools 2019). Native Hawaiians continue to have the highest incidence of diabetes relative to other ethnicities in Hawai'i (fig. 1.69). Hawai'i county has seen an uptick in diabetes rates among Native Hawaiian adults, increasing from 8 to 14 percent between 2013 and 2016.

**FIGURE 1.69** Prevalence of diabetes—county comparison  
 [as a percentage of adults ages 18 and older, by ethnicity, county, and year, Hawai'i, 2013 and 2016]



Data source: Hawai'i Behavioral Risk Factor Surveillance System, 2013 (years 2011 to 2013 combined) and 2016 (years 2014 to 2016 combined), Hawai'i Department of Health

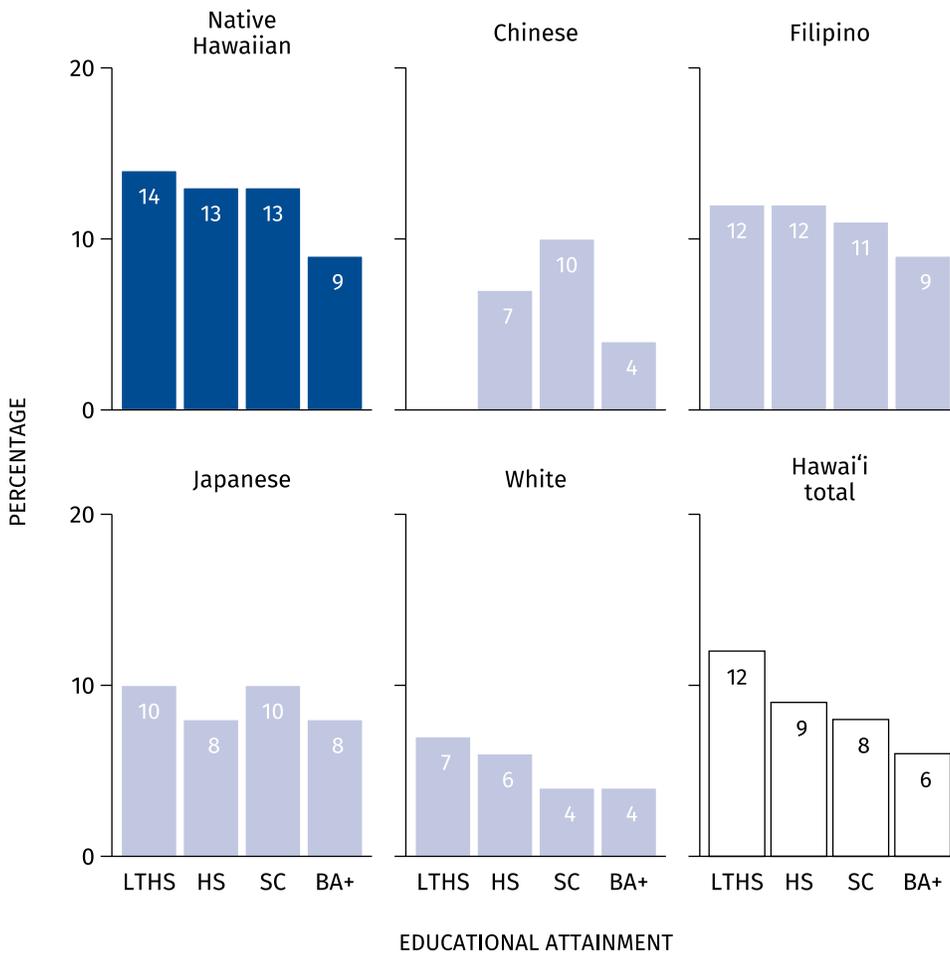
Note 1: This chart includes overlapping and sometimes obscured data points. The most recent data points are all visible; older data points that are not discernible suggest little or no change over time.

Note 2: Missing circles indicate data that are unavailable, not applicable, or suppressed due to small sample size.

- At the state level, Native Hawaiians have the highest prevalence of diabetes among Hawai'i's major ethnicities (except Filipinos).
- Over a three-year period, Hawai'i county had a significant increase in the prevalence of diabetes among Native Hawaiian adults, rising from 8 to 14 percent between 2013 and 2016.
- In 2016, the prevalence of diabetes among Native Hawaiian adults did not differ significantly from county to county.
- For the Hawai'i total (not shown), there was an increase in the prevalence of diabetes, going from 7 to 9 percent between 2013 and 2016.

For Native Hawaiian adults, the prevalence of diabetes is lowest among those who have higher levels of education. For example, in 2016, 9 percent of Native Hawaiians with a bachelor's degree or higher had diabetes, compared with 13 percent among those whose highest degree is a high school diploma (fig. 1.70). Income is also related to the prevalence of diabetes: Among Native Hawaiians earning \$50,000 or more annually, 10 percent have diabetes, compared with 14 percent of those with an annual income of less than \$50,000 (not shown).

**FIGURE 1.70** Prevalence of diabetes, by educational attainment  
 [as a percentage of adults ages 18 and older, by ethnicity and educational attainment, Hawai'i, 2016]



Data source: Hawai'i Behavioral Risk Factor Surveillance System, 2016 (years 2011 to 2016 combined), Hawai'i Department of Health

Note 1: LTHS = Less than high school; HS = High school; SC = Some college; BA+ = Bachelor's degree or higher.

Note 2: Missing lines or bars indicate data that are unavailable, not applicable, or suppressed due to small sample size.

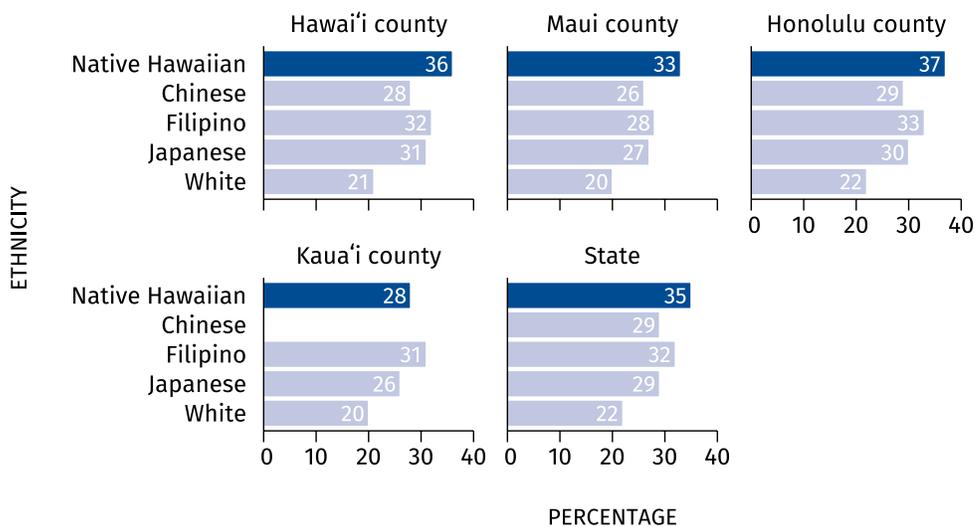
- Among adults in Hawai‘i, higher educational attainment generally corresponds with lower prevalence of diabetes.
- Among Native Hawaiians with a bachelor’s degree or higher, 9 percent have diabetes, compared with 13 percent of Native Hawaiians whose highest degree is a high school diploma.

### HIGH BLOOD PRESSURE

According to the Mayo Clinic (2018a), high blood pressure can develop over time and can be easily detected and monitored. Risk factors for high blood pressure include age, race, family history, diet, level of physical activity, and stress levels. Over time, high blood may eventually lead to heart disease. For Native Hawaiians, activities such as hula have been shown to successfully lower high blood pressure (Kaholokula et al. 2017).

Comparing adults from Hawai‘i’s major ethnicities, Native Hawaiians have the highest rates of high blood pressure. At the state level, more than one-third (35 percent) of Native Hawaiians have high blood pressure (fig. 1.71), compared with the Hawai‘i total of 28 percent (not shown).

**FIGURE 1.71** Prevalence of high blood pressure—county comparison  
[as a percentage of adults ages 18 and older, by ethnicity and county, Hawai‘i, 2015]



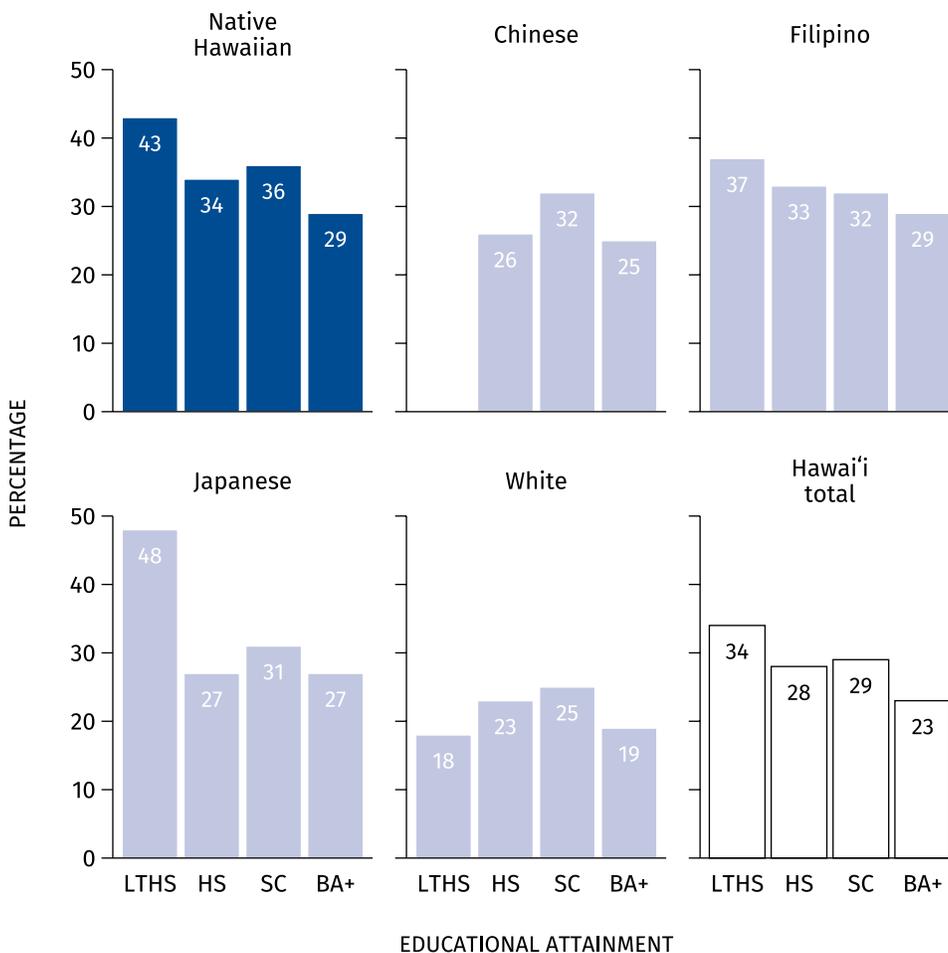
Data source: Hawai‘i Behavioral Risk Factor Surveillance System, 2015 (years 2011, 2013, 2015 combined), Hawai‘i Department of Health

Note 1: Missing lines or bars indicate data that are unavailable, not applicable, or suppressed due to small sample size.

- Across counties, Kaua‘i has the lowest proportion of Native Hawaiians with high blood pressure (28 percent).
- At the state level, 35 percent of Native Hawaiian adults have high blood pressure, compared with the Hawai‘i total of 28 percent (not shown).

Among Native Hawaiians, higher rates of high blood pressure are associated with lower levels of educational attainment. For example, among Native Hawaiian adults whose highest degree is a high school diploma, 34 percent have high blood pressure, compared with 29 percent of those who have a bachelor's degree or higher (fig. 1.72). High blood pressure is not associated with income (not shown).

**FIGURE 1.72** Prevalence of high blood pressure, by educational attainment  
 [as a percentage of adults ages 18 and older, by ethnicity and educational attainment, Hawai'i, 2015]



Data source: Hawai'i Behavioral Risk Factor Surveillance System, 2015 (years 2011, 2013, 2015 combined), Hawai'i Department of Health

Note 1: LTHS = Less than high school; HS = High school; SC = Some college; BA+ = Bachelor's degree or higher.

Note 2: Missing lines or bars indicate data that are unavailable, not applicable, or suppressed due to small sample size.

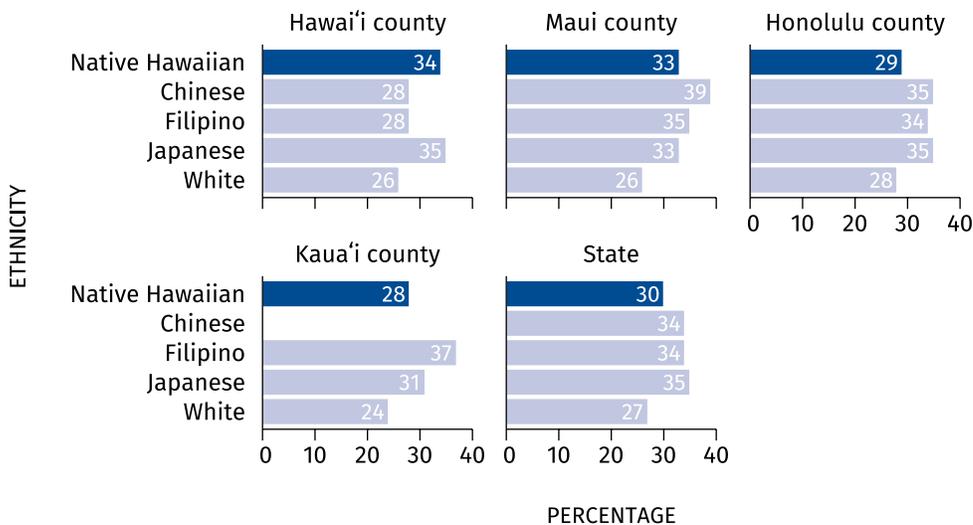
- In general, high blood pressure is less prevalent among adults with higher levels of educational attainment.
- Among Native Hawaiians with a bachelor's degree or higher, 29 percent have high blood pressure, compared with 34 percent of Native Hawaiians whose highest degree is a high school diploma.

## HIGH CHOLESTEROL

Similar to high blood pressure, high cholesterol can increase the risk of heart disease and can lead to a heart attack or stroke. High cholesterol can be reduced through a healthy diet, regular exercise, limiting alcohol consumption, and by not smoking. Cholesterol levels can be monitored through blood tests and doctor visits, further emphasizing the importance of access to quality healthcare.

Looking across Hawai'i's major ethnicities, the lowest rates of high cholesterol are among Whites (27 percent) and Native Hawaiians (30 percent) (fig. 1.73). Our analysis does not show an association between high cholesterol rates and educational attainment or income.

**FIGURE 1.73** Prevalence of high cholesterol—county comparison  
[as a percentage of adults ages 18 and older, by ethnicity and county, Hawai'i, 2015]



Data source: Hawai'i Behavioral Risk Factor Surveillance System, 2015 (years 2011, 2013, 2015 combined), Hawai'i Department of Health

Note 1: Missing lines or bars indicate data that are unavailable, not applicable, or suppressed due to small sample size.

- At the state level, the prevalence of high cholesterol among Native Hawaiian adults (30 percent) does not differ significantly from the Hawai'i total of 31 percent (not shown).
- Across ethnicities, the prevalence of adults with high cholesterol does not differ significantly from region to region.



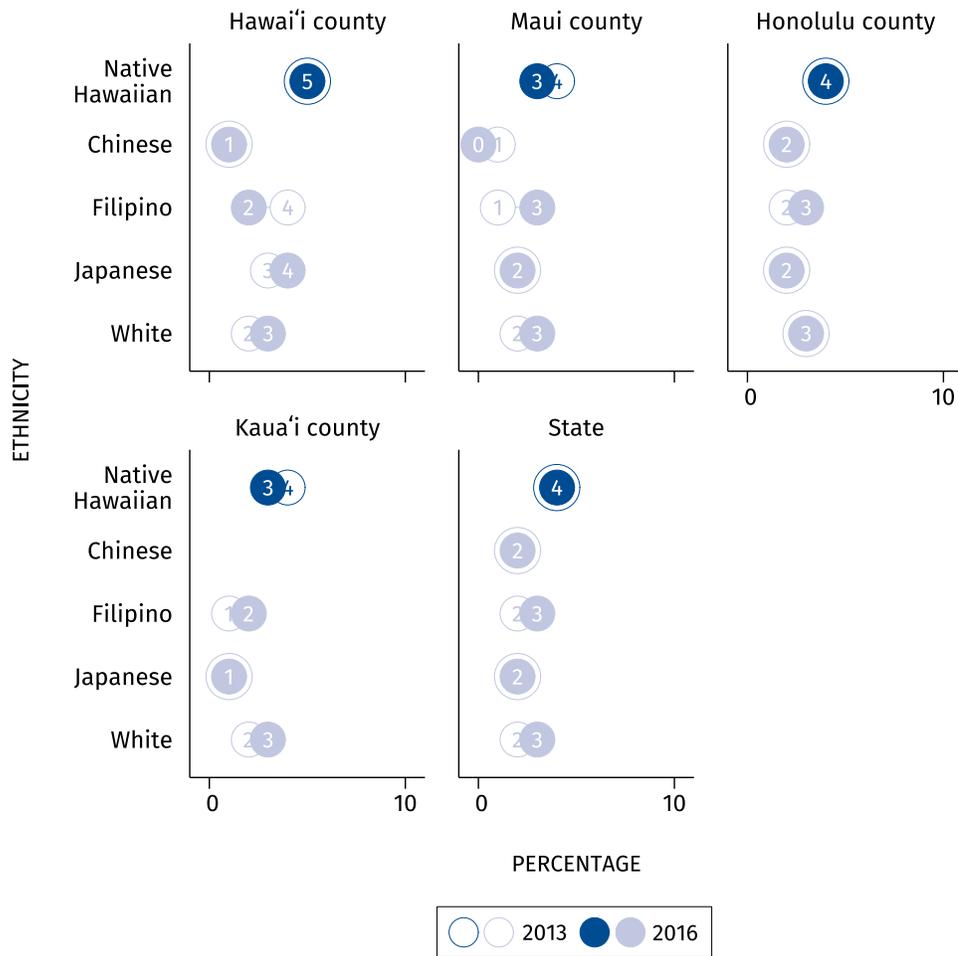
Compared with Hawai'i's other major ethnicities, Native Hawaiians have the second-lowest rates of high cholesterol (30 percent).

### ANGINA OR CORONARY HEART DISEASE

Coronary heart disease (or cardiovascular disease) is often caused by smoking, high blood pressure, high cholesterol, diabetes, or an inactive lifestyle. Diet also plays a role. Angina, a symptom of coronary heart disease, is a type of chest pain that can occur during physical or emotional stress. Common symptoms of coronary heart disease include heart attacks and strokes (Mayo Clinic 2020a).

The Healthcare Association of Hawai'i (2015) reports that in Hawai'i, the death rate due to heart disease among Native Hawaiians and other Pacific Islanders is more than three times higher than that of Hawai'i's overall population. Our data show that in 2016, one in twenty-five Native Hawaiian adults experienced angina or coronary heart disease, constituting the highest rates among Hawai'i's other major ethnic groups. For Native Hawaiian adults at the state level, there was no change in the prevalence of angina or coronary heart disease between 2013 and 2016 (fig. 1.74).

**FIGURE 1.74** Prevalence of angina or coronary heart disease—county comparison  
 [as a percentage of adults ages 18 and older, by ethnicity, county, and year, Hawai'i, 2013 and 2016]



Data source: Hawai'i Behavioral Risk Factor Surveillance System, 2013 (years 2011 to 2013 combined) and 2016 (years 2014 to 2016 combined), Hawai'i Department of Health

Note 1: This chart includes overlapping and sometimes obscured data points. The most recent data points are all visible; older data points that are not discernible suggest little or no change over time.

Note 2: Missing circles indicate data that are unavailable, not applicable, or suppressed due to small sample size.

- Among Native Hawaiians, the prevalence of angina or coronary heart disease did not change significantly between 2013 and 2016.
- At the state level, the prevalence of angina or coronary heart disease is higher among Native Hawaiians than among other major ethnic groups in Hawai'i.

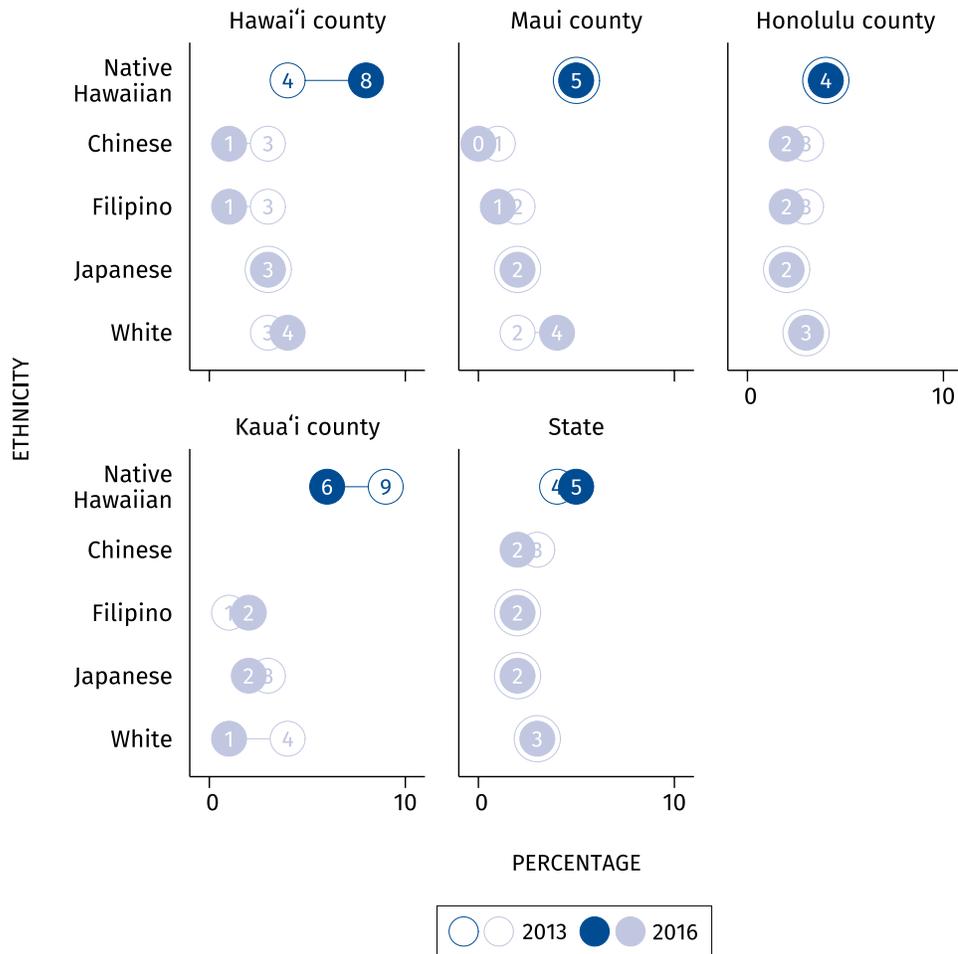
The prevalence of angina or coronary heart disease is not associated with educational attainment; however, there is a correlation with income. For example, among Native Hawaiians with an annual income of \$50,000 or more, 3 percent have angina or coronary heart disease, compared with 5 percent among those making less than \$50,000 a year (not shown).

## HEART ATTACK AND STROKE

Like angina, heart attacks and strokes can be symptoms of, or risk factors for, coronary heart disease. Both occur when arteries become blocked. Other types of stroke involve the rupturing of an artery in the brain, or mini-strokes, which cut off oxygen and nutrients to the brain for a short duration (Centers for Disease Control and Prevention 2020g). Not all strokes lead to heart disease.

One in twenty Native Hawaiian adults had a heart attack in 2016—a higher proportion than that of all major ethnicities in Hawai'i (fig. 1.75). From 2013 to 2016, across counties and at the state level, heart attack rates generally remained stable or declined slightly among Hawai'i's major ethnic groups. However, for Native Hawaiians in Hawai'i county, heart attack prevalence increased significantly, from 4 to 8 percent between 2013 and 2016. Given the relatively high proportion of Native Hawaiians in Hawai'i county, additional analysis is needed to understand these adverse trends.

**FIGURE 1.75** Prevalence of heart attack—county comparison  
 [as a percentage of adults ages 18 and older, by ethnicity, county, and year, Hawai‘i, 2013 and 2016]



Data source: Hawai‘i Behavioral Risk Factor Surveillance System, 2013 (years 2011 to 2013 combined) and 2016 (years 2014 to 2016 combined), Hawai‘i Department of Health

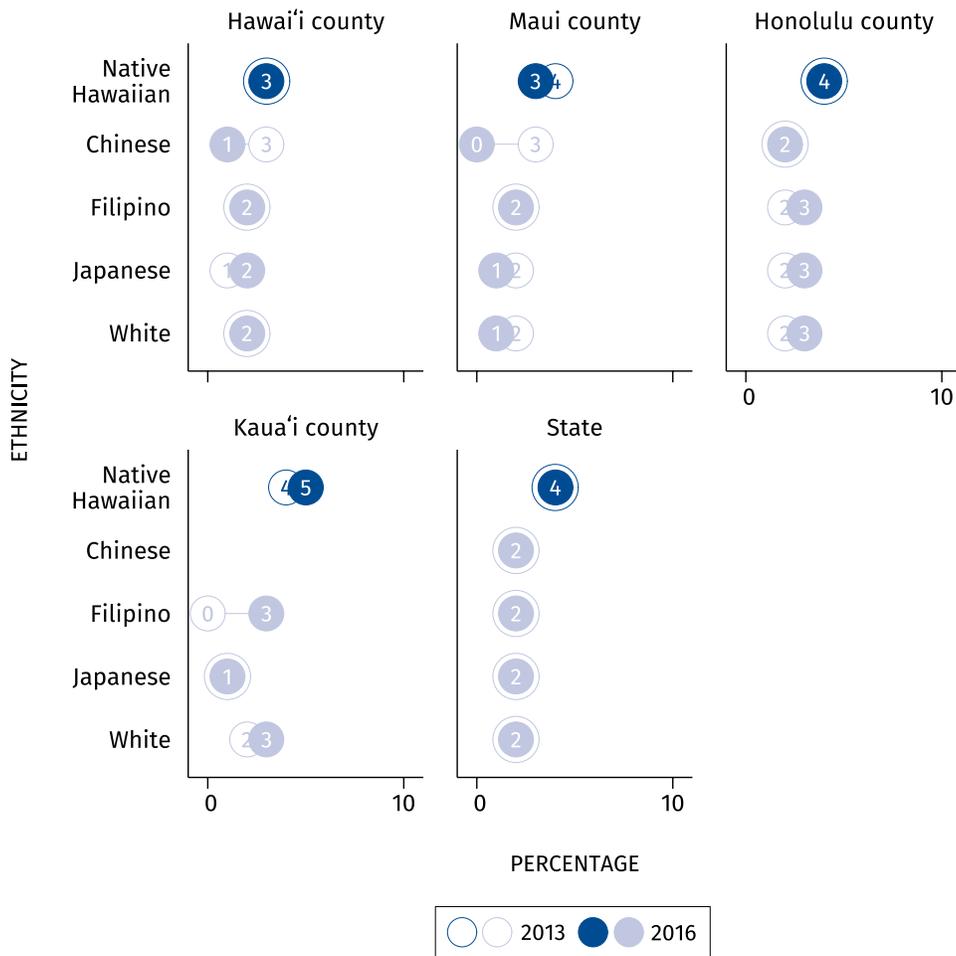
Note 1: This chart includes overlapping and sometimes obscured data points. The most recent data points are all visible; older data points that are not discernible suggest little or no change over time.

Note 2: Missing circles indicate data that are unavailable, not applicable, or suppressed due to small sample size.

- Between 2013 and 2016, Hawai‘i county had a significant increase in the prevalence of heart attack among Native Hawaiians.
- Compared with Native Hawaiians in other counties, Native Hawaiians in Hawai‘i county had the highest prevalence of heart attack in 2016.
- At the state level in 2016, one in twenty Native Hawaiian adults (5 percent) had a heart attack—the greatest proportion among all major ethnicities in Hawai‘i.

At the state level, the prevalence of stroke among Native Hawaiians is slightly higher than that of other ethnicities, but the difference is not statistically significant. Among all of Hawai'i's major ethnic groups, rates of stroke have not changed at the state level since 2013 (fig. 1.76).

**FIGURE 1.76** Prevalence of stroke—county comparison  
[as a percentage of adults ages 18 and older, by ethnicity, county, and year, Hawai'i, 2013 and 2016]



Data source: Hawai'i Behavioral Risk Factor Surveillance System, 2013 (years 2011 to 2013 combined) and 2016 (years 2014 to 2016 combined), Hawai'i Department of Health

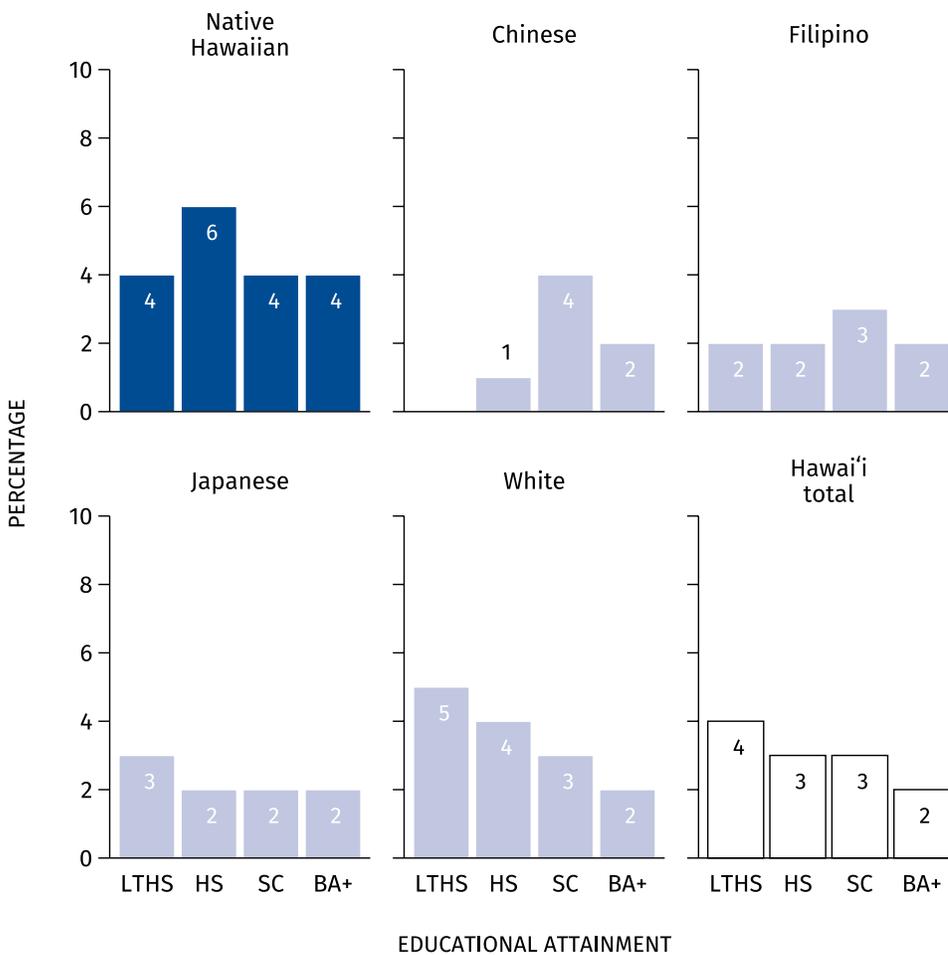
Note 1: This chart includes overlapping and sometimes obscured data points. The most recent data points are all visible; older data points that are not discernible suggest little or no change over time.

Note 2: Missing circles indicate data that are unavailable, not applicable, or suppressed due to small sample size.

- Compared with other major ethnicities in Hawai'i, Native Hawaiians have the highest prevalence of stroke; however, the differences are not statistically significant.
- Among Native Hawaiian adults, the prevalence of stroke does not differ significantly from region to region.
- From 2013 to 2016, the prevalence of stroke did not change significantly among Hawai'i's major ethnic groups.

Among Native Hawaiian adults, educational attainment data show no relation to rates of heart attacks (fig. 1.77) but are correlated with rates of stroke (fig. 1.78). More specifically, Native Hawaiians with higher levels of education are at less risk of having a stroke. Similarly, higher income is correlated with lower rates of both heart attack and stroke among Native Hawaiians (not shown).

**FIGURE 1.77** Prevalence of heart attack, by educational attainment  
[as a percentage of adults ages 18 and older, by ethnicity and educational attainment, Hawai'i, 2016]



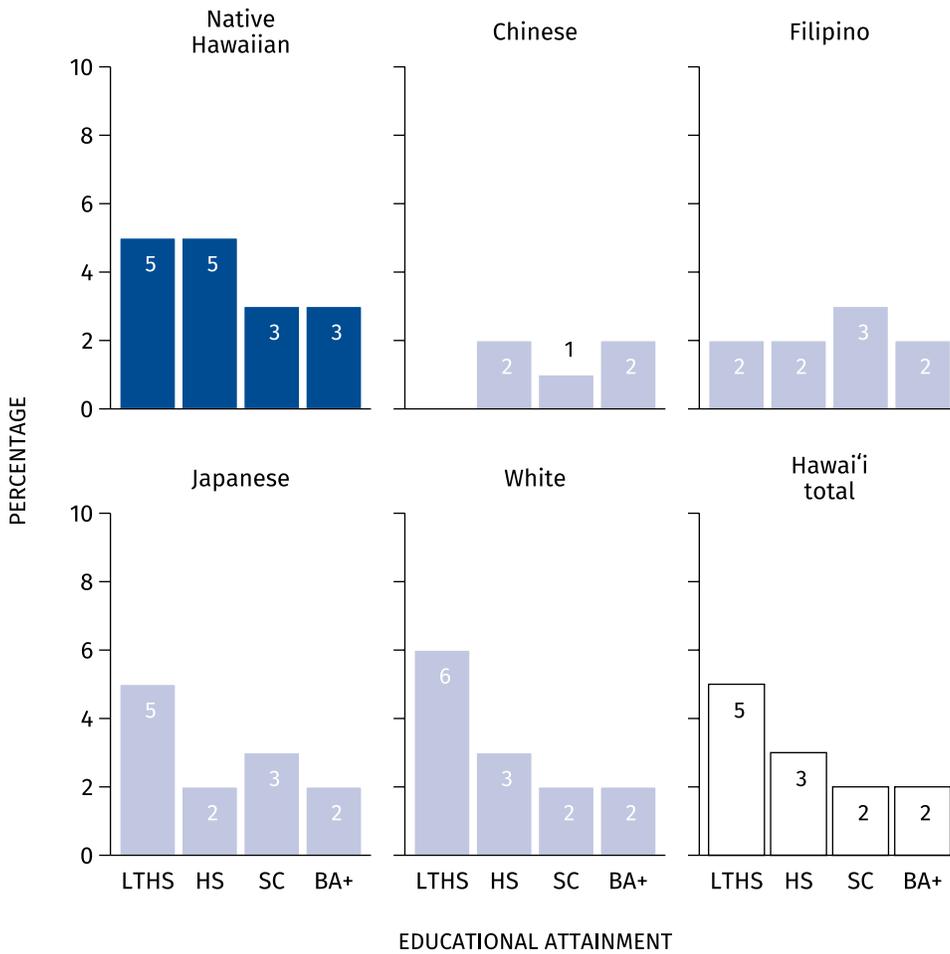
Data source: Hawai'i Behavioral Risk Factor Surveillance System, 2016 (years 2011 to 2016 combined), Hawai'i Department of Health

Note 1: LTHS = Less than high school; HS = High school; SC = Some college; BA+ = Bachelor's degree or higher.

Note 2: Missing lines or bars indicate data that are unavailable, not applicable, or suppressed due to small sample size.

- Among Native Hawaiians, educational attainment does not significantly correlate with heart attack prevalence.
- Looking at the Hawai'i total, the prevalence of heart attack decreases with higher levels of educational attainment.

**FIGURE 1.78** Prevalence of stroke, by educational attainment  
 [as a percentage of adults ages 18 and older, by ethnicity and educational attainment, Hawai'i, 2016]



Data source: Hawai'i Behavioral Risk Factor Surveillance System, 2016 (years 2011 to 2016 combined), Hawai'i Department of Health

Note 1: LTHS = Less than high school; HS = High school; SC = Some college; BA+ = Bachelor's degree or higher.

Note 2: Missing lines or bars indicate data that are unavailable, not applicable, or suppressed due to small sample size.

- Among adults in Hawai'i, higher levels of educational attainment generally correspond with lower prevalence of stroke.
- For adults with a bachelor's degree or higher, the prevalence of stroke among Native Hawaiians (3 percent) is significantly higher than that of the Hawai'i total (2 percent).

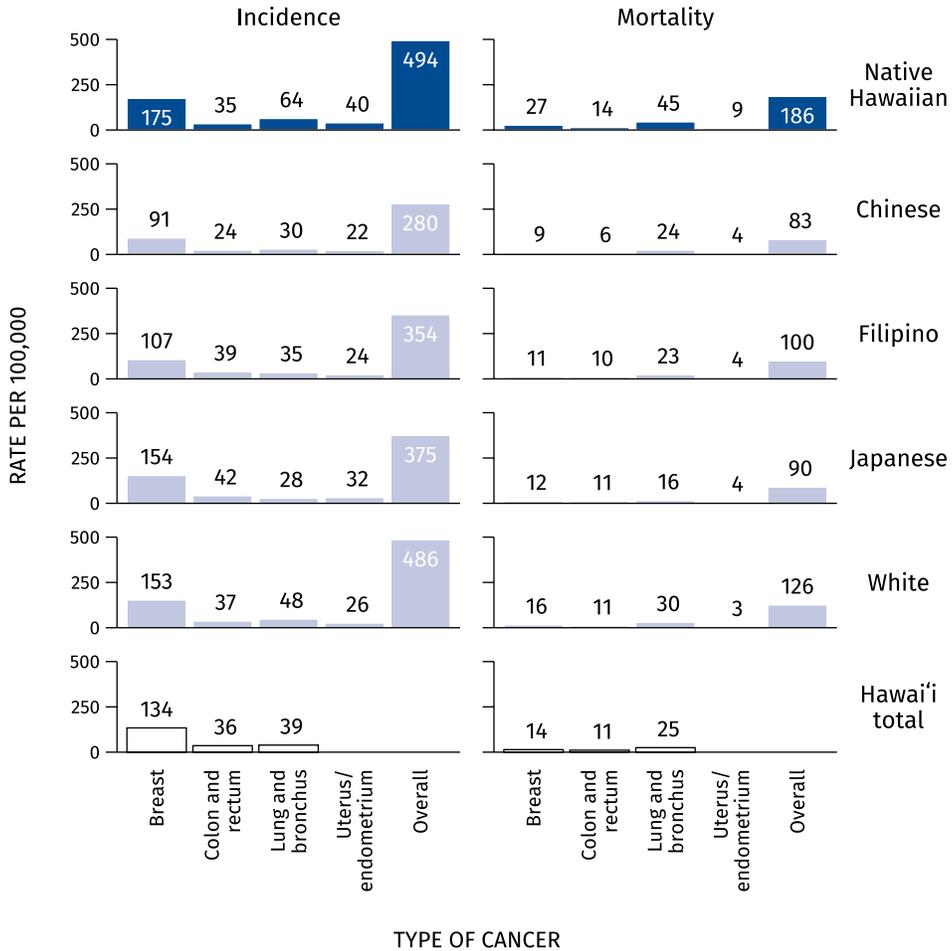
## CANCER AND MORTALITY RATES

Cancer comes at a high cost to individuals, families, and communities. According to Tsark and Braun (2009), Native Hawaiians and other Pacific Islanders are more likely than other ethnic groups in the United States to die due to cancer. Cancer, as a collection of related diseases, is associated with a number of internal, external, and lifestyle risk factors (‘Imi Hale 2015). Some risk factors are unavoidable, such as growing older or inherited family genetics. Known risk factors include cigarette smoking, tobacco use, infections, radiation, and immunosuppressive medicines after organ transplant. Other factors that may affect the risk of cancer include diet, alcohol, physical activity, obesity, and diabetes. Preventative measures such as changes in diet, lifestyle, and early diagnosis may lower the number of new cancer cases.

Research has shown that compared with other ethnicities, Native Hawaiians and other Pacific Islanders are more likely to engage in behaviors associated with high rates of cancer (Tsark 1998; Mokuau et al. 2012). Ongoing disparities in healthcare access, utilization, and quality also impact an individual’s ability to receive timely and preventative care. For example, Tsark and Braun (2009) and Mokuau, Braun, and Daniggelis (2012) found that Native Hawaiians and other Pacific Islanders are relatively less likely to be current on cancer screenings, which may be partially explained by an uneven distribution of cancer care resources, particularly among patients on neighbor islands. Braun et al. (2002) also found that limited access to healthcare was a significant obstacle to cancer recovery. Another challenge is the scarcity of culturally appropriate interventions across all stages of cancer prevention, diagnosis, and treatment (Mokuau, Braun, and Daniggelis 2012).

Our analysis shows that Native Hawaiians—both females and males—have the highest rates of mortality due to cancer among the major ethnicities in Hawai‘i. Among females in Hawai‘i, the cancer incidence rate among Native Hawaiians (494 per 100,000) is similar to that of Whites (486 per 100,000) (fig. 1.79).

**FIGURE 1.79** Selected cancer incidence and mortality rates among females  
 [as a rate per 100,000, age-adjusted to US 2000 standard population, by type of cancer, 2013]



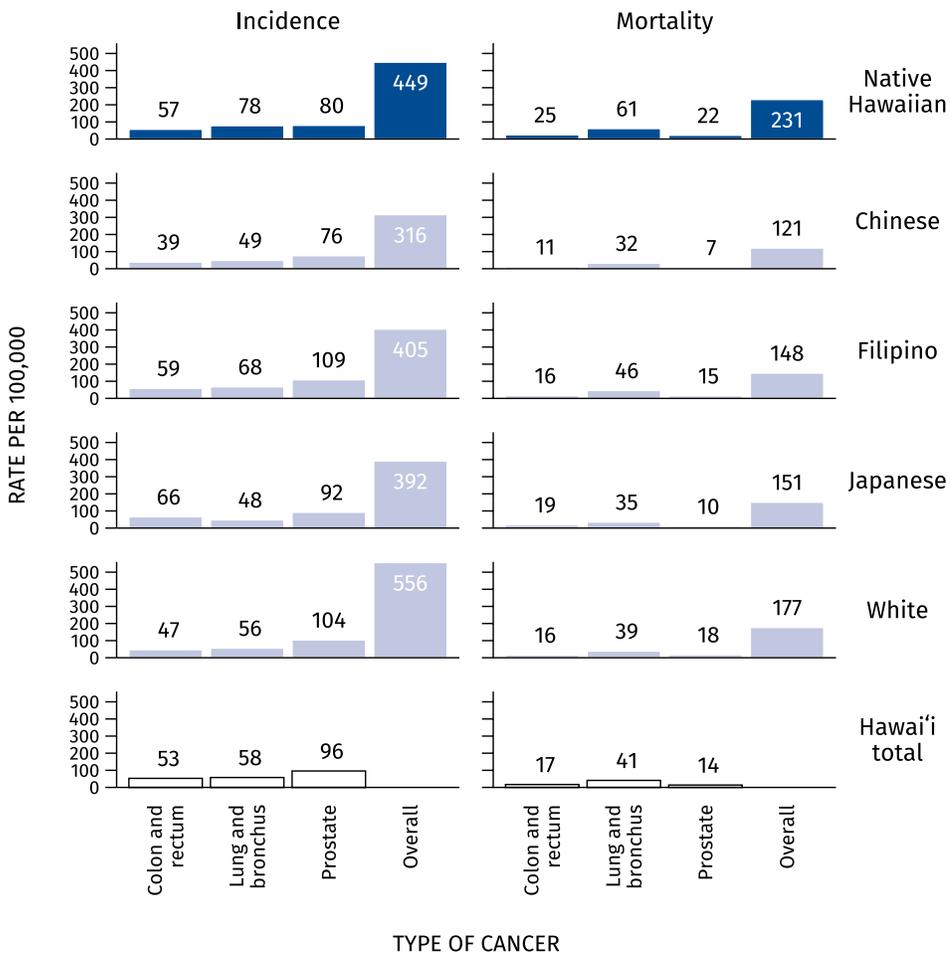
Data source: Hawai'i Tumor Registry, University of Hawai'i Cancer Center, via "Hawai'i Cancer at a Glance, 2009-2013"

Note 1: Missing lines or bars indicate data that are unavailable, not applicable, or suppressed due to small sample size.

- Among females in Hawai'i, the incidence of breast cancer is the highest of the four types of cancer.
- Across ethnicities, Native Hawaiian females have the highest incidence of breast cancer.
- Among females in Hawai'i, lung and bronchus cancer have the highest mortality rate, relative to other cancers.
- The mortality rate for lung and bronchus cancer among Native Hawaiian females (45 per 100,000) is higher than that of women from other ethnicities and is nearly double the Hawai'i total (25 per 100,000).

Among males in Hawai'i, the cancer incidence rate of Native Hawaiians (449 per 100,000) is lower than that of Whites (556 per 100,000). However, compared with other major ethnic groups in Hawai'i, Native Hawaiian males have the highest rates of mortality due to cancer (231 per 100,000) (fig. 1.80).

**FIGURE 1.80** Selected cancer incidence and mortality rates among males  
[as a rate per 100,000, age-adjusted to US 2000 standard population, by type of cancer, 2013]



Data source: Hawai'i Tumor Registry, University of Hawai'i Cancer Center, via "Hawai'i Cancer at a Glance 2009–2013"

Note 1: Missing lines or bars indicate data that are unavailable, not applicable, or suppressed due to small sample size.

- Among males in Hawai'i, the incidence of prostate cancer is the highest of the three types of cancer.
- The incidence of prostate cancer among Native Hawaiian males (80 per 100,000) is lower than the Hawai'i total (96 per 100,000) and slightly higher than that of Chinese males (76 per 100,000).

- Among males in Hawai'i, lung and bronchus cancer have the highest mortality rate, relative to other cancers.
- The mortality rate for lung and bronchus cancer among Native Hawaiian males (61 per 100,000) is higher than that of males from other ethnicities in Hawai'i.

## DISABILITY

Definitions of disability have evolved over time and now extend beyond notions of perceived internal deficiency to include deeper understandings of multiple, contributing environmental factors (Pobutsky, Hirokawa, and Reyes-Savaill 2003). The Institute of Medicine and the International Classification of Functioning, Disability, and Health describe disability as a product of interactions among three factors: individuals' bodies; their physical, emotional, and mental health; and the physical and social environment in which they live, work, or play (Stucki 2005). Disability exists where such interactions result in limitations of activities and restrictions to full participation at school, work, home, or in the community. For example, disability may arise when a person is limited in their ability to work due to job discrimination against persons with specific health conditions. Disability could also exist where a child has difficulty learning because the school cannot accommodate the child's deafness.

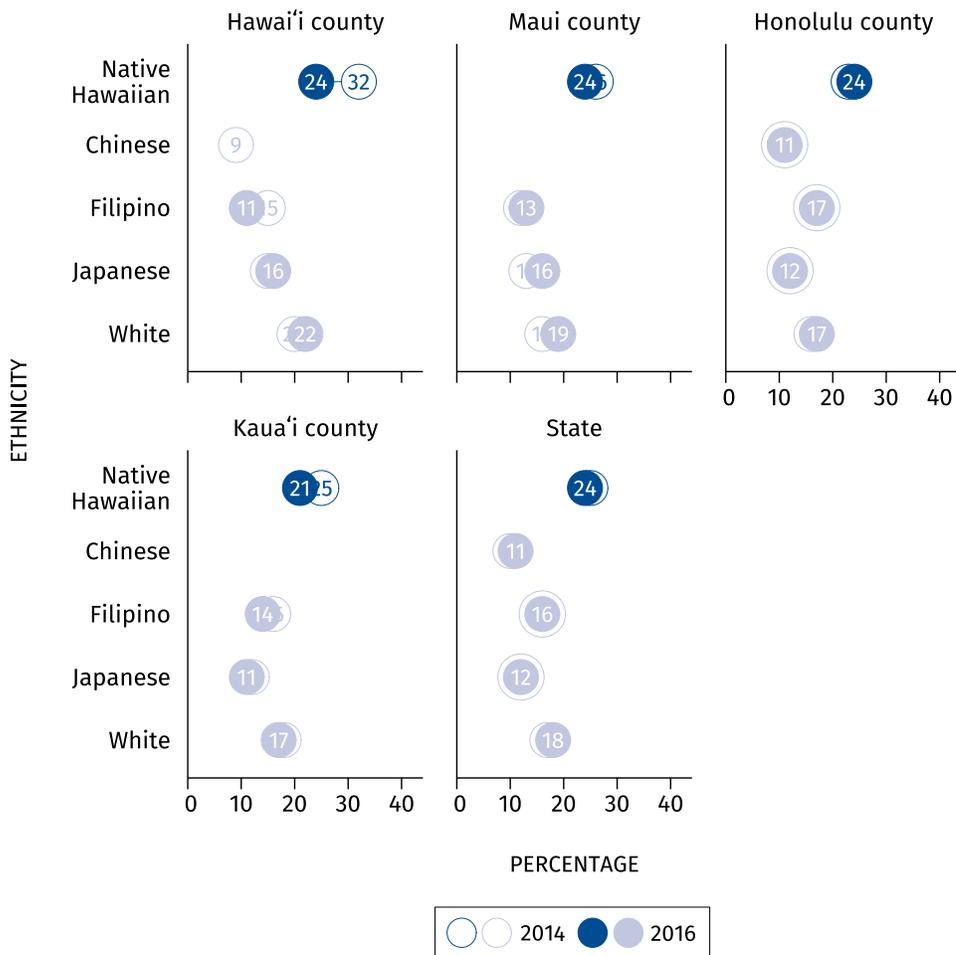
Disability is a dynamic concept that changes over time as one's health improves or declines, as technology advances, and as social structures adapt. As such, disability exists along a continuum, where the degree of difficulty may also increase or decrease.

The Centers for Disease Control and Prevention (2020d) categorize adult disability into six broad types (listed in order of prevalence): mobility, cognition, independent living, hearing, vision, and self-care. In Hawai'i, disability is monitored by the Hawai'i Behavioral Risk Factor Surveillance System, using self-reported "activity limitations." In the analysis that follows, we address disability in general terms, based on individuals who report any degree of difficulty or impairment. Subsequent sections present data specific to cognitive disability and independent living.

Among Native Hawaiians of all ages in Hawai'i, 10 percent have a disability (Kamehameha Schools 2019). Based on 2016 data, among the Native Hawaiian adult population across the state, 24 percent have at least one disability (fig. 1.81)—the highest rate among other major ethnicities and 7 percentage points higher than the Hawai'i total of 17 percent (not shown). The most prevalent disabilities among Native Hawaiians are ambulatory disability (having serious difficulty walking or climbing stairs), cognitive disability, and difficulty with independent living (not shown).

At the county level, Hawai'i county has seen positive change in recent years in the proportion of Native Hawaiians with a disability. For example, the percentage of Native Hawaiian adults in Hawai'i county who have at least one disability decreased by 8 percentage points—declining from 32 to 24 percent between 2014 and 2016.

**FIGURE 1.81** Adults with at least one disability—county comparison  
[as a percentage of adults ages 18 and older, by ethnicity, county, and year, Hawai'i, 2014 and 2016]



Data source: Hawai'i Behavioral Risk Factor Surveillance System, 2014 (years 2013 to 2014 combined) and 2016 (years 2015 to 2016 combined), Hawai'i Department of Health

Note 1: This chart includes overlapping and sometimes obscured data points. The most recent data points are all visible; older data points that are not discernible suggest little or no change over time.

Note 2: Missing circles indicate data that are unavailable, not applicable, or suppressed due to small sample size.

- In Hawai'i county, the proportion of Native Hawaiians with at least one disability decreased significantly from 2014 to 2016.
- In 2016, there were no significant differences between counties in the percentage of Native Hawaiian adults with a least one disability.
- At the state level, Native Hawaiians have the greatest proportion of adults (24 percent) with at least one disability.

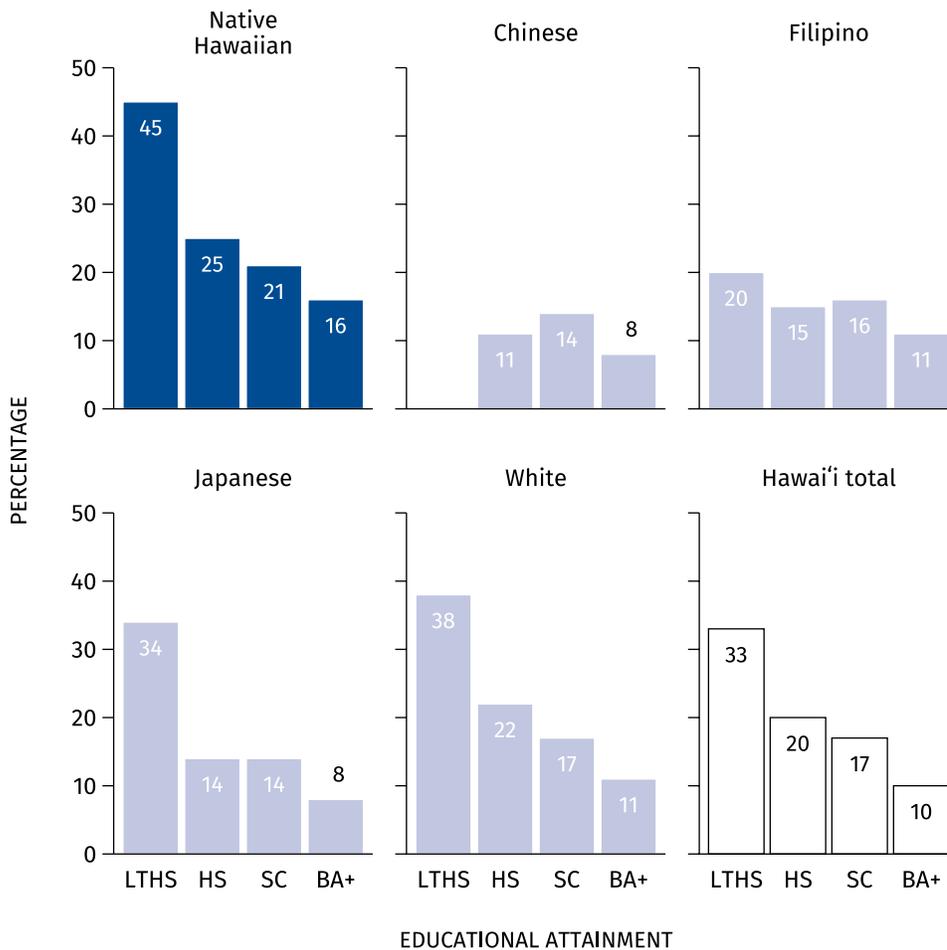
- Ambulatory disability is the most common disability among Native Hawaiians, affecting 14 percent of the adult population, compared with the Hawai'i total of 9 percent (not shown).
- The percentage of Native Hawaiians with an ambulatory disability did not change significantly from 2014 to 2016 (not shown).

Among Native Hawaiian adults, educational attainment and income are correlated with having a disability or ambulatory disability. For example, among Native Hawaiian adults whose highest degree is a high school diploma, 25 percent have at least one disability, compared with 16 percent of adults with a bachelor's degree or higher (fig. 1.82). Native Hawaiian adults earning less than \$50,000 annually are twice as likely as higher earners to have a disability or ambulatory disability (not shown).



In Hawai'i county, the percentage of Native Hawaiian adults with at least one disability decreased from 32 to 24 percent between 2014 and 2016.

**FIGURE 1.82** Adults with at least one disability, by educational attainment  
[as a percentage of adults ages 18 and older, by ethnicity and educational attainment, Hawai'i, 2016]



Data source: Hawai'i Behavioral Risk Factor Surveillance System, 2016 (years 2013 to 2016 combined), Hawai'i Department of Health

Note 1: LTHS = Less than high school; HS = High school; SC = Some college; BA+ = Bachelor's degree or higher.

Note 2: Missing lines or bars indicate data that are unavailable, not applicable, or suppressed due to small sample size.

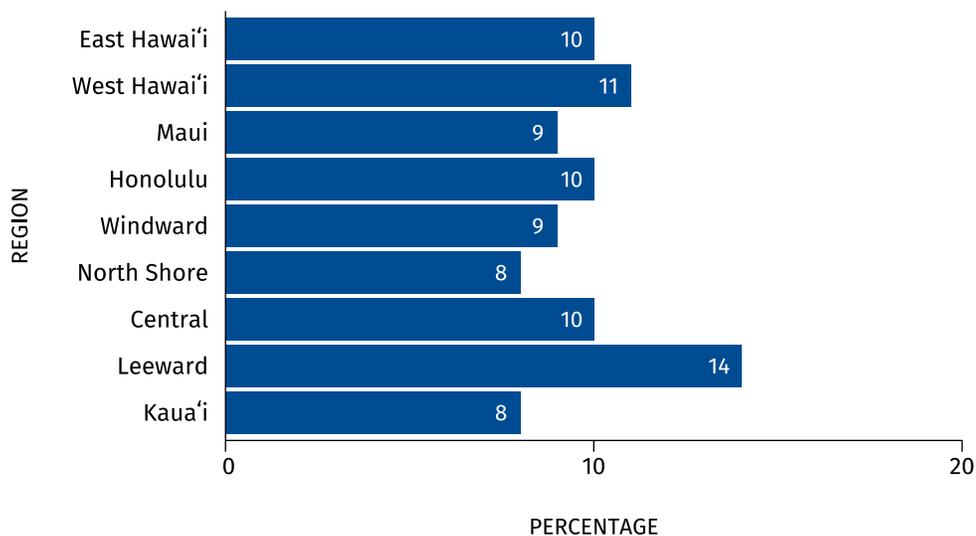
- Lower levels of educational attainment are generally associated with a greater likelihood of having at least one disability.
- Among Native Hawaiians whose highest degree is a high school diploma, 25 percent have at least one disability, compared with 16 percent of Native Hawaiians who have a bachelor's degree or higher.
- The prevalence of ambulatory disability follows a similar pattern: Among Native Hawaiians whose highest degree is a high school diploma, 14 percent have an ambulatory disability, compared with 9 percent of those who have a bachelor's degree or higher (not shown).

The likelihood of disability generally increases with age. The most common disabilities for adults are physical, while cognitive disabilities are more common among children. Current data show that among Native Hawaiian students, those with a disability are less likely than their peers who do not have a disability to complete high school. Among Native Hawaiian adults (ages twenty-five to sixty-four), those with a disability are about half as likely as those without a disability to obtain a college degree (not shown).

### Disability—Regional Highlights

Looking across specific regions, Leeward has the highest rate of reported disabilities (14 percent), which is 6 percentage points higher than that of Kaua'i and North Shore (fig. 1.83).

**FIGURE 1.83** Native Hawaiians with a disability—regional comparison  
[as a percentage of civilian noninstitutionalized Native Hawaiians, by region, Hawai'i, 2015]



Data source: US Census Bureau, American Community Survey, Selected Population Tables

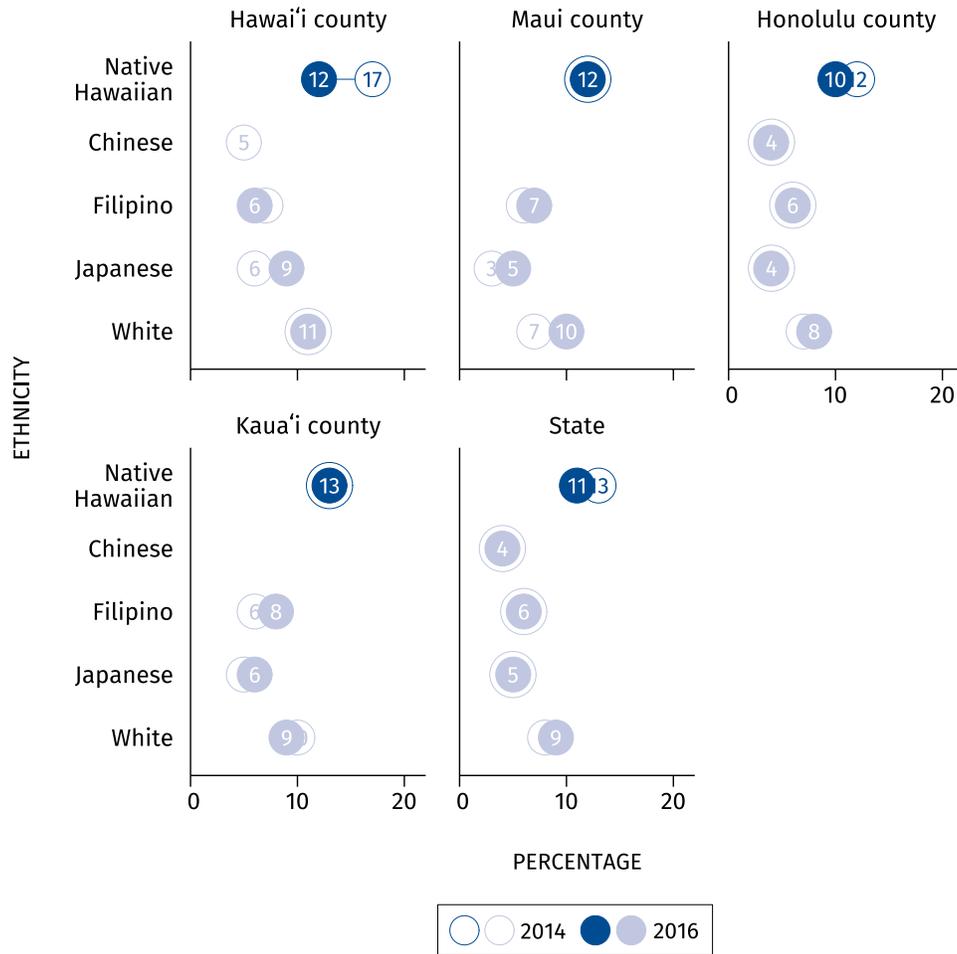
- Compared with other regions, Leeward has the highest proportion of Native Hawaiians with a disability (14 percent).
- Relative to other regions, North Shore and Kaua'i have the lowest percentage of Native Hawaiians with a disability (8 percent).
- Based on county-level data, Kaua'i has the smallest proportion (10 percent) of Native Hawaiian adults with an ambulatory disability (not shown).

## COGNITIVE DISABILITY

Cognitive disability refers to limitations in areas such as mental functioning, communication, self-care, and social interaction. Cognitive disability is the second-most prevalent type of disability affecting adults in the United States (Centers for Disease Control and Prevention 2020d).

Our findings show that Native Hawaiians are more likely than other major ethnicities in Hawai'i to experience cognitive disability. However, recent data also indicate that cognitive disability may be trending downward among Native Hawaiians at the state level, with a slight decrease from 2014 to 2016. In Hawai'i county, there was significant decrease in the percentage of Native Hawaiian adults with a cognitive disability, declining from 17 to 12 percent between 2014 and 2016 (fig. 1.84).

**FIGURE 1.84** Adults with a cognitive disability—county comparison  
 [as a percentage of adults ages 18 and older, by ethnicity, county, and year, Hawai'i, 2014 and 2016]



Data source: Hawai'i Behavioral Risk Factor Surveillance System, 2014 (years 2013 to 2014 combined) and 2016 (years 2015 to 2016 combined), Hawai'i Department of Health

Note 1: Cognitive disability is defined as having serious difficulty concentrating, remembering, or making decisions because of a physical, mental, or emotional condition (self-reported).

Note 2: This chart includes overlapping and sometimes obscured data points. The most recent data points are all visible; older data points that are not discernible suggest little or no change over time.

Note 3: Missing circles indicate data that are unavailable, not applicable, or suppressed due to small sample size.

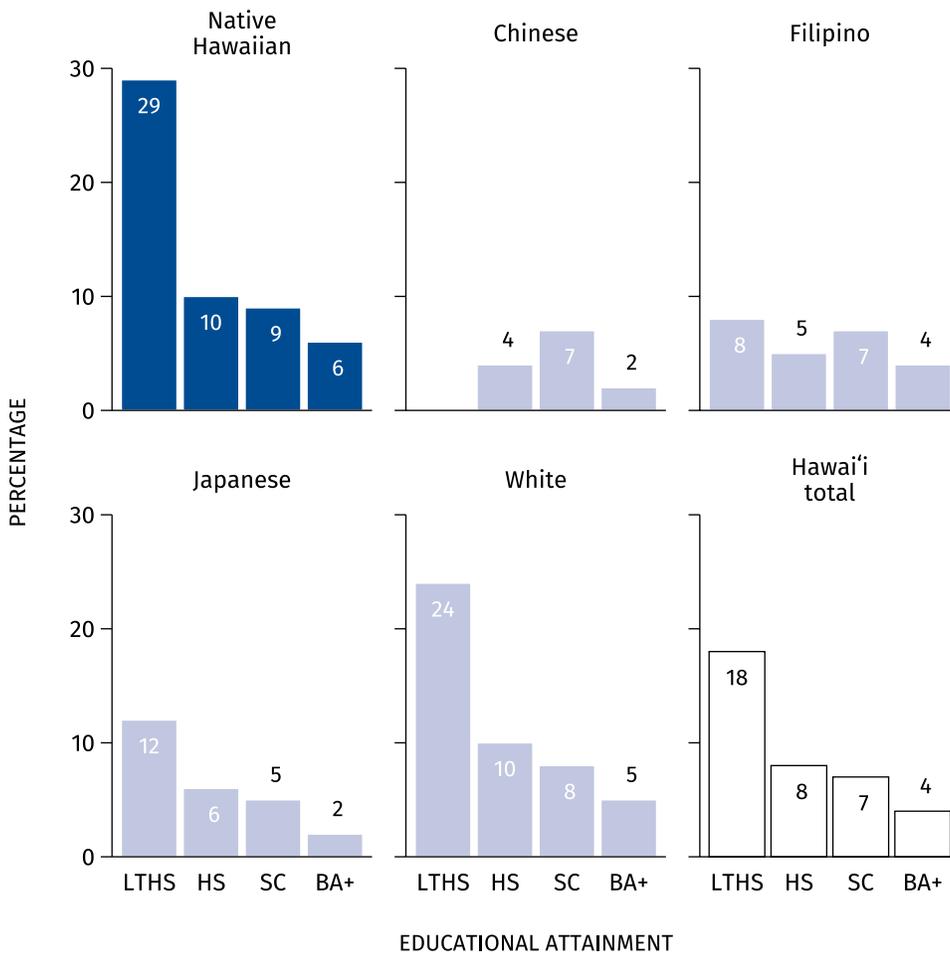
- Among Hawai'i's major ethnic groups, Native Hawaiians have the highest percentage of adults with a cognitive disability.
- In Hawai'i county, the percentage of Native Hawaiian adults with a cognitive disability decreased significantly between 2014 and 2016.
- In 2016, there was no significant difference from county to county in the percentage of Native Hawaiian adults with a cognitive disability.

Income is associated with cognitive disability. Among Native Hawaiians—as with adults from other ethnicities in Hawai‘i—those with higher incomes have lower rates of cognitive disability. For example, among Native Hawaiians who earn \$50,000 or more annually, 5 percent have a cognitive disability, compared with 16 percent of those making less than \$50,000 (not shown). For Native Hawaiians earning less than \$50,000 annually, the percentage of adults with a cognitive disability (16 percent) is significantly higher than the Hawai‘i total (11 percent) (not shown).

While the reasons for higher-earning Native Hawaiians having lower rates of cognitive disability may not be established based on these data points alone, a possible explanation is that lower income leads to stressors, which can result in cognitive disabilities. Another possibility is that those with cognitive disability will experience lower incomes. More research is needed to better understand these correlations among Native Hawaiian adults.

Similar to income, education is also correlated with cognitive disability. Among Native Hawaiians, for example, the higher the educational attainment, the lower the likelihood of having a cognitive disability. More specifically, among Native Hawaiians with a bachelor’s degree or higher, 6 percent have a cognitive disability, compared with 10 percent of those whose highest degree is a high school diploma (fig. 1.85).

**FIGURE 1.85** Adults with a cognitive disability, by educational attainment  
 [as a percentage of adults ages 18 and older, by ethnicity and educational attainment, Hawai'i, 2016]



Data source: Hawai'i Behavioral Risk Factor Surveillance System, 2016 (years 2013 to 2016 combined), Hawai'i Department of Health

Note 1: Cognitive disability is defined as having serious difficulty concentrating, remembering, or making decisions because of a physical, mental, or emotional condition (self-reported).

Note 2: LTHS = Less than high school; HS = High school; SC = Some college; BA+ = Bachelor's degree or higher.

Note 3: Missing lines or bars indicate data that are unavailable, not applicable, or suppressed due to small sample size.

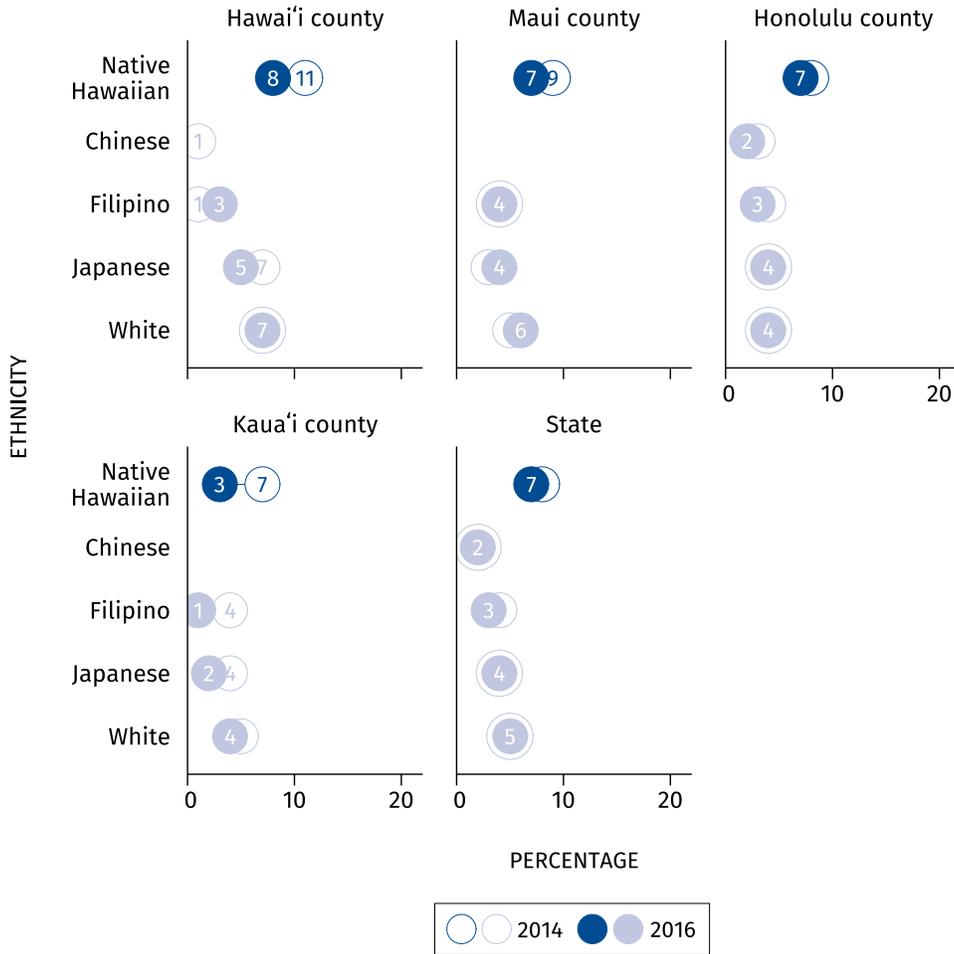
- Cognitive disability is generally more prevalent among adults with lower levels of educational attainment.
- Among Native Hawaiians whose highest degree is a high school diploma, 10 percent have a cognitive disability, compared with 6 percent of Native Hawaiians who have a bachelor's degree or higher.

## INDEPENDENT LIVING

According to the Disability Community Resource Center, independent living is “a philosophy, a way of looking at society and disability, and a worldwide movement of people with disabilities working for equal opportunities, self-determination, and self-respect” (n.d., under “What is Independent Living?”). Independent living means having opportunities to exert “voice, choice, and control” in one’s everyday life (Centers for Disease Control and Prevention 2020c, under “Independent Living”). For an adult, being able to do errands alone and engage in activities of their choosing is an important dimension of independent living and can facilitate increased family and community engagement.

In Hawai‘i, Native Hawaiians are more likely than adults from other ethnicities to have difficulty doing errands alone (fig. 1.86). Consistent with a 2018 community well-being study of adults in Hawai‘i, 62 percent of Native Hawaiians (compared with 59 percent of non-Native Hawaiians) reported that physical and mental health barriers prevent them from doing things that other people their age could normally do (SMS Research 2018).

**FIGURE 1.86** Adults who have difficulty doing errands alone—county comparison  
 [as a percentage of adults ages 18 and older, by ethnicity, county, and year, Hawai'i, 2014 and 2016]



Data source: Hawai'i Behavioral Risk Factor Surveillance System, 2014 (years 2013 to 2014 combined) and 2016 (years 2015 to 2016 combined), Hawai'i Department of Health

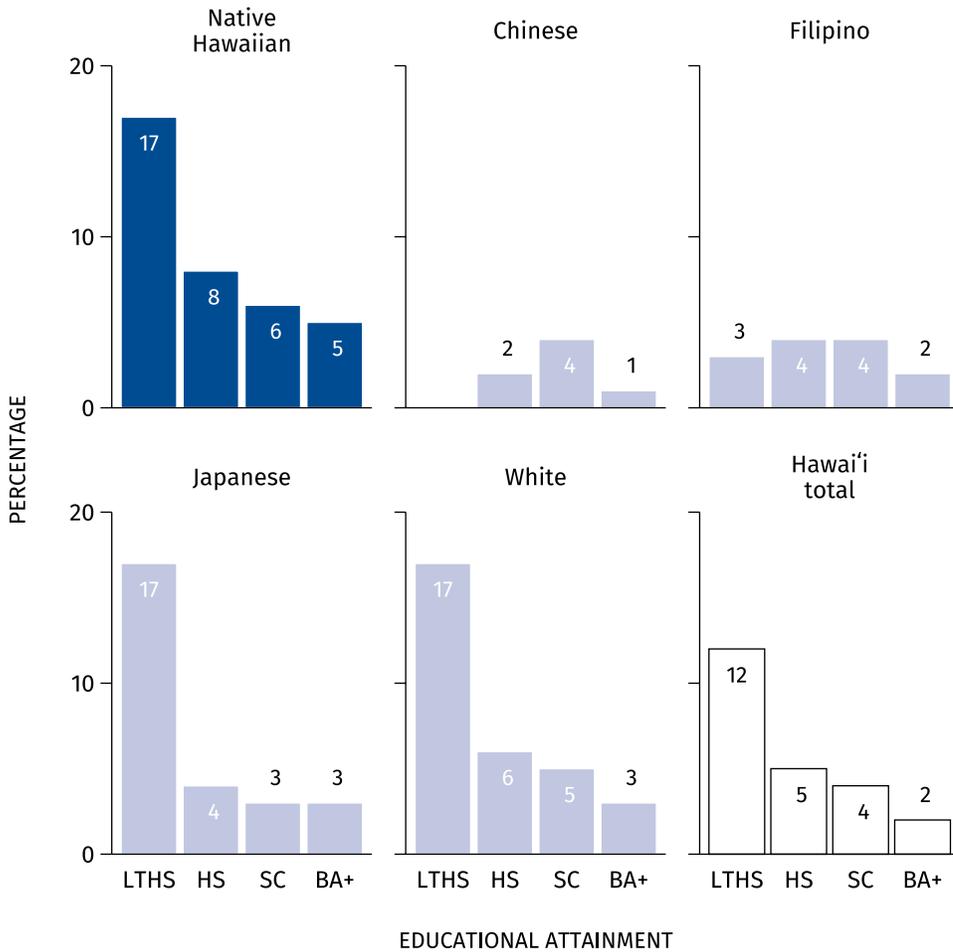
Note 1: This chart includes overlapping and sometimes obscured data points. The most recent data points are all visible; older data points that are not discernible suggest little or no change over time.

Note 2: Missing circles indicate data that are unavailable, not applicable, or suppressed due to small sample size.

- At the state level in 2016, Native Hawaiians had the highest proportion of adults who have difficulty doing errands alone (7 percent), compared with other major ethnicities across Hawai'i.
- Across Hawai'i's major ethnicities at the state level, the percentage of adults who have difficulty doing errands alone did not change significantly from 2014 to 2016.

Among Native Hawaiian adults, higher educational attainment, on average, is associated with less difficulty in doing errands alone (fig. 1.87). A similar pattern exists with regard to income: Among Native Hawaiians, those making \$50,000 or more per year are nearly three times as likely than those with lower earnings to be able to do errands alone without difficulty (not shown).

**FIGURE 1.87** Adults who have difficulty doing errands alone, by educational attainment  
 [as a percentage of adults ages 18 and older, by ethnicity and educational attainment, Hawai'i, 2016]



Data source: Hawai'i Behavioral Risk Factor Surveillance System, 2016 (years 2013 to 2016 combined), Hawai'i Department of Health

Note 1: LTHS = Less than high school; HS = High school; SC = Some college; BA+ = Bachelor's degree or higher.

Note 2: Missing lines or bars indicate data that are unavailable, not applicable, or suppressed due to small sample size.

- Generally speaking, higher educational attainment is associated with a lower likelihood of having difficulty doing errands alone.
- Among Native Hawaiians with a bachelor's degree or higher, 5 percent have difficulty doing errands alone, compared with 8 percent of Native Hawaiians whose highest degree is a high school diploma.

## Physical Health, Educational Attainment, and Income

The preceding analysis of physical well-being has examined associations between health outcomes and two social determinants: educational attainment and income. Here, we provide a summary of our findings, confirming that physical health outcomes are often influenced by a person's educational attainment and level of income.

For example, we find that increased education levels are correlated with lower rates of diabetes, disabilities, obesity, smoking, high blood pressure, heavy alcohol consumption, and overall poor physical health, among other outcomes. Increased income is related to decreased rates of coronary heart disease, heart attack, diabetes, smoking, and overall poor physical health, among other outcomes. The table below summarizes these relationships among Native Hawaiian adults.

**TABLE 1.1** How do higher education and higher income relate to health outcomes among Native Hawaiian adults?

	 <b>Higher educational attainment generally means...</b>	 <b>Higher income generally means...</b>
<b>PREVENTATIVE CARE</b>		
Missing a doctor's visit	↓	↓
<b>NUTRITION, PHYSICAL ACTIVITY, AND OBESITY</b>		
Fruits and vegetables consumption	—	—
Physical activity	↑	↑
Obesity	↓	—
<b>SUBSTANCE ABUSE</b>		
Smoking	↓	↓
Heavy drinking	↓	—
Disability	↓	↓
<b>PHYSICAL ILLNESS</b>		
Poor physical health	↓	↓
Diabetes	↓	↓
High blood pressure	↓	—
High cholesterol	—	—
Angina or coronary heart disease	—	↓
Heart attack	—	↓
Stroke	↓	↓

↓ less likely    ↑ more likely    — not related

Note: For the purposes of this summary table, “higher educational attainment” refers to those who have a bachelor’s degree or higher, as compared with those whose highest degree is a high school diploma. “Higher income” refers to making \$50,000 or more per year, compared with an annual income of less than \$50,000.

Acknowledging the various social determinants of health reaffirms what Native Hawaiians have always known—that health, wellness, and well-being are the result of complex and intricate relationships between physical, spiritual, social, emotional, and cognitive dimensions. As such, Native Hawaiian voices, leadership, and advocacy are essential in public health, medicine, and wellness arenas.

The COVID-19 pandemic and resulting economic shutdown have magnified systemic inequities across sectors and exacerbated existing disparities for vulnerable communities. For example, we are witnessing numerous examples of how underserved communities of color around the globe are at greater risk for COVID-19 exposure, infection, lack of medical insurance, and further health complications, thereby increasing the likelihood of mortality. These realities point to greater urgency to broaden our perceptions of health and wellness and to better account for the profound impact of social and cultural determinants on health outcomes.

As demonstrated in this section, much of the data for Native Hawaiian health is sobering. Kānaka Maoli are generally the most likely of Hawai'i's major ethnicities to be in poor health and to have higher rates of smoking, obesity, diabetes and high blood pressure. Native Hawaiians also experience comparatively higher rates of heart disease, heart attack, disability, and cancer mortality. At the county level, adverse findings such as relatively high incidence of obesity, heart attack, and stroke—combined with the fact that Native Hawaiian high schoolers in Hawai'i county are comparatively more likely to be at risk for substance abuse disorders (Kamehameha Schools 2019) and are decreasingly likely to eat five fruits or vegetables per day (see [fig. 3.26](#))—suggest a pressing need for further analysis and action.

On the positive side, there has been an increase in health insurance coverage for Native Hawaiians, which is on par with the rest of Hawai'i. Physical activity and consumption of fruits and vegetables for Native Hawaiian adults are also on par with the rest of Hawai'i and are better than national averages. These positive trends suggest hope for future progress and reduction of negative health outcomes that continue to persist in our Native Hawaiian communities.

The path toward optimal physical health is not simple. We must continue to understand health statistics within a multifaceted historical and present context. We must also celebrate and uplift areas of growth and continue to scale culturally responsive ways of enhancing well-being for Native Hawaiians. We must act now to reverse unhealthy trends and strengthen healthy trends for our next generation—their lives literally depend on it.

# SPIRITUAL AND EMOTIONAL WELL-BEING

I ka wā kahiko, in historical times, a wise and generous person was said to have “He ‘ōpū ali’i—*the heart of a chief*.” This ‘ōlelo no‘eau emphasizes a key standard by which ali’i (chiefs) were often judged. When making critical decisions, would the ali’i be able to manage their emotions and lean upon spiritual guidance? Or would they give in to selfish impulses, anger, and arrogance?

Upholding he ‘ōpū ali’i, whether as a chief or a commoner, requires self-awareness, self-management, a sense of belonging, and faith. These factors highlight lōkahi and pono (righteousness), which are key elements of spiritual and emotional well-being for Kānaka Maoli.

Native Hawaiians often view well-being holistically, emphasizing physical, emotional, and spiritual balance. This approach contrasts with Western assumptions that tend to see health and illness mainly through a biomedical lens (Mark and Lyons 2010). For Native Hawaiians, positive spiritual and emotional well-being unites the mind, body, and spirit, balancing personal needs with those of others, the community, and the ‘āina (Look et al. 2013; Pukui, Haertig, and Lee 1979). Indeed, the well-being of an individual is often tied to the well-being of the ‘ohana and the community in which they live, work, and belong (Theodori 2001).

Maintaining balance in the face of adversity is a challenge. Psychological resilience—the ability to maintain, recover, or achieve positive mental health (Lee Kum Sheung Center for Health and Happiness, n.d.)—is a necessary and powerful capability that allows individuals to recover from traumatic events. Native Hawaiians and other Polynesians share a host of protective variables, for example, “personal fortitude, familial support, political advocacy and community partnerships, [which] all contribute to Native Hawaiians and Māori ‘rising from the trauma.’ The[se] culturally based solutions...might be seen as a decolonizing approach to the worst vestiges of historical trauma” (Mokuau and Mataira 2013, 151).

Close ties among extended ‘ohana—kūpuna, mākua (uncles and aunties), cousins, and other relatives—foster emotional and spiritual well-being. These support systems, embodied in the traditional kauhale way of life, play a key role in mitigating the many negative stressors children and young adults often face today. Whether the need is for someone to help with childcare, or an elder to seek advice from, or a cousin to spend time with, a robust ‘ohana serves as a buffer to life’s ups and downs.

Despite growing recognition of the significance of emotional and spiritual well-being, the availability of relevant data for Native Hawaiians is severely limited. The prevailing literature centers on cognition, mental health, and spiritual beliefs and practices, with a greater focus on individuals than on families and communities. Within this limited body of research, we find that Native Hawaiians generally tend to be overrepresented in indicators of poor mental health such as depression and suicide (Goebert et al. 2018). However, compared with non-Hawaiians, Native Hawaiians report higher rates of spirituality and assign greater significance of spirituality in their lives (Kamehameha Schools, Lili'uokalani Trust, and the Office of Hawaiian Affairs 2018).

The following analyses explore concepts of spirituality, identity, and other factors related to the emotional well-being of Native Hawaiians such as mental health, depression, and suicide. On the whole, results for spiritual well-being are favorable for Native Hawaiians, while results for emotional well-being are not. These findings are perplexing and prompt a fundamental question: Given the strong spiritual foundations that characterize Kānaka Maoli, why are mental health indicators often so low? This imbalance suggests the need to develop and track data that build on community strengths and examine the relationships between spirituality and mental health for Native Hawaiians.



Two in three Native Hawaiians (66 percent) say that 'āina has important cultural, spiritual, and subsistence purposes, compared with 41 percent among non-Native Hawaiians.

## Spirituality

Spirituality, in its many forms, provides strength, hope, and a sense of purpose for Native Hawaiians. In a survey of more than three thousand Native Hawaiian adults in 2018, nearly nine in ten (89 percent) said they believe in a “higher power” (loosely defined as referring to God, Ke Akua, or personal or family deities), compared with 71 percent of non-Native Hawaiians. When asked if connecting to this higher power is important for well-being, 97 percent of Native Hawaiians responded that it was somewhat or very important, compared with 94 percent of non-Hawaiians (Kamehameha Schools, Lili'uokalani Trust, and the Office of Hawaiian Affairs 2018).

Many Indigenous groups have an enduring and ancestral relationship with the land; Native Hawaiians are no exception (Kana'iaupuni and Malone 2006). 'Āina in all of its manifestations—from the ocean shallows to the deep moana lipolipo (great ocean), from the vast kula (plains, open fields) to the quiet uplands, from the youngest 'ōhi'a growing on the lava to the oldest koa tree towering in the forest—is central to Native Hawaiian identity and well-being. This long-standing tradition acknowledges 'āina as a literal extension of our 'ohana. It is also a site of mo'okū'auhau (genealogy), where manifestations of akua (gods) are part of the natural landscape (Fujikane 2019; La Valle et al. 2019).

Traditional Native Hawaiian religious and cultural practices experienced extreme change and denigration over recent centuries, resulting in cultural-historical trauma. All living Native Hawaiians share this traumatic past. Similarly, we are linked by combined efforts in the present to live our cultural values and restore our collective well-being. As Queen Lili'uokalani reflected,

I could not turn back the time for the political change, but there is still time to save our heritage. You must remember to never cease to act because you fear to fail. The way to lose an earthly kingdom is to be inflexible, intolerant, and prejudicial. Another way is to be too flexible, tolerant of too many wrongs and without judgment at all. It is a razor's edge. It is the width of a blade of pili grass. To gain the kingdom of heaven is to hear what is not said, to see what cannot be seen, and to know the unknowable—that is Aloha. (Queen Lili'uokalani, as cited in Coffman 2009, xi)

Today, these efforts are evident as Kānaka Maoli maintain a reverence for the sacred while respecting and engaging in a wide range of spiritual and religious practices.

Based on findings from a recent statewide survey, the majority of Native Hawaiians report that 'āina has important cultural, spiritual, and subsistence purposes—66 percent, compared with 41 percent of non-Native Hawaiians. Religious engagement with the 'āina is another important dimension of well-being, with 38 percent of Native Hawaiians interacting with the land for spiritual or religious reasons, compared with 21 percent among non-Native Hawaiians (Kamehameha Schools, Lili'uokalani Trust, and the Office of Hawaiian Affairs 2018).

Spiritual practice may provide a coping strategy to deal with life's challenges. Studies note that, compared with other major ethnicities in Hawai'i, Native Hawaiians are more likely to turn to spirituality for support. For example, among Native Hawaiians, nearly half (49 percent) reported that they pray or meditate when faced with difficulties, compared with 36 percent of non-Hawaiians (Kana'iaupuni, Malone, and Ishibashi 2005). A recent study of health and well-being across Hawai'i revealed that 69 percent of Native Hawaiians draw inspiration from the lives of ancestors when making a difficult decision or taking on a challenging task, compared with 53 percent of non-Native Hawaiians (Kamehameha Schools, Lili'uokalani Trust, and the Office of Hawaiian Affairs 2018).

Organized religion also factors into emotional and spiritual well-being among Kānaka Maoli. Across Hawai'i, about one-third of parents regularly attend religious services (Stern and Min 2010). For many Native Hawaiians, faith-based activities serve as a mechanism to gather family and community and provide a weekly opportunity to connect with extended 'ohana and strengthen social and emotional ties. Research finds that roughly half of Native Hawaiian adults (51 percent) participate in community organizations inclusive of religious/spiritual groups, and that more than two-thirds (71 percent) of those participating serve in leadership roles (Kana'iaupuni, Malone, and Ishibashi 2005).

## Hawaiian Identity

Cultural identity is a critical factor in the personal development and growth of Native Hawaiian keiki. Identity starts with knowing who you are and where you come from. At its core, it means belonging to a people, to a place, and to a culture. Relationships to the land, knowledge and beliefs, language, self-determination, family and kinship networks, and cultural expression (e.g., arts and ritual) are meaningful because they connect to a wider world. Scholar and musician Jonathan Osorio writes about identity for Native people:

Ultimately, it is about reverence. Revering ancestors, sacred places and revering the life around us are necessary to revering ourselves, to seeing and knowing ourselves as splendid products of three billion years of evolution and thousands and thousands of years of cultivating human relationships. Native people, almost by definition, are connected to land and to nature and to one another enabled by that reverence. Seeing all of these living beings as connected to us brings a dignity and meaning to our lives that is so very much richer than thinking of ourselves as consumers and commodities. (Osorio and Osorio 2016, 193)

Strong identification and pride in one's ethnic and cultural roots increase self-esteem, providing children with a boost against social and economic obstacles (Phinney 1995; Phinney and Alipuria 1990; Phinney, Cantu, and Kurtz 1997; Phinney and Chavira 1992). Recent research on cultural connectedness among Indigenous communities around the world shows an overwhelmingly positive association with well-being outcomes (Bourke et al. 2018). Social and emotional well-being, physical health, and avoiding risky behaviors such as substance abuse, are all associated with strong Indigenous connections.

Contemporary social movements shine a light on the accomplishments of Kanaka Maoli leaders and the broader lāhui, which helps to strengthen Hawaiian identity. From the successful completion of the Mālama Honua Worldwide Voyage, to the establishment of a framework of Hawaiian culture-based standards across Hawai'i public schools (HĀ), to the global mobilization for Mauna Kea, Native Hawaiians have many positive examples of cultural vibrancy to embrace today.

Growth in Native Hawaiian scholarship adds critical new Kanaka voices to our knowledge of culture, connectedness, and identity. For example, in 2019, Kamehameha Publishing released the eleventh volume of *Hūlili*, a peer-reviewed academic journal devoted to multidisciplinary studies of Native Hawaiian well-being. In 2019, the Office of Hawaiian Affairs published a landmark study, *Mana Lāhui Kānaka*. Results of a 2013 Kamehameha Schools Alumni Survey suggest graduates have strong cultural identity, active engagement in traditional Hawaiian practices, and ongoing interest in learning about cultural heritage. These results are echoed by a Hawai'i Pacific University study of one thousand self-identified Native Hawaiians, where 72 percent agreed or strongly agreed that they are active in Hawaiian organizations, social events, or cultural activities (Phan 2020).

## Emotional Well-Being

Emotional well-being refers to the ability of an individual “to practice stress-management techniques, be resilient, and generate the emotions that lead to good feelings” (Davis 2019). The National Institutes of Health articulate six strategies for improving emotional health: reducing stress, getting quality sleep, brightening your outlook, coping with loss, strengthening social connections, and being mindful (National Institutes of Health 2018). In a study of Native Hawaiian college students, cultural affiliation was shown to have a positive impact on psychological well-being (Scanlan 2013). Several measures are conventionally used to assess emotional health including mental health, depression, and suicide.

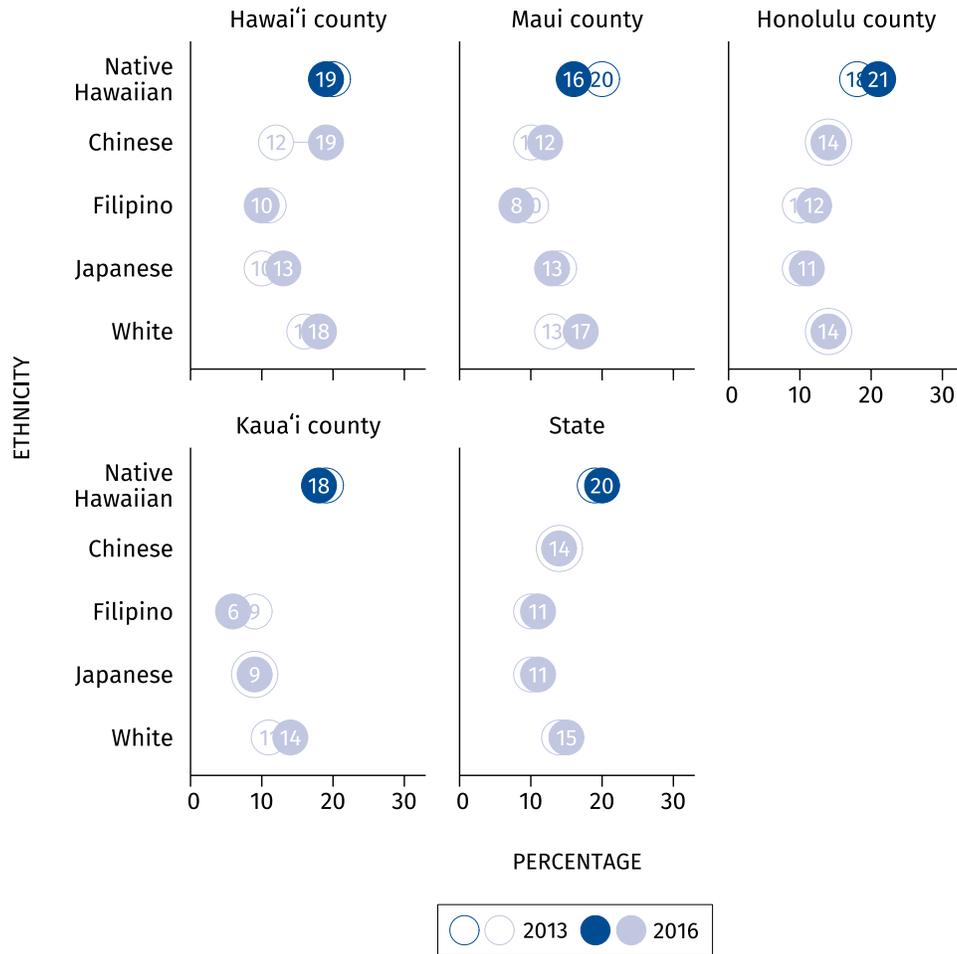
## Mental Health

Poor mental health is a broad category that includes moodiness, anger, despondency, and anxiety. Ultimately, poor mental health affects people’s ability to concentrate, maintain healthy relationships, and fully participate in society. In the United States, as many as one in five adults experiences mental illness (National Institute of Mental Health 2020). Hawai‘i faces an alarming shortage of mental health workers and psychiatrists relative to demand (Lyte 2018). The greatest scarcity exists in rural areas of Kaua‘i and Hawai‘i Island (Aaronson and Withy 2017). Mental health providers across the state “are reporting heightened levels of anxiety, loneliness, depression and stress” among their patients as a result of pandemic-induced hardships such as job loss, financial worries, and the “psychologically isolating effects” of stay-at-home orders (Lyte 2020). Nationally, as a result of COVID-19, it has been estimated that “as many as one in three children may exhibit serious mental health challenges” (Keels 2020). Receiving care is critical, given the harm that undiagnosed or mismanaged mental illness can be for healthy child development (Kataoka, Zhang, and Wells 2002).

Growing mental health needs have stimulated new programs, initiatives, and ways of working together. For example, increased collaboration between state and private providers, along with new partnerships with homelessness outreach groups and the expansion of telemedicine, make it possible for patients to continue to receive therapy at home and without the added hassle of coordinating transportation and childcare needs (Lyte 2020).

Prior to the COVID-19 pandemic, data indicated that one-fifth (20 percent) of Native Hawaiian adults had poor mental health for at least six days a month—a rate that remained relatively stable from 2013 to 2016 and is significantly higher than the Hawai‘i total (14 percent) (fig. 1.88). Among Native Hawaiian adults, those with less than a high school education are more likely to report having poor mental health (33 percent), compared with those who completed high school or some college (18 percent) and those who earned a bachelor’s degree or higher (16 percent) (fig. 1.89). The same is true among those who earn less than \$50,000 annually (23 percent) as compared with higher earners (14 percent) (not shown).

**FIGURE 1.88** Adults with poor mental health for at least six days in the past month—county comparison  
 [as a percentage of adults ages 18 and older, by ethnicity, county, and year, Hawai'i, 2013 and 2016]



Data source: Hawai'i Behavioral Risk Factor Surveillance System, 2013 (years 2011 to 2013 combined) and 2016 (years 2014 to 2016 combined), Hawai'i Department of Health

Note 1: Poor mental health is measured by respondents who self-report their mental health as being “not good” due to stress, depression, and problems with emotions.

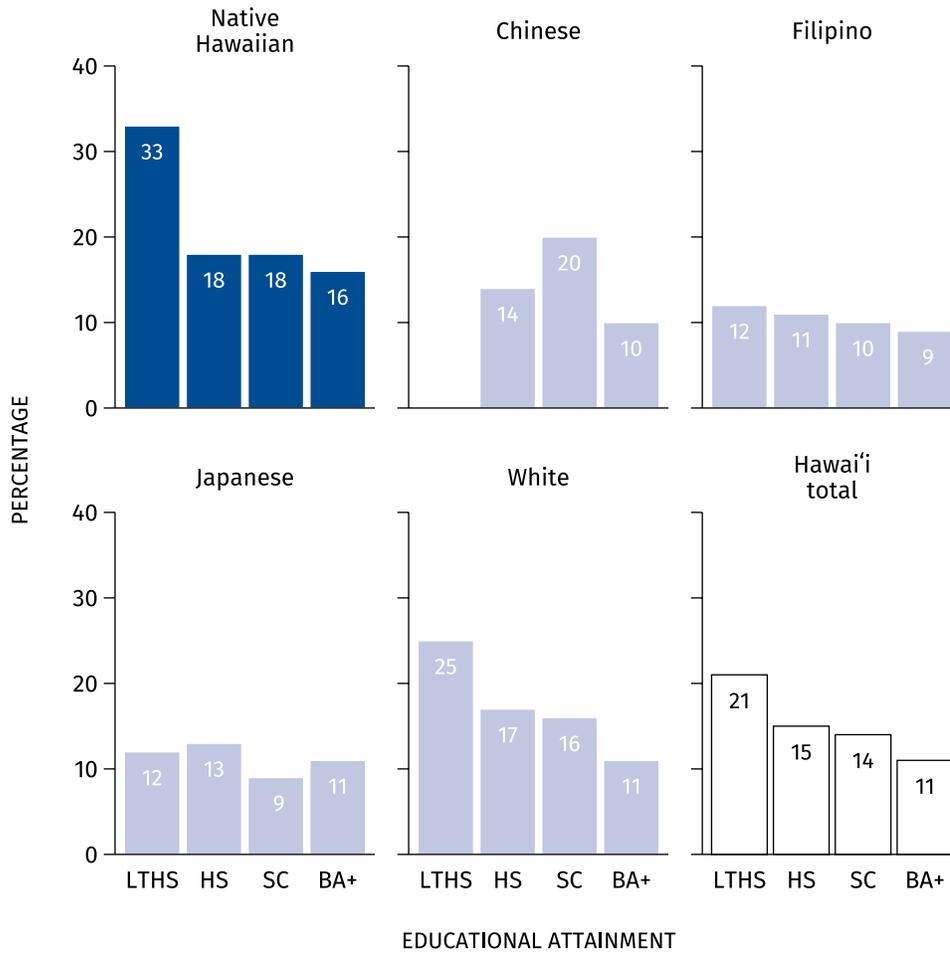
Note 2: This chart includes overlapping and sometimes obscured data points. The most recent data points are all visible; older data points that are not discernible suggest little or no change over time.

Note 3: Missing circles indicate data that are unavailable, not applicable, or suppressed due to small sample size.

- At both the state and county level, there was not a statistically significant change from 2013 to 2016 in the proportion of Native Hawaiian adults who reported having poor mental health for at least six days in the past month.
- In 2016, the percentage of Native Hawaiian adults with poor mental health in Maui county (16 percent) was lower than that of Honolulu (21 percent) and the state (20 percent).
- Compared with other major ethnicities in Hawai'i in 2016, Native Hawaiians had the greatest proportion of adults who report having poor mental health for at least six days in the past month.

**FIGURE 1.89** Adults with poor mental health for at least six days in the past month, by educational attainment

[as a percentage of adults ages 18 and older, by ethnicity and educational attainment, Hawai'i, 2016]



Data source: Hawai'i Behavioral Risk Factor Surveillance System, 2016 (years 2011 to 2016 combined), Hawai'i Department of Health

Note 1: Poor mental health is measured by respondents who self-report their mental health as being "not good" due to stress, depression, and problems with emotions.

Note 2: LTHS = Less than high school; HS = High school; SC = Some college; BA+ = Bachelor's degree or higher.

Note 3: Missing lines or bars indicate data that are unavailable, not applicable, or suppressed due to small sample size.

- Among Native Hawaiians who have a high school diploma, some college, or a bachelor's degree or higher, there is not a statistically significant difference in the percentage of adults who report having poor mental health for at least six days in the past month.
- For the Hawai'i total, there is a correlation between educational attainment and the prevalence of poor mental health.

## Depression

Symptoms of depression can vary from mild to severe and may include feelings of sadness or despondency, loss of appetite, changes in sleeping habits, difficulty concentrating, and thoughts about death or suicide. To be diagnosed with a major depressive disorder, an individual must experience symptoms that last longer than two weeks.

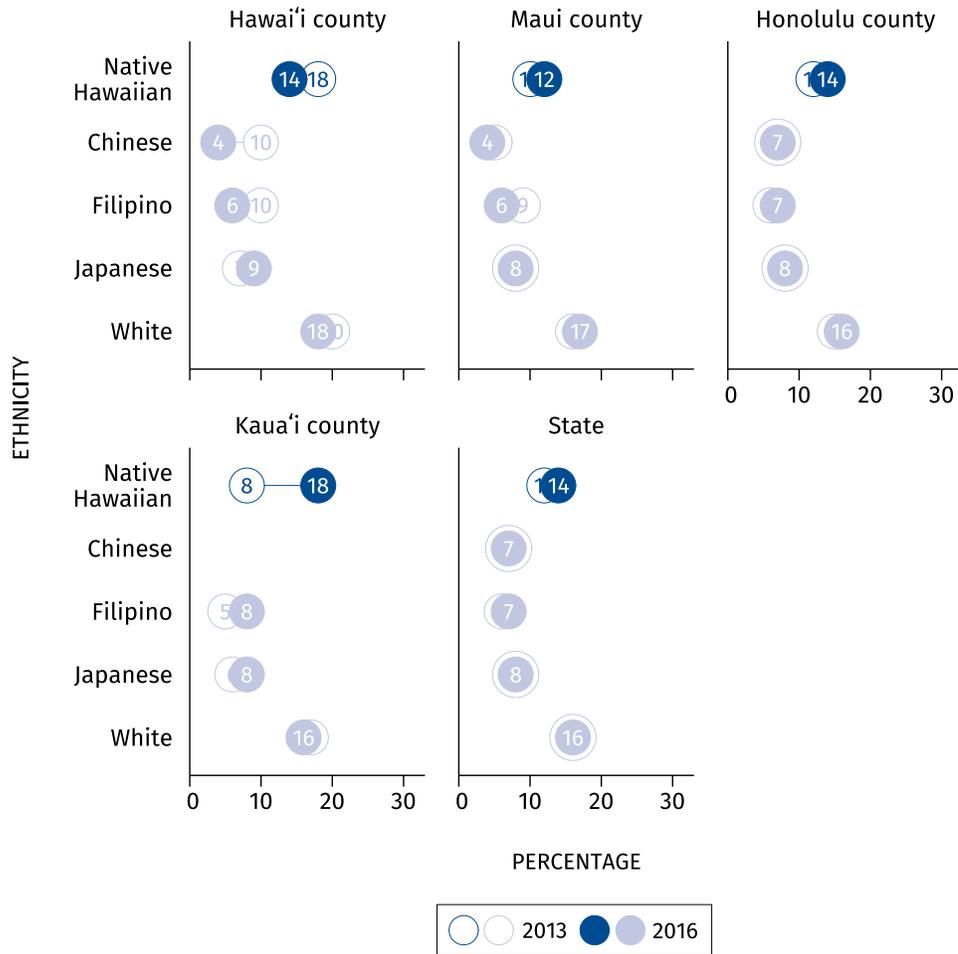
Whites and Native Hawaiians have the highest rates of depression in Hawai'i. Among Native Hawaiians, there was a notable increase in the statewide percentage of adults diagnosed with depression, from 12 to 14 percent between 2013 and 2016 (fig. 1.90).



Native Hawaiian adults in Hawai'i county witnessed a decrease in rates of depression, declining from 18 to 14 percent between 2013 and 2016.



**FIGURE 1.90** Adults with a depressive disorder—county comparison  
 [as a percentage of adults ages 18 and older, by ethnicity, county, and year, Hawai'i, 2013 and 2016]



Data source: Hawai'i Behavioral Risk Factor Surveillance System, 2013 (years 2011 to 2013 combined) and 2016 (years 2014 to 2016 combined), Hawai'i Department of Health

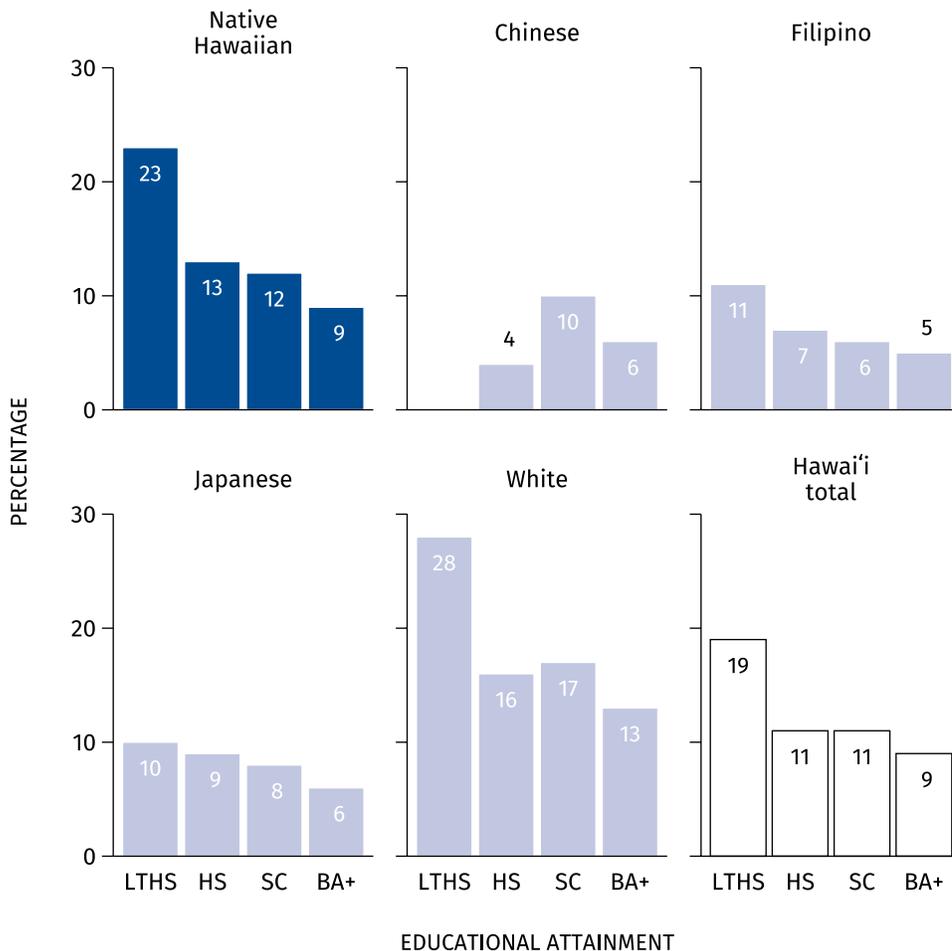
Note 1: This chart includes overlapping and sometimes obscured data points. The most recent data points are all visible; older data points that are not discernible suggest little or no change over time.

Note 2: Missing circles indicate data that are unavailable, not applicable, or suppressed due to small sample size.

- In Hawai'i county, the percentage of Native Hawaiian adults with a depressive disorder decreased significantly between 2013 and 2016.
- Between 2013 and 2016, Kaua'i county experienced a significant increase in the percentage of Native Hawaiian adults with a depressive disorder.
- On the whole, Native Hawaiians and Whites had the highest percentage of adults with a depressive disorder in 2016.

From 2013 to 2016, the prevalence of depression among Native Hawaiian adults increased in all counties except Hawai'i county, where there was a significant decrease of 4 percentage points. During the same time period, Kaua'i county saw a drastic increase in depressive disorders among Native Hawaiian adults, going from 8 to 18 percent between 2013 and 2016. Education and income are important factors to consider when examining the prevalence of depression. In general, higher educational attainment corresponds with lower rates of depression. For example, Native Hawaiians with a bachelor's degree or higher have lower rates of depression (9 percent) compared with those whose highest degree is a high school diploma (13 percent) (fig. 1.91). Among Native Hawaiians, adults making less than \$50,000 a year are more than twice as likely to have a depressive disorder when compared with those making \$50,000 or more (not shown).

**FIGURE 1.91** Adults with a depressive disorder, by educational attainment  
[as a percentage of adults ages 18 and older, by ethnicity and educational attainment, Hawai'i, 2016]



Data source: Hawai'i Behavioral Risk Factor Surveillance System, 2016 (years 2011 to 2016 combined), Hawai'i Department of Health

Note 1: LTHS = Less than high school; HS = High school; SC = Some college; BA+ = Bachelor's degree or higher.

Note 2: Missing lines or bars indicate data that are unavailable, not applicable, or suppressed due to small sample size.

- Higher educational attainment generally corresponds with lower rates of depressive disorders.
- Among Native Hawaiians with a bachelor's degree or higher, 9 percent have a depressive disorder, compared with 13 percent of Native Hawaiians whose highest degree is a high school diploma.
- The proportion of Native Hawaiians with a depressive disorder does not differ significantly from the Hawai'i total.

Adult depression is linked to adverse childhood experiences (ACEs). For example, one study finds, “The presence of ACEs among women in Hawai‘i was indicative of current depressive symptoms in adulthood, notably verbal abuse” (Remigio-Baker, Hayes, and Reyes-Salvail 2014).

## Suicide

Besides in extreme settings such as war, suicide was virtually nonexistent in ka wā kahiko. However, suicide rates among Native Hawaiians have increased every year since statistics were first gathered in 1908. The prevalence of suicide among Indigenous and minority groups is a byproduct of historical trauma. Extreme despondency, which can sometimes result in suicide, is one of many negative social and health outcomes of colonization and institutional racism (Brave Heart et al. 2011).

Native Hawaiian and Pacific Islander youth are among the highest risk for suicide-related behaviors in the United States (Goebert et al. 2018). Native Hawaiians living in rural communities are at the greatest risk for suicide and attempted suicide. Outside of Honolulu, Hawai‘i communities are federally designated as Health Professional Shortage Areas and Medically Underserved Populations, and therefore access to services are severely limited (Chung-Do et al. 2014).

Spiritual and emotional well-being continue to be critical components of the healthy development of individuals, families, and communities. For Native Hawaiians, the significance of these concepts is reflected in cultural values like aloha, lōkahi, and pono. These and other cultural beliefs have successfully guided Native Hawaiians through tremendous change in the past, giving comfort and assurance in our ability to deal with upheaval and uncertainty today and in the future.

At the same time, the data we have regarding spiritual and emotional well-being for Native Hawaiians paint a mixed picture. On the one hand, Native Hawaiians continue to experience comparatively poor mental health outcomes. Disproportionate rates of depression and suicide are especially worrisome. As scholars suggest, these outcomes likely originate in historical trauma and are often exacerbated by discrimination and systemic inequities.

On the other hand, however, Native Hawaiian ‘ohana continue to find strength in spirituality. Hopeful promise exists in the kinship Native Hawaiians feel with the ‘āina as an integral link to spiritual and ancestral assets. It is these sacred ties that encourage us to gather as ‘ohana, to express gratitude, and to remain steadfast in our commitment to strengthening our lāhui.

## EDUCATIONAL WELL-BEING

Lifelong learning, in Native Hawaiian tradition, is rooted firmly in ‘ohana, kaiāulu, and ‘āina. Deeper learning comes from diverse sources, as reflected in the saying, “A’ohe pau ka ‘ike i ka hālau ho’o-kahi—*All knowledge is not taught in the same school*” (Pukui 1983, 24). The ‘ohana is a keiki’s first kumu (teacher), where young learners are taught to listen, observe, demonstrate, and then act.

Kupuna Ilei Beniamina described “tēnā,” a practice of knowledge acquisition that begins in the ‘ohana: “Tēnā is a Hawaiian learning style. One is sent on errands to complete simple to multicomplex tasks. After which, one evolves to be the learner, the practitioner, the teacher, and finally the nurturer of generations” (Beniamina 2010, 10). Conversely, keiki have the kuleana to seek out and obtain wisdom. From a cultural standpoint, keiki learn important skills and knowledge by interacting with the ‘āina (Ledward 2013). ‘Āina serves as a living, breathing, and giving classroom that provides opportunities to learn sophisticated sciences, arts, and culture using observation and hands-on experience. The ‘ōlelo no‘eau, “Ma ka hana ka ‘ike—*In working one learns*” (Pukui 1983, 227) captures the guiding philosophy of applied learning through practice.

Transitioning to adulthood brings additional kuleana to provide for families and sustain healthy communities. In the Western educational system, following a learning trajectory through completion of a postsecondary degree is a huge differentiator of lifetime opportunities, earnings, and other outcomes.<sup>10</sup> Enrolling in college and obtaining a degree opens the door to a wide range of possibility, choice, and participation over a person’s lifetime. Research has shown connections between obtaining a college degree and a variety of aspects of life and livelihood, including economic security (Carnevale, Jayasundara, and Cheah 2013; Tamborini, Kim, and Sakamoto 2015), social relationships (Huang, Van den Brink, and Groot 2009), civic engagement and political participation (Baum, Ma, and Payea 2005; Flanagan and Levine 2010; Newell 2014; Perrin and Gillis 2019), physical health (Hummer and Hernandez 2013), and life satisfaction (Trostel 2015). As seen in our earlier findings on adult emotional well-being, research suggests that a quality college education can strengthen a person’s overall life satisfaction and well-being.

In Hawai‘i, college, career, and community readiness are measures of student success (Hawai‘i Department of Education, n.d.[i]). The state’s “55 by ‘25” goal is led by a statewide partnership to achieve 55 percent of the population with a college degree by 2025. Partners

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<sup>10</sup> The authors acknowledge that quality educational experiences and pathways come from a diversity of environments extending beyond college. College attainment is featured prominently in this chapter due to data availability and access.

include the University of Hawai'i, educational organizations, and the business community in working to strengthen the education pipeline from early childhood through higher education "so that all students achieve career and college success" (Hawai'i P-20 Partnerships for Education n.d.[b], under "About Us"). Enhancing Native Hawaiian postsecondary success is also a strategic priority for the Office of Hawaiian Affairs (Office of Hawaiian Affairs 2014) and Kamehameha Schools.

For Native Hawaiians, data suggest that pathways to postsecondary achievement are complex. Despite relatively low rates of high school completion (see [Chapter 3](#)), data show upward trends in college enrollment and completion of undergraduate and advanced degrees over the past decade. Native Hawaiian females, in particular, are experiencing gains in college degree attainment, a finding consistent with college trends across Hawai'i and nationally (US Department of Labor, Bureau of Labor Statistics 2017; Fry 2019).

Despite signs of progress, when compared with other major ethnicities in Hawai'i, disparities exist for Native Hawaiians in postsecondary success, suggesting persistent barriers on the journey to completing a college degree. For example, financial constraints are one of the most significant obstacles to postsecondary education for Native Hawaiians and other groups who experience socioeconomic disadvantage (Hagedorn et al. 2003; Makuakane-Drechsel and Hagedorn 2000; Freitas and Balutski 2011). Equally important is how college campuses welcome Indigenous students and create an environment for them to belong and thrive (Thomas et al. 2012).

We begin this section with a brief discussion of the pathways students take upon completing their high school experience. With respect to post-high success, we first look at the broad landscape of Native Hawaiian postsecondary attainment using US Census data, which tracks Native Hawaiians attending any college or university. Detailed data are then presented from the University of Hawai'i (UH) system, which enrolls roughly eleven to twelve thousand Native Hawaiian students at any given time. This section, titled "A Closer Look at Native Hawaiian Students in Public Higher Education," provides a more detailed and comprehensive view of Native Hawaiian college enrollment, retention, transfers, and degree completion. We also examine degree types, employment status while in school, financial aid, and representation of Native Hawaiian faculty in the UH system.

## Post-High School Decisions and Transitions

The decisions students make following high school represent a developmental transition from young adulthood to adulthood. Many students, especially those who obtain their high school diploma, enroll in a college or university to further their education. The college-bound pathway is generally expected of most US high school students (Goyette 2008; Venezia and Jaegar 2013), likely due to the numerous individual, institutional, and societal benefits associated with earning a college degree.

Recent data from the Hawai'i P-20 Partnerships for Education (n.d.[a]) suggest that more than half of high school students in Hawai'i pursue higher education. For example, of the 85 percent of students who earned their high school diploma or equivalent credential on time in 2018, the majority (55 percent) enrolled immediately in college, leaving almost half who delayed entry or did not enter college.<sup>11</sup> Among Native Hawaiians, about 40 percent of high school graduates also go on to enroll in postsecondary studies, on average. Conversely, about one in five Native Hawaiian youth does not graduate from high school on time, making the college-bound path much more difficult, if it happens at all.

Entering directly into the workforce may be a more viable and favorable option for some high school graduates. According to the US Bureau of Labor Statistics (2020), in 2019, nearly three-quarters (72 percent) of recent high school graduates not enrolled in college were working. Career and technical education (CTE) programs play a pivotal role in providing students with opportunities to explore career pathways based on their interests, while gaining relevant skills and experience. CTE experiences include cooperative education, internships, apprenticeships, and mentorships that can occur in high school, during college, or in adult education (Institute for Research on Poverty 2019). Research shows that high school CTE programs not only increase postsecondary enrollment and attainment but also help to place students directly into apprenticeships or employment (US Department of Education 2019a). Research has further suggested the promise of CTE programs for young adults who choose work over college: High school graduates who enter directly into the workforce are more likely to remain employed if they took high school CTE courses, compared with those who did not (US Department of Education 2020a).

A more concerning pathway involves young people ages sixteen to twenty-four who are neither enrolled in school nor working—often referred to as “opportunity youth” or sometimes “disconnected youth” (Institute for Research on Poverty 2019). Opportunity youth are more likely to have dropped out of high school, have a disability, and live in poverty, compared with young adults of the same age who are in school or working (Measure of America 2020a). Many have also experienced trauma or adverse childhood experiences. Data on this group are hard to come by, given that they are disconnected from most mainstream institutions.

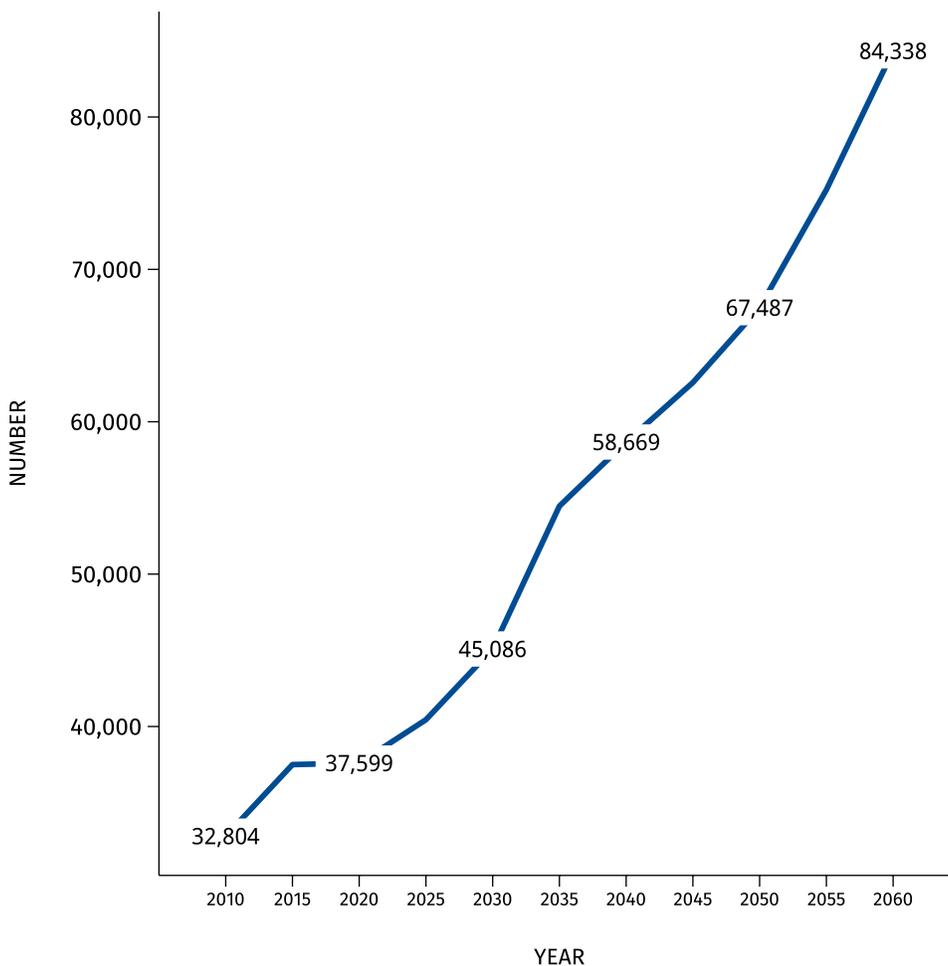
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<sup>11</sup> Immediate enrollment is defined as enrolling into a postsecondary institution in the first fall following high school graduation.

One estimate suggests that in 2018, nearly one in ten (9 percent) of youth were disconnected throughout Hawai'i. Each of the counties reports about 15 percent of youth who are disconnected, except Honolulu, which reports a lower proportion (10 percent) (Measure of America 2020b).

Relatively little is known about the well-being of Native Hawaiian opportunity youth and of those who begin working straight out of high school. Both represent discrete demographics that warrant further research to guide appropriate policies and programs to help young Native Hawaiian adults reach their full potential. These two groups represent a significant, albeit less visible, population among all Native Hawaiians ages eighteen to twenty-four, which, as a whole, rose from 32,804 to 37,599 between 2010 and 2020 (fig. 1.92). Our estimates suggest that this population is projected to increase steadily through 2060.

**FIGURE 1.92** Projected numbers of Native Hawaiian youth ages 18–24 in Hawai'i  
 [Native Hawaiian adults ages 18–24, 2010 to 2060]



Data source: Hong 2012

## Native Hawaiian College Students

### COLLEGE ENROLLMENT

US colleges and universities have experienced an overall decline in enrollment since the 2008 recession (US Department of Education 2020b). Still, college enrollment is considered a leading indicator of a population's educational well-being and is an important step toward completing a postsecondary degree.

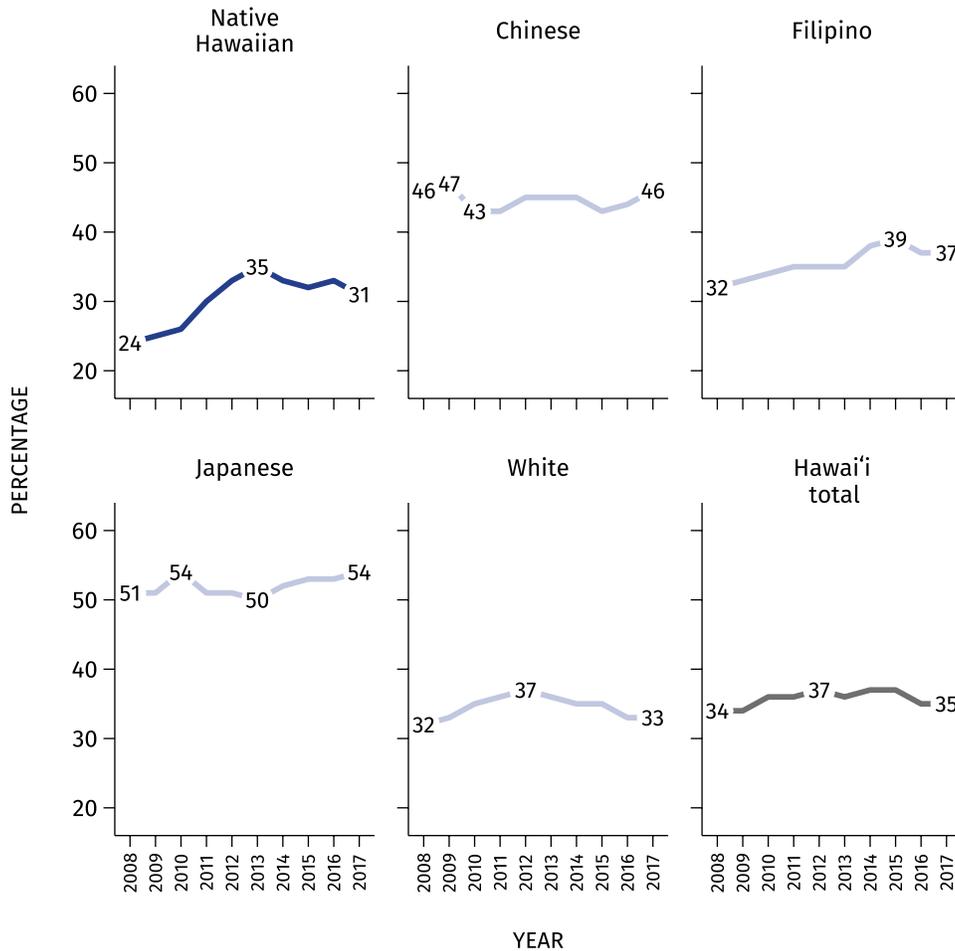
As of 2017, nearly one-third (31 percent) of Native Hawaiians ages eighteen to twenty-four were enrolled in college—the lowest enrollment rate among Hawai'i's major ethnicities. However, trend data for the past decade show an increase in Native Hawaiian college enrollment between 2008 and 2017, reaching a high point of 35 percent in 2013 before declining in the following years (fig. 1.93). The overall increase in Native Hawaiian college enrollment contrasts with the experience of most other ethnicities in Hawai'i during the same period. These results show that Native Hawaiian college enrollment rates are approaching the Hawai'i total and are on par with those of the White population. Because college enrollment may correspond with broader economic patterns, we may expect fluctuations in Native Hawaiian college enrollment in the coming decade due to COVID-19.



Native Hawaiian college enrollment in Hawai'i increased from 24 to 31 percent between 2008 and 2017, defying national trends during the same period.



**FIGURE 1.93 Trends in college enrollment**  
 [as a percentage of young adults ages 18–24, by ethnicity, Hawai'i, 2008 to 2017]



*Data source:* US Census Bureau, American Community Survey, Public Use Microdata Sample 1-year files  
 Note 1: The designation “White” in this chart refers to non-Hispanic Whites, alone or in combination with other ethnicities, as defined by the American Community Survey.  
 Note 2: Data labels are presented for the first and last points, the maximum and minimum points, and some inflection points where the trend changes.

- Over the past decade, college enrollment among Native Hawaiians in Hawai'i grew by 7 percentage points, increasing from 24 to 31 percent between 2008 and 2017.
- The proportion of Native Hawaiian young adults enrolled in college reached a high point of 35 percent in 2013, before declining to 31 percent in the following years.
- Despite marked improvement over time, Native Hawaiians continue to have the lowest rates of college enrollment among Hawai'i's major ethnic groups.
- College enrollment among Native Hawaiian, Filipino, and White students has varied over the years, while enrollment of Chinese and Japanese students has remained relatively consistent and higher than the Hawai'i total.
- Although the Hawai'i total increased slightly between 2011 and 2015, college enrollment among young adults in Hawai'i has not changed significantly from 2008 to 2017.

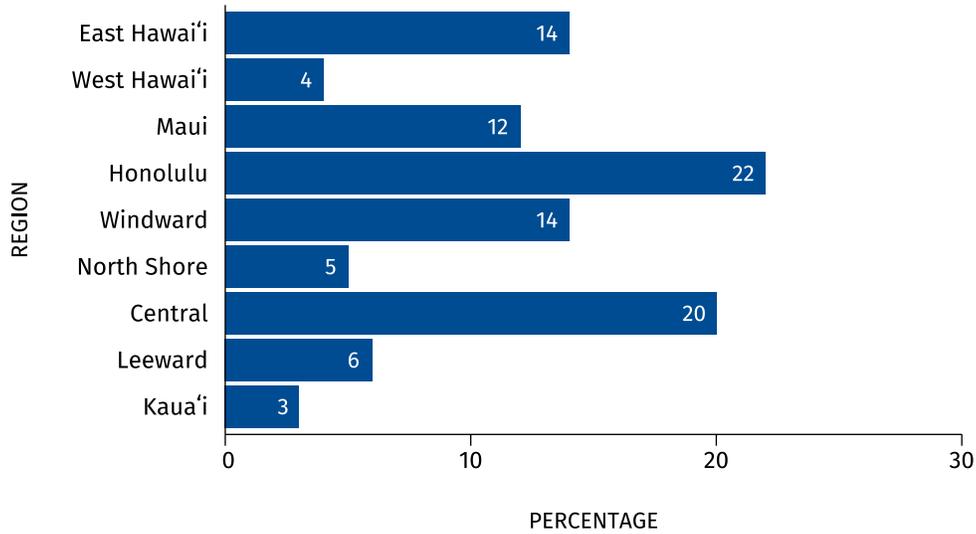
The timing of college enrollment (i.e., delayed entry) among the college-going population in Hawai'i does not seem to differ between major ethnic groups (not shown). However, sex differences among Native Hawaiian college students exist. Females are more likely than males to enroll—mirroring statewide trends (Kamehameha Schools 2019) and national statistics (Hussar et al. 2020). Over time, both male and female Native Hawaiian college students have seen an increase in college enrollment, with a notable spike between 2010 and 2013, in part owing to a surge in female enrollment (Kamehameha Schools 2019).

Once enrolled, Native Hawaiian students attending college in Hawai'i are more likely than other college students to live at home or with a relative (Kamehameha Schools 2019). Living at home while earning a degree can help defray college expenses, particularly for low-income students who have fewer economic resources (Bozick 2007). Research confirms that being near family generally serves as a positive factor in supporting degree persistence and completion among Native Hawaiian and Pacific Islander students—even though living with family may entail balancing familial roles and school obligations (Vakalahi 2009). Native Hawaiian college students who live at home also are less likely to be employed, compared with those who are heads of households and live with relatives or somewhere other than with their parents (Kamehameha Schools 2019).

### **College Enrollment—Regional Highlights**

Important differences can be seen in college enrollment at the regional level. Out of the total population of Native Hawaiian college students in Hawai'i, about two-thirds (67 percent) reside on O'ahu—the island with the most college campuses and the largest population in Hawai'i. As a result, the largest share of college-enrolled Native Hawaiians is in the Honolulu and Central regions (42 percent, combined), followed by East Hawai'i and Maui. The West Hawai'i and Kaua'i regions have the smallest percentage of Native Hawaiian college students, proportionate to the population (fig. 1.94).

**FIGURE 1.94** Regional distribution of college enrollment among Native Hawaiians  
[as a percentage of Native Hawaiians enrolled in college, by region, Hawai'i, 2015]



Data source: US Census Bureau, American Community Survey, Selected Population Tables

- Of all Native Hawaiians enrolled in college, two-thirds (67 percent) live on O'ahu.
- Among Native Hawaiians enrolled in college, more than four in ten (42 percent) live in Honolulu or Central O'ahu.
- Nearly one in five Native Hawaiians (18 percent) who are enrolled in college lives on Hawai'i Island.
- Kaua'i has the smallest percentage of Native Hawaiians enrolled in college.

The proportion of college-enrolled Native Hawaiians in a given geography is related to the presence of a physical college campus and the accompanying "college town" culture and mindset. For instance, regions such as Honolulu and Central, with their larger, established campuses, contrast with West Hawai'i and Kaua'i, which have smaller community colleges, and are also different from North Shore and Leeward, which do not have physical campuses.

## COLLEGE COMPLETION

Turning now to college completion as a key population-level indicator of health and success, the 32 percent of Native Hawaiians who went on to complete a college degree did so between the ages of nineteen and twenty-six (Kamehameha Schools 2019). More importantly, data demonstrate a growing gap in completion rates between Native Hawaiian females and males: Native Hawaiian females are more likely than Native Hawaiian males to obtain a college degree (particularly, a bachelor's degree or higher). Various factors may influence these trends, such as employment opportunities and age of marriage and childbearing (Kamehameha Schools 2019).

### Completion of Bachelor's Degree or Higher

Earning a bachelor's degree or higher requires financial fortitude, a commitment to learning, and perseverance. Between 2008 to 2017, young people of all ethnicities in Hawai'i realized gains in bachelor's degree completion or higher. For Native Hawaiians, a slight downturn in college completion rates began in 2009 but started to reverse in 2011, with 17 percent of adults attaining a bachelor's degree or higher in 2014, up from 14 percent in 2011, and remaining steady through 2017 (fig. 1.95). Comparatively, for the Hawai'i total, the percentage of adults with a bachelor's degree or higher climbed steadily, increasing from 29 to 32 percent between 2008 and 2017. During the same period, Japanese adults realized the greatest increase in the attainment of a bachelor's degree or higher, followed by Filipinos, Whites, Native Hawaiians, and Chinese.

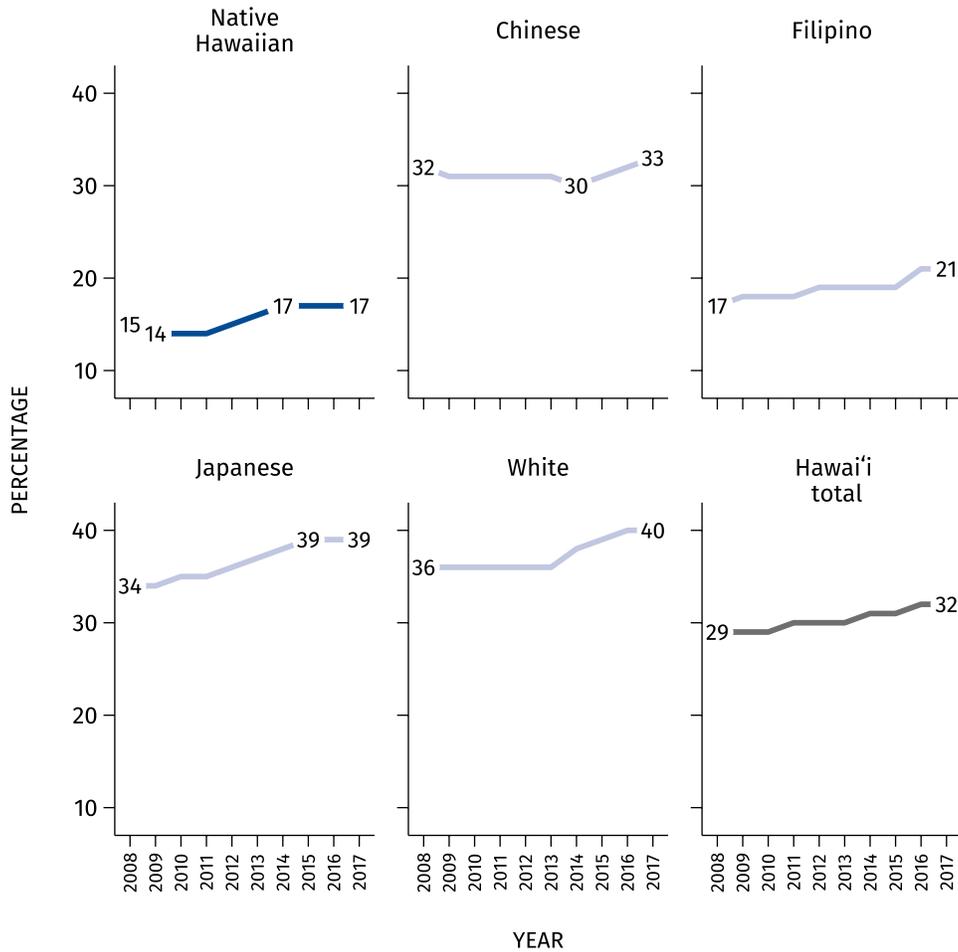
On the whole, Native Hawaiians have the lowest rate of attaining a bachelor's degree or higher among Hawai'i's major ethnicities. The disparity is especially sharp when comparing the Native Hawaiian rate (17 percent) against the Hawai'i total (32 percent).



Across regions, the Central region realized the largest gains in the proportion of Native Hawaiians with a bachelor's degree or higher, growing from 12 to 18 percent between 2000 and 2015.



**FIGURE 1.95** Trends in attainment of a bachelor's degree or higher  
[as a percentage of adults ages 25 and older, by ethnicity, Hawai'i, 2008 to 2017]



Data source: US Census Bureau, American Community Survey, Public Use Microdata Sample 1-year files

Note 1: The designation "White" in this chart refers to non-Hispanic Whites, alone or in combination with other ethnicities, as defined by the American Community Survey.

Note 2: Data labels are presented for the first and last points, the maximum and minimum points, and some inflection points where the trend changes.

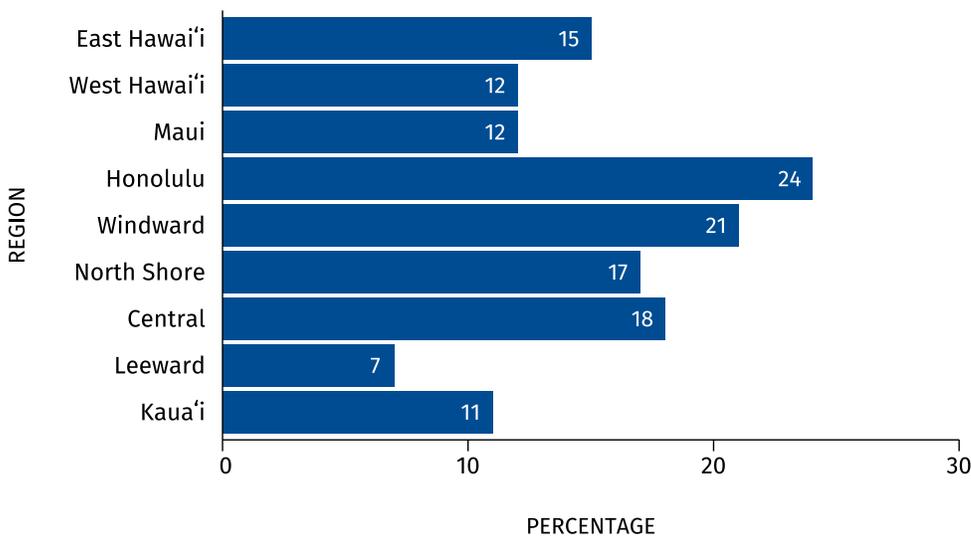
- The proportion of Native Hawaiians with a bachelor's degree or higher increased over a ten-year period, rising from 15 to 17 percent between 2008 and 2017.
- The years 2011 to 2014 saw the greatest gains in the percentage of Native Hawaiians with a bachelor's degree or higher, increasing by 3 percentage points over a four-year period.
- For the Hawai'i total, there has been a steady rise in the percentage of adults with a bachelor's degree or higher—from 29 to 32 percent between 2008 and 2017.
- Between 2008 and 2017, all major ethnicities in Hawai'i realized gains in the attainment of a bachelor's degree or higher (although the increase was only marginal for Chinese adults).
- Japanese adults realized the greatest increase in the attainment of a bachelor's degree or higher between 2008 and 2017, followed by Filipinos, Whites, Native Hawaiians, and Chinese.

### Completion of Bachelor's Degree or Higher—Regional Highlights

Regions that have the highest proportion of Native Hawaiians with a bachelor's degree or higher are Honolulu (24 percent) and Windward (21 percent) (fig. 1.96). These regions also have the highest percentage of Native Hawaiian family households earning \$150,000 or more annually (see [fig. 1.26](#)). Income and educational attainment are directly related.

Looking at regional trend data from 2000 to 2015, the percentage of Native Hawaiians earning a bachelor's degree or higher increased across Hawai'i. The Central region realized the largest gains (6 percentage points), rising from 12 to 18 percent between 2000 and 2015. Possibly contributing to this growth is the addition of the University of Hawai'i West O'ahu campus, which was built to serve a greater proportion of learners in the Central region. East Hawai'i and Windward also experienced positive growth during this period (5 percentage points). West Hawai'i, Kaua'i, and Leeward saw more modest increases (fig. 1.97).

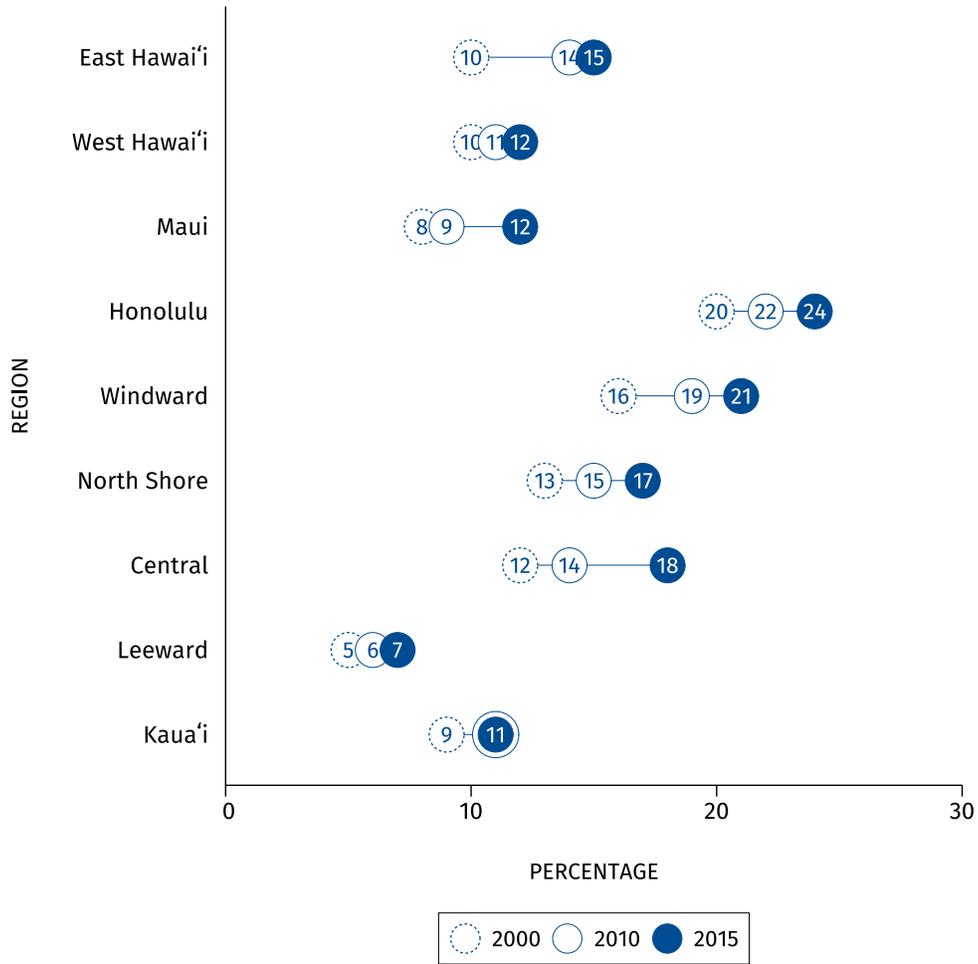
**FIGURE 1.96** Attainment of a bachelor's degree or higher among Native Hawaiians—regional comparison  
[as a percentage of Native Hawaiian adults ages 25 and older, by region, Hawai'i, 2015]



Data source: US Census Bureau, American Community Survey, Selected Population Tables

- The Honolulu region has the highest rate of attainment of a bachelor's degree or higher among Native Hawaiian adults (24 percent).
- Four of the five O'ahu regions have the highest proportion of Native Hawaiians with a bachelor's degree or higher.
- Higher educational attainment is lowest in the Leeward region, where 7 percent of Native Hawaiian adults have a bachelor's degree or higher.
- Native Hawaiian adults in West Hawai'i, Maui, and Kaua'i have similar rates of attainment of a bachelor's degree or higher (12 percent, 12 percent, and 11 percent, respectively).

**FIGURE 1.97** Trends in attainment of a bachelor’s degree or higher among Native Hawaiians—regional comparison  
 [as a percentage of Native Hawaiian adults ages 25 and older, by region, Hawai‘i; 2000, 2010, 2015]



Data source: US Census Bureau, 2011–2015 American Community Survey, Selected Population Tables; US Census Bureau, 2006–2010 American Community Survey, Selected Population Tables; Census 2000, Summary File 4

- Across regions, Central realized the greatest gains in the percentage of Native Hawaiians with a bachelor’s degree or higher, increasing from 12 to 18 percent between 2000 and 2015.
- From 2000 to 2015, East Hawai‘i and Windward realized 5-point increases in the percentage of Native Hawaiians with a bachelor’s degree or higher, while Honolulu, Maui, and North Shore increased by 4 percentage points.
- In the same period, attainment of a bachelor’s degree or higher among Native Hawaiians increased by 2 percentage points in West Hawai‘i, Leeward, and Kaua‘i.

### Completion of Graduate or Professional School

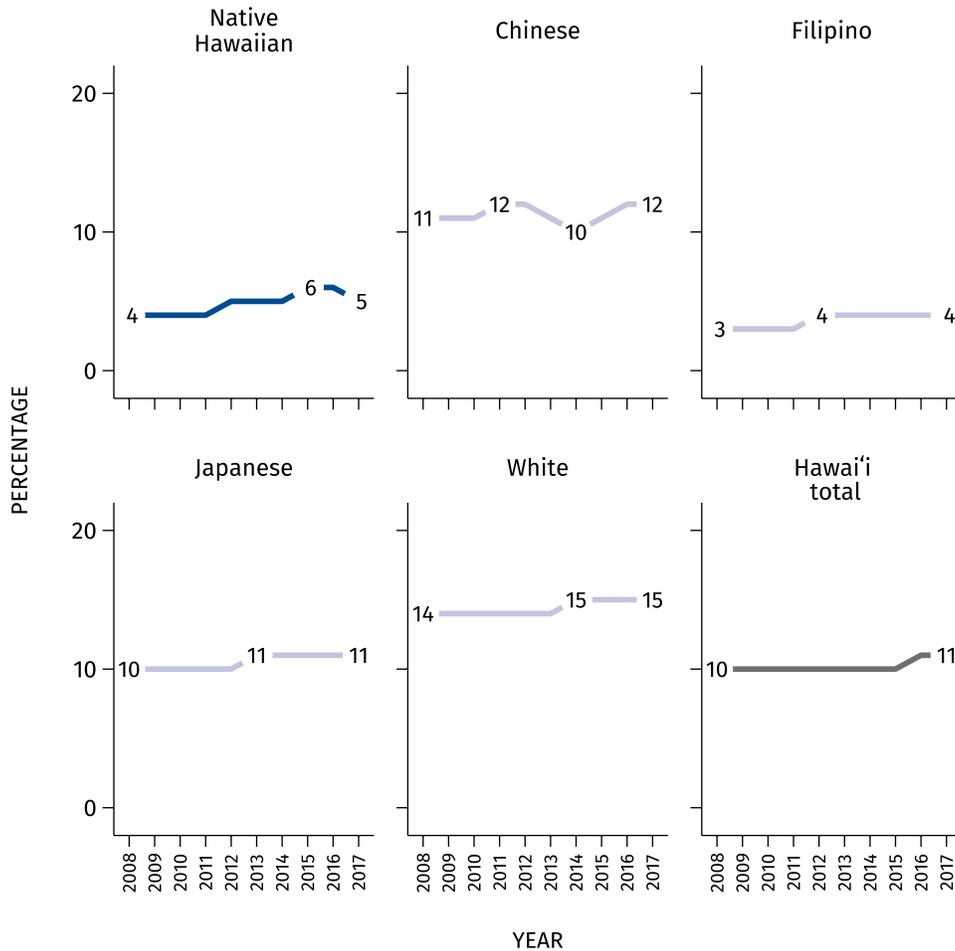
Individuals with graduate or professional diplomas typically earn higher wages and exercise greater choice over their careers, compared with their peers who do not have an advanced degree (Zumeta et al. 2012). While the percentage of Native Hawaiians with a graduate or professional degree has increased modestly since 2008, it is still less than half the rate of the Hawai'i total (5 percent versus 11 percent) (fig. 1.98).

In Hawai'i, Whites have the highest rate of attaining a graduate or professional degree (15 percent), whereas Filipinos have the lowest percentage of completers (4 percent). From 2008 to 2017, all major ethnicities in Hawai'i realized increases in the attainment of a graduate or professional degree, with an increase of 1 percentage point for the Hawai'i total.



From 2000 to 2015, East Hawai'i, Maui, Honolulu, and Windward were the regions with the largest increases (3 percentage points) in the proportion of Native Hawaiians with a graduate or professional degree.

**FIGURE 1.98** Trends in attainment of a graduate or professional degree  
 [as a percentage of adults ages 25 and older, by ethnicity, Hawai'i, 2008 to 2017]



Data source: US Census Bureau, American Community Survey, Public Use Microdata Sample 1-year files

Note 1: The designation "White" in this chart refers to non-Hispanic Whites, alone or in combination with other ethnicities, as defined by the American Community Survey.

Note 2: Data labels are presented for the first and last points, the maximum and minimum points, and some inflection points where the trend changes.

- Among all major ethnicities in Hawai'i, there was a slight increase from 2008 to 2017 in the percentage of adults who have a graduate or professional degree.
- For the Hawai'i total, the rate of graduate or professional degree attainment is more than twice that of Native Hawaiians—a disparity that has been consistent over the ten-year period.

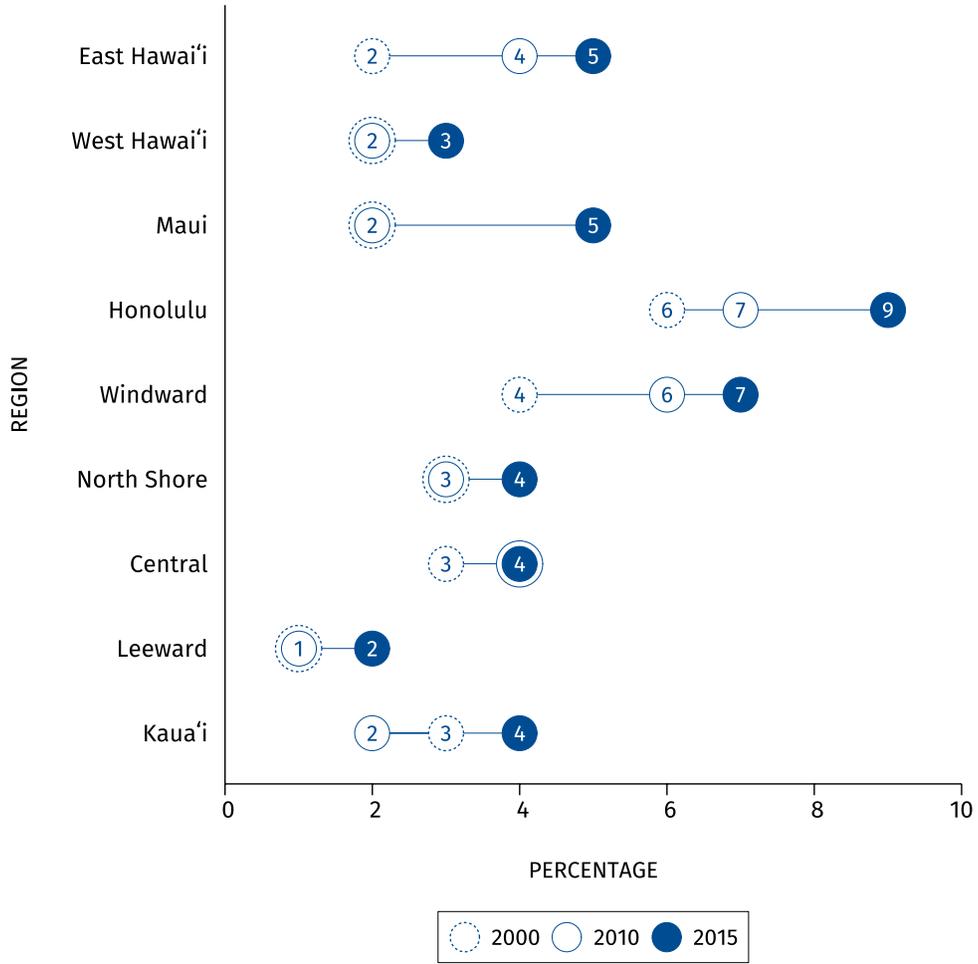
## COMPLETION OF GRADUATE OR PROFESSIONAL DEGREE—REGIONAL HIGHLIGHTS

Among regions, Honolulu had the highest proportion (9 percent) of Native Hawaiian adults with a graduate or professional degree in 2015 (fig. 1.99)—a rate that begins to approach the Hawai'i total of 11 percent (not shown). This may correlate with the fact that Native Hawaiian households in Honolulu, on average, have relatively high income, compared with that of other regions (see [fig. 1.26](#)).

A slight upward trend is evident in graduate or professional degree completion across regions. Between 2000 and 2015, East Hawai'i, Honolulu, Maui, and Windward saw the largest increases (3 percentage points) in the proportion of Native Hawaiians with a graduate or professional degree. By 2015, the North Shore, Central, and Kaua'i regions had achieved the same rate of Native Hawaiian advanced degree attainment (4 percent) as Windward had seen in 2000—an indication of small but notable educational gains occurring across regions (fig. 1.99).

**FIGURE 1.99** Trends in attainment of a graduate or professional degree among Native Hawaiians—regional comparison

[as a percentage of Native Hawaiian adults ages 25 and older, by region, Hawai'i; 2000, 2010, 2015]



Data source: US Census Bureau, 2011–2015 American Community Survey, Selected Population Tables; 2006–2010 American Community Survey, Selected Population Tables; Census 2000, Summary File 4

- All regions experienced a small increase in the percentage of Native Hawaiians with a graduate or professional degree between 2000 and 2015.
- Over a shorter time period, from 2010 to 2015, the greatest increases in the proportion of Native Hawaiian graduate or professional degree attainment were in Maui (3 percentage points) and Honolulu (2 percentage points).

## COLLEGE SURVIVAL RATES

We measure college survival rates as the proportion of students who make it to the next step in progressing from enrollment to graduation. Detailed analyses show that Native Hawaiian college students have a 50 percent survival rate between each step, from college enrollment to graduate degree attainment (Kamehameha Schools 2019). That is, half of all college-age Native Hawaiians enroll in college at some point; half of those who enroll, complete a degree (associate's or higher); slightly more than half of those who complete a degree earn a bachelor's or higher; and almost half of those who earn a bachelor's degree go on to complete a graduate degree. By comparison, the survival rates of Japanese students in Hawai'i, a group with generally higher educational attainment, are closer to 75 percent at each stage leading up to a bachelor's degree (Kamehameha Schools 2019).

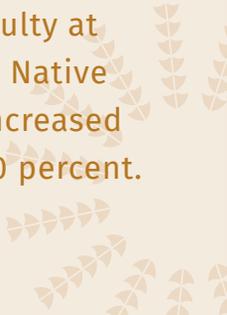
These disparate findings suggest systematic inequities in Native Hawaiian educational outcomes, requiring focused attention and programmatic interventions to support the 50 percent of Native Hawaiians who never enroll in college or who enroll but do not complete a degree.

## A Closer Look at Native Hawaiian Students in Public Higher Education

The UH system is Hawai'i's single public higher education system and is the postsecondary choice for the majority of local high school graduates. The UH system includes ten institutions across six islands. The main University of Hawai'i campuses are in Mānoa (UH–Mānoa), Hilo (UH–Hilo), and West O'ahu (UH–West O'ahu), which is the newest campus in the UH system. Community colleges include Hawai'i Community College, Honolulu Community College, Kapi'olani Community College, Kaua'i Community College, Leeward Community College, Maui College,<sup>12</sup> and Windward Community College.



From 2004 to 2018, the proportion of tenured faculty at UH who are Native Hawaiian increased from 6 to 10 percent.



<sup>12</sup> Maui College offers (mostly) two-year and four-year programs and is referred to as the system's only "college" (as opposed to a university or community college). Maui College is listed with the community colleges in this analysis.

In recent years, the University of Hawai'i has made efforts to better support postsecondary completion among Native Hawaiian students. For example, as part of the 2015–21 priorities, the university implemented the Hawai'i Graduation Initiative to increase the “participation and completion of students, particularly Native Hawaiians, low-income students and those from underserved regions and populations and preparing them for success in the workforce and their communities” (University of Hawai'i 2016, HGI Goal and Context). Representation among UH's tenure-track faculty has also improved somewhat, with Native Hawaiian associate professors and professors constituting 10 percent of the university's tenured faculty—up from 6 percent in 2004 (see [fig. 1.116](#)). As a result, recent times have seen an upsurge of Native Hawaiian scholarship and publishing in the fields of political science, education, and Hawaiian studies. Taken together, these examples reflect UH–Mānoa's commitment to being a “Hawaiian place of learning” to support Native Hawaiian students and to ensure learning outcomes that result in all undergraduate students having an understanding of Hawaiian culture and history (University of Hawai'i at Mānoa 2019).

## UH ENROLLMENT

Campuses within the UH system serve diverse communities with diverse student populations. Trend data from 2008 to 2019 show an increase in Native Hawaiian enrollment, relative to the total undergraduate and graduate student population in the UH system (figs. 1.100, 1.101). During the same period, UH–Hilo experienced the largest increase in the proportion of Native Hawaiian students as a percentage of total enrollment, both at the undergraduate and graduate levels. These gains suggest a potential inflection point as families, communities, and systems come together to improve the historically low college participation rates among Native Hawaiians.

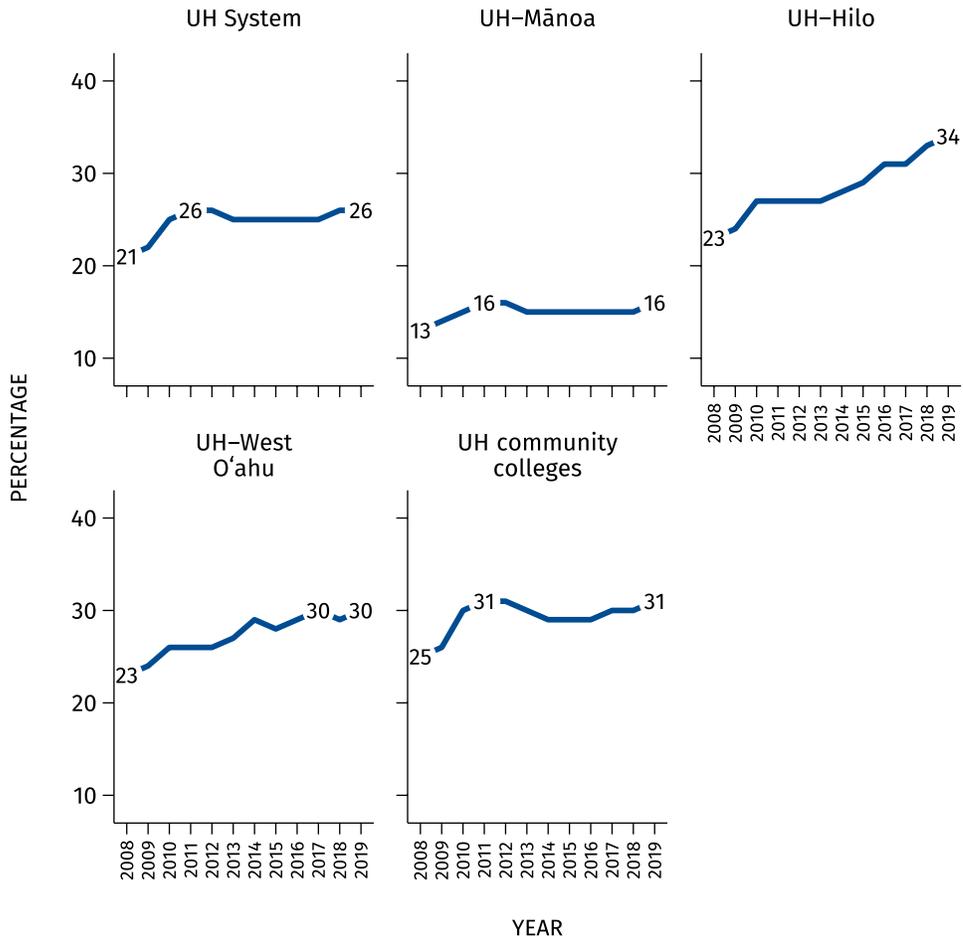


Native Hawaiian enrollment in the UH system, as a proportion of all students, increased from 21 to 26 percent between 2008 and 2019.



**FIGURE 1.100** Trends in Native Hawaiian undergraduate enrollment as a percentage of total enrollment at the University of Hawai'i

[by University of Hawai'i campus, Hawai'i, 2008 to 2019]



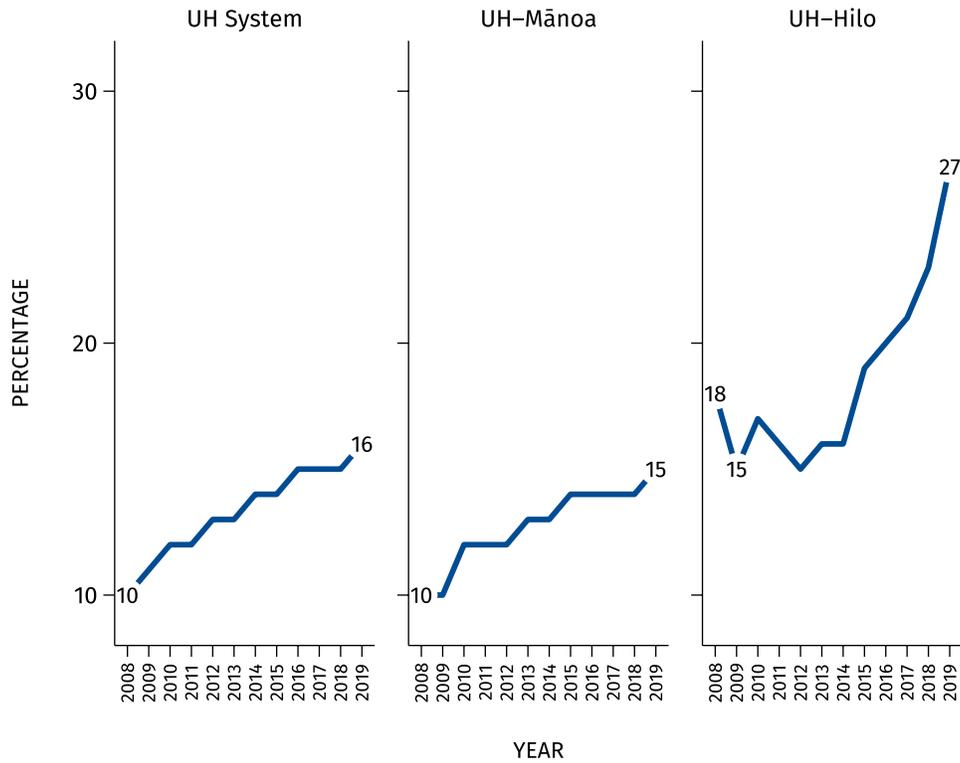
Data source: University of Hawai'i, Institutional Research and Analysis Office, Enrollment Table 4, fall 2008 to fall 2019

Note 1: Data labels are presented for the first and last points, the maximum and minimum points, and some inflection points where the trend changes.

- The proportion of Native Hawaiian college students within the UH system, relative to the total undergraduate population, has increased over time.
- From 2008 to 2019, the proportion of Native Hawaiian undergraduates in the UH system, as a percentage of the total college student population, increased from 21 to 26 percent.
- Compared with other UH campuses and the system as a whole, UH-Hilo realized the greatest gains in the proportion of Native Hawaiian undergraduate enrollment between 2008 and 2019.

**FIGURE 1.101** Trends in Native Hawaiian graduate enrollment as a percentage of total enrollment at the University of Hawai'i

[by University of Hawai'i campus, Hawai'i, 2008 to 2019]



*Data source:* University of Hawai'i, Institutional Research and Analysis Office, Enrollment Table 4, fall 2008 to fall 2019

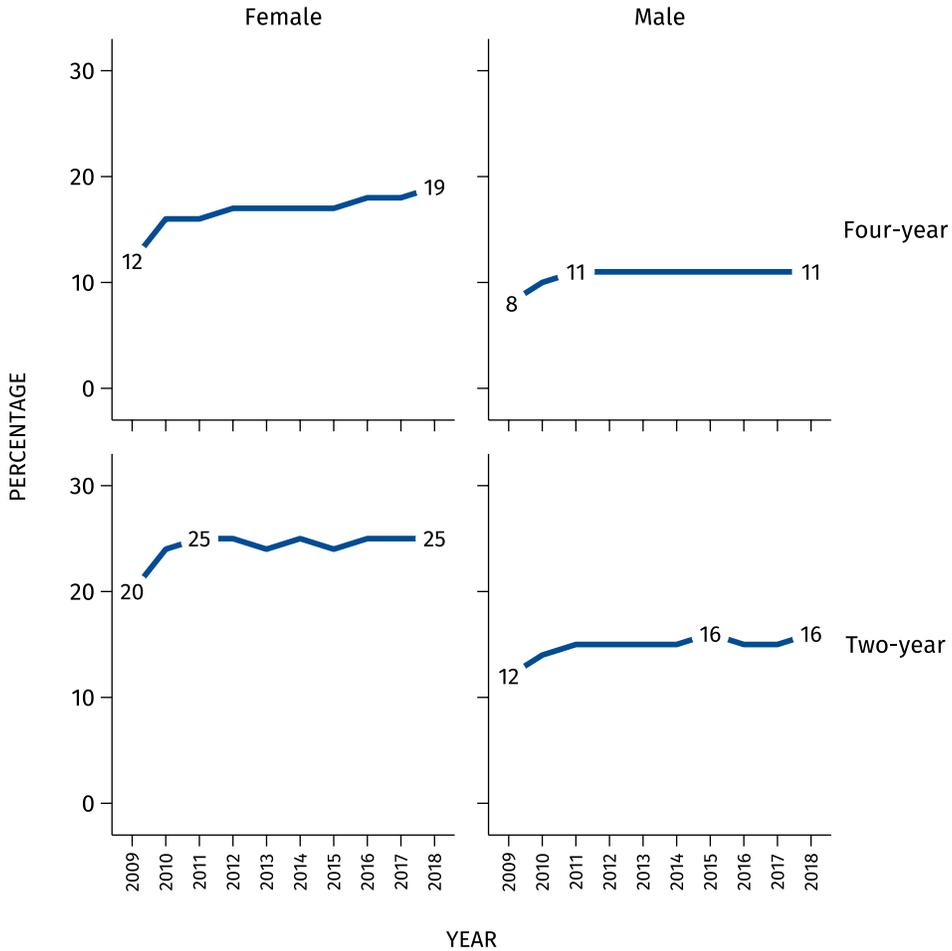
Note 1: Data labels are presented for the first and last points, the maximum and minimum points, and some inflection points where the trend changes.

- The proportion of Native Hawaiian graduate students within the UH system, relative to the total graduate student population, has increased over time.
- From 2008 to 2019, the proportion of Native Hawaiian graduate students, as a percentage of total graduate students in the UH system, increased from 10 to 16 percent.
- Between 2008 and 2019, UH-Hilo grew by 9 percentage points, realizing the greatest gains in the proportion of Native Hawaiian graduate students enrolled, compared with other UH campuses.

### **UH Undergraduate Enrollment**

When examining undergraduate enrollment within the UH system, the data show greater proportions of Native Hawaiian female and male students over the past decade, relative to the total undergraduate enrollment for four-year and two-year campuses. And, female Native Hawaiian undergraduates consistently represent a higher proportion of total enrollment, compared with that of their male counterparts (fig. 1.102). Also promising is that more Native Hawaiian students are transferring from two-year to four-year colleges within the UH system, growing from 350 transfers in school year 2009–10, to 624 transfers in school year 2014–15, and then declining to 521 transfers in school year 2018–19 (not shown).

**FIGURE 1.102** Trends in Native Hawaiian undergraduate enrollment at the University of Hawai'i [as a percentage of enrolled undergraduate students, by college type, ethnicity, and sex, Hawai'i, 2009 to 2018]



Data source: University of Hawai'i—data prepared at the request of Kamehameha Schools

Note 1: Percentages are based on fall semester enrollment.

Note 2: Data labels are presented for the first and last points, the maximum and minimum points, and some inflection points where the trend changes.

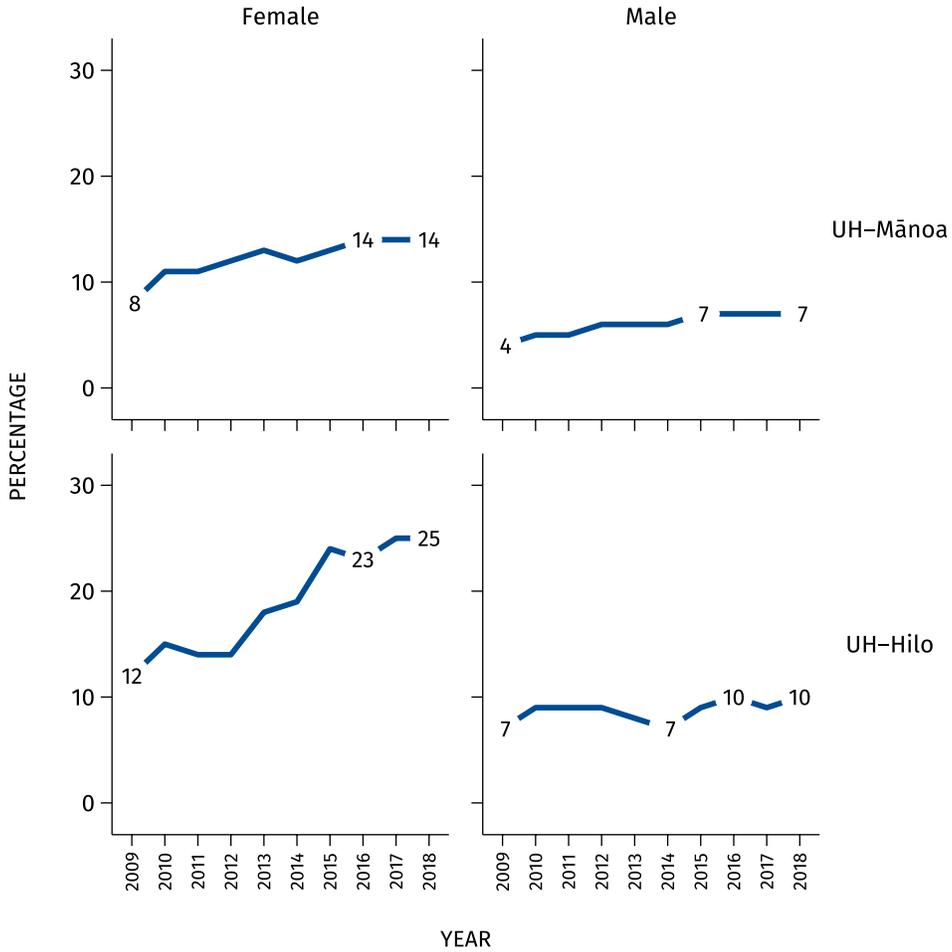
- From 2009 to 2018, the proportion of Native Hawaiian undergraduate students enrolled at two-year and four-year UH campuses—relative to total undergraduate enrollment on each campus—increased for both females and males.
- From 2009 to 2018, the proportion of Native Hawaiian females enrolled at four-year UH campuses increased by 7 percentage points.
- In comparing female undergraduates at two-year UH campuses, Native Hawaiians had the greatest increase (5 percentage points) in the proportion of total undergraduate enrollment among the major ethnicities from 2009 to 2018 (not shown).

- Among male undergraduates at two-year UH campuses, Native Hawaiians had the greatest increase in the proportion of total undergraduate enrollment among the major ethnicities (not shown), going from 12 to 16 percent between 2009 and 2018—though most of these gains were realized between 2009 and 2015.
- The proportion of Native Hawaiian male students at four-year UH campuses increased from 8 to 11 percent between 2009 and 2018.

### **UH Graduate Enrollment**

Similar to enrollment trends among UH undergraduates, enrollment of Native Hawaiian graduate students seeking advanced degrees at UH–Hilo and UH–Mānoa increased for females and males between 2009 and 2018 (fig. 1.103).

**FIGURE 1.103** Trends in Native Hawaiian graduate enrollment at the University of Hawai'i  
 [as a percentage of enrolled graduate students, by campus, ethnicity, and sex, Hawai'i, 2009 to 2018]



Data source: University of Hawai'i—data prepared at the request of Kamehameha Schools

Note 1: Percentages are based on fall semester enrollment.

Note 2: Data labels are presented for the first and last points, the maximum and minimum points, and some inflection points where the trend changes.

- Between 2009 and 2018, the proportion of Native Hawaiian graduate students enrolled at UH-Hilo and UH-Mānoa—relative to the total graduate enrollment on each campus—increased for both females and males.
- UH-Hilo had the greatest increase in the proportion of Native Hawaiian students as a percentage of total graduate enrollment, with Native Hawaiian female enrollment increasing by 13 percentage points and Native Hawaiian male enrollment increasing by 3 percentage points from 2009 to 2018.
- Comparing all graduate students (not shown), Native Hawaiian females experienced the greatest gains in the proportion of total enrollment at both UH-Hilo and UH-Mānoa.

- Compared with all male graduate students (not shown) at UH–Hilo, Native Hawaiians had the greatest gains in the proportion of total graduate enrollment, increasing from 7 to 10 percent between 2009 and 2018.
- Comparing male graduate students of Hawai‘i’s major ethnicities at UH–Mānoa (not shown), Native Hawaiians had the highest increase (3 percentage points) in the proportion of total enrollment from 2009 to 2018.

## UH NATIVE HAWAIIAN COLLEGE RETENTION AND COMPLETION

Retention rates provide an important window into the quality of students’ experiences with an institution and how well students are supported by their campus community. Decades of research on retention, persistence,<sup>13</sup> and completion show that when students are engaged, attached, and supported in learning by their institutions, they are less likely to drop out and, therefore, more likely to earn a degree (Astin 1999; Spady 1970, 1971; Tinto 1975, 1982, 1987, 1993; Bean 1980, 1982a, 1982b, 1983; Cabrera et al. 1992; Pascarella 1980; Museus 2014; Thomas et al. 2012).

Retention rates are often calculated as a percentage of a student cohort that has been retained throughout the system over a particular interval of time. It is most common for institutions to report one-year retention rates (the percentage of students who completed their first year of college and enrolled for fall semester of their second year) as a metric of institutional success. One-year retention rates are collected and reported by the National Center for Education Statistics, the leading federal entity that analyzes education data in the United States (Hagedorn 2006). Generally, research shows a strong association between the first-year experience and the likelihood of degree completion (Adelman 1999, 2006; Attewell, Heil, and Reisel 2012).

In this section, we present one-year college retention rates and college completion rates, side by side and over time, for several student cohorts.<sup>14</sup> Our intent is to provide an overview of retention and completion patterns across Hawai‘i’s public university campuses, which is where most Native Hawaiians attend college.

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<sup>13</sup> Persistence is a student-level measure that refers to a student persisting and working through challenges (e.g., at school, home, and in their communities) to achieve their postsecondary endeavors. Persistence is generally calculated as the percentage of students (in a cohort) who return to college following previous consecutive enrollment (the institution may or may not be the same as the one previously enrolled in). Retention is an institutional-level measure that refers to an institution’s ability and kuleana to support and retain students once they are enrolled in college.

<sup>14</sup> Our analyses do not address causality between retention and completion. Moreover, student-level data limitations and additional variables (e.g., drop out rates, stop out rates, and transfer rates) limit the ability to develop and test comprehensive models of student retention and completion.

At a system level, one-year retention rates at four-year colleges generally decline from year to year as students graduate, transfer to other schools, or otherwise discontinue their studies.<sup>15</sup> Differences are apparent between cohorts. For example, at UH–Mānoa, retention rates among the 2009 cohorts of Native Hawaiian students were noticeably lower than those of the 2008 cohorts. During the same period, Native Hawaiian enrollment rates increased (see “UH Enrollment” above). These patterns are consistent with national trends following the 2008 recession, where more students enrolled in college, but fewer completed their degree—a phenomenon that likely is correlated with retention rates observed within the UH system.

With regard to completion rates, Native Hawaiian students at UH campuses generally do not graduate within the intended parameters of two-year and four-year programs. For example, at UH community colleges, 14 percent of Native Hawaiian students, on average, graduate in three years or less. At UH–Mānoa, an average of 51 percent of Native Hawaiian college students graduate in six years or less. And at UH–Hilo, an average of 38 percent of Native Hawaiian students complete their bachelor’s degree in six years or less (table 1.2).<sup>16</sup>

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<sup>15</sup> All of the data presented in this section come from the University of Hawai‘i via a special request by Kamehameha Schools.

<sup>16</sup> College completion data for UH–West O‘ahu are not included because it is the newest institution in the UH system and data were not available. However, retention data for UH–West O‘ahu are included in the analysis.

**TABLE 1.2** Native Hawaiian retention and completion rates across the University of Hawai'i system, 2008 to 2015\*

<b>UH COMMUNITY COLLEGES**</b>	Average 1-year retention rate % (2nd fall)	Average completion rates (%)		
		GRAD IN 2 YEARS	GRAD IN 3 YEARS	GRAD IN 4 YEARS
All Native Hawaiian students	55	4	14	13
Native Hawaiian females	58	4	15	14
Native Hawaiian males	51	5	13	13

<b>UH-MĀNOA</b>	Average 1-year retention rate % (2nd fall)	Average completion rates (%)		
		GRAD IN 4 YEARS	GRAD IN 6 YEARS	GRAD IN 8 YEARS
All Native Hawaiian students	76	24	51	56
Native Hawaiian females	77	27	54	58
Native Hawaiian males	75	20	48	53

<b>UH-HILO</b>	Average 1-year retention rate % (2nd fall)	Average completion rates (%)		
		GRAD IN 4 YEARS	GRAD IN 6 YEARS	GRAD IN 8 YEARS
All Native Hawaiian students	66	12	38	39
Native Hawaiian females	69	14	38	43
Native Hawaiian males	61	9	37	33

<b>UH-WEST O'AHU***</b>	Average 1-year retention rate % (2nd fall)	Average completion rates (%)		
		GRAD IN 4 YEARS	GRAD IN 6 YEARS	GRAD IN 8 YEARS
All Native Hawaiian students	60	–	–	–
Native Hawaiian females	61	–	–	–
Native Hawaiian males	59	–	–	–

\* Information in this table is based on cohorts of Native Hawaiian students. Specific years associated with various cohorts are detailed in figures 1.104 to 1.111.

\*\* Maui College is included in the UH community college data.

\*\*\* For UH-West O'ahu, retention rates span 2012 to 2015. Graduation data are unavailable.

### Native Hawaiians at UH Community Colleges (Two-Year Colleges)

Community colleges play an important role in higher education and in the economy. Almost half of postsecondary students in the United States are enrolled in community colleges (Shapiro et al. 2014). In addition to awarding associate's degrees and certificates, community colleges provide designations for vocational training and offer support for matriculating to a four-year campus to earn a bachelor's degree (Cohen, Brawer, and Kisker 2013). Open admission and enrollment policies, relatively low tuition rates, and being physically located in the hearts of communities (Ma and Baum 2016) ease the pathway to obtaining a higher education for many students who otherwise might not attend college.

Overall, between 2008 and 2015, the average one-year retention rate for Native Hawaiian students at UH community colleges was 55 percent (see [table 1.2](#)).



Native Hawaiian community college students made considerable improvements in two-year and three-year graduation rates between 2008 to 2015, with increases ranging from 5 to 10 percentage points.

#### NATIVE HAWAIIAN FEMALES—DETAILED DATA ON UH COMMUNITY COLLEGES

For Native Hawaiian female students at UH community colleges, the average one-year retention rate is 58 percent—meaning that nearly three in five enroll for the fall semester of their second year of studies (see [table 1.2](#)). Among cohorts of female students at UH community colleges, Native Hawaiians and Whites are the least likely to enroll for their second year of college (not shown).

In our comparison of completion rates among eight cohorts of first-time, full-time community college students (entering from 2008 to 2015), we are encouraged to see higher rates of Native Hawaiian females graduating in three-years, rising from 11 percent among the 2008 cohort to 21 percent among the more recent 2015 cohort (fig. 1.104), totaling

an average of 15 percent across all eight cohorts (see [table 1.2](#)). Native Hawaiian females in more recent cohorts also saw higher graduation rates from two-year community college programs, with 7 percent of the 2015 cohort finishing in two years, compared with 2 percent among the 2008 cohort (fig. 1.104). Overall, far too few Native Hawaiian females complete in two years, averaging a troubling 4 percent at UH community colleges across all eight cohorts (see [table 1.2](#)).

Considering trends in retention and graduation simultaneously, we do not see a clear, positive relationship for Native Hawaiian females at UH community colleges. However, the relationship may be masked in these broad, descriptive statistics. Individual-level analyses are required to tease out the statistical relationships to help understand predictors of success.

**FIGURE 1.104** Retention and graduation rates of Native Hawaiian female students at UH community colleges

[percentage, by cohort, retention into 2nd fall, and years taken to graduate, Hawai'i, 2008 to 2015]



*Data source:* Institutional Research and Analysis Office, University of Hawai'i; prepared at the request of Kamehameha Schools

Note 1: Missing lines or bars indicate data that are unavailable, not applicable, or suppressed due to small sample size.

- Generally, two-year graduation rates are low among Native Hawaiian female students at UH community colleges. Three-year graduation rates are slightly better, with the 2015 cohort of Native Hawaiian females showing the highest rate (21 percent) and the 2009 cohort, the lowest (9 percent).
- Based on graduation data across eight cohorts, an average of 4 percent of Native Hawaiian females at UH community colleges graduate within two years, and 15 percent graduate within three years (see [table 1.2](#)).
- The average one-year retention rate is 58 percent for Native Hawaiian female students at UH community colleges, based on data from eight cohorts, meaning slightly more than one in two enroll in the following fall semester for their second year of community college (see [table 1.2](#)).

#### NATIVE HAWAIIAN MALES—DETAILED DATA ON UH COMMUNITY COLLEGES

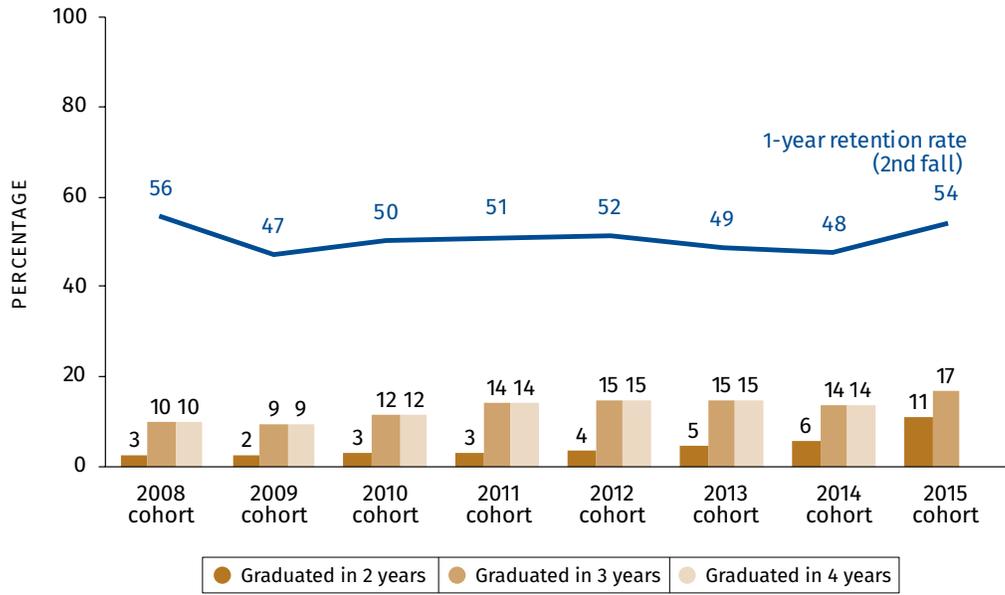
Data indicate that Native Hawaiian males have lower retention rates at public community colleges in Hawai'i, relative to female students (see [fig. 1.104](#)). Averaging across the 2008 to 2015 cohorts, about half of Native Hawaiian males persist to the second year of college—51 percent, or 7 percentage points lower than rates of female students at UH community colleges (see [table 1.2](#)). One-year retention rates of Native Hawaiian males have remained relatively consistent. Starting at 56 percent with the 2008 cohort, the rate dropped to 47 percent for the 2009 cohort, and rebounded to 54 percent for the 2015 cohort (fig. 1.105).

As with female students, the data show positive trends in Native Hawaiian males graduating from public community colleges: The two-year graduation rate improved by 8 percentage points—increasing from 3 to 11 percent for the cohort starting in 2008 versus 2015. As for the three-year graduation rate, 17 percent of the 2015 cohort of Native Hawaiian males graduated in three years or less, up from 10 percent of the 2008 cohort. Overall, worrisome disparities still persist, with 5 percent of Native Hawaiian males graduating in two years averaged across all cohorts, and 13 percent graduating in three years (see [table 1.2](#)).

When taken side by side, as seen with the preceding analysis of female students, the broad descriptive statistics are perplexing with regard to retention and graduation rates for Native Hawaiian males at community colleges: Retention rates dipped from the 2008 cohort to the 2015 cohort, while graduation rates increased. Again, we caution that more in-depth, individual-level analyses are required to control for factors explaining this relationship in predicting successful college completion.

**FIGURE 1.105** Retention and graduation rates of Native Hawaiian male students at UH community colleges

[percentage, by cohort, retention into 2nd fall, and years taken to graduate, Hawai'i, 2008 to 2015]



Data source: Institutional Research and Analysis Office, University of Hawai'i; prepared at the request of Kamehameha Schools

Note 1: Missing lines or bars indicate data that are unavailable, not applicable, or suppressed due to small sample size.

- The two-year graduation rate of Native Hawaiian males at UH community colleges increased by 8 percentage points, from 3 percent among the 2008 cohort to 11 percent among the 2015 cohort.
- Based on graduation data across eight cohorts, an average of 5 percent of Native Hawaiian males at UH community colleges graduate in two years, and an average of 13 percent graduate in three years (see [table 1.2](#)).
- The average one-year retention rate of Native Hawaiian males at UH community colleges, based on data from eight cohorts, is 51 percent. This means that approximately one in two enrolls in the following fall semester for their second year of community college (see [table 1.2](#)).

### Native Hawaiians at UH Four-Year Colleges

Research shows it takes an average of 5.1 years to graduate with a bachelor's degree in the United States (Shapiro et al. 2016). About 10 percent of students obtain their degree within four years, 39 percent in five years, and 50 percent in six years. In this section we examine retention and completion rates for Native Hawaiian students attending Hawai'i's public four-year colleges, UH–Mānoa and UH–Hilo, between 2008 to 2015. Because UH–West O'ahu is relatively new, only retention rates are available from 2012 to 2015.

Retention and graduation rates vary between the two four-year colleges and, on the whole, tend to be higher among female students than among male students (which is consistent with US Census data presented above). At UH–Mānoa, three in four Native Hawaiian students (76 percent) persist through the first year and enroll in the second year of college, which represents an increase over time. Across the five cohorts, about half of all Native Hawaiian students (51 percent) graduate in six years or less. At UH–Hilo, the cohort data evidence that two-thirds of Native Hawaiian students (66 percent) are retained through the first year, and an average of 38 percent of all Native Hawaiian students graduate in six years or less (see [table 1.2](#)).

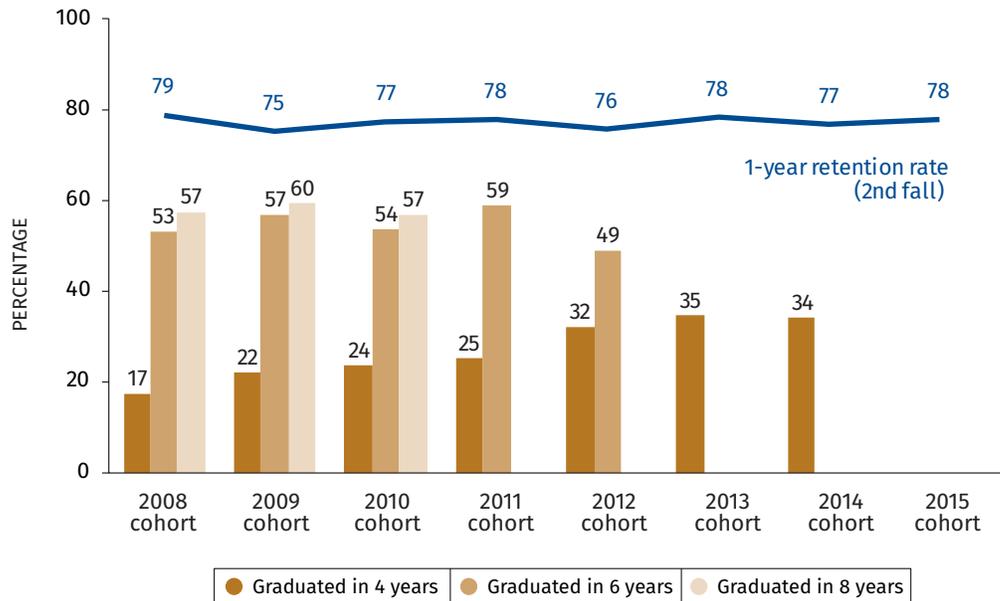
#### NATIVE HAWAIIAN FEMALES—DETAILED DATA ON UH FOUR-YEAR COLLEGES

About 77 percent of Native Hawaiian female students complete the first year at UH–Mānoa in the cohorts starting in 2008 through 2015, resulting in slightly more than three in four enrolling for the fall semester of their second year of college and one in four not persisting (see [table 1.2](#)). One-year retention rates remain relatively consistent from the 2008 to 2015 cohorts, ranging from 75 to 79 percent of Native Hawaiian female students returning for their second year of studies (fig. 1.106).

Native Hawaiian female students were much more likely to graduate in four years at UH–Mānoa in the most recent 2014 cohort, compared with earlier cohorts. Over time, the four-year graduation rate doubled, from 17 percent in the earlier 2008 cohort to 34 percent in the later 2014 cohort, with an average of 27 percent across these cohorts (not shown). We also observe an increase in the six-year graduation rate to a high of 59 percent for the 2011 cohort, then a sharp decline to 49 percent for the 2012 cohort (fig. 1.106). Among all Native Hawaiian female students at UH–Mānoa, the overall six-year graduation rate is 54 percent (see [table 1.2](#)).

On the surface, no obvious relationship appears between retention and graduation rates of Native Hawaiian females at UH–Mānoa. Between 2008 and 2015, one-year retention rates among cohorts remained relatively stable, while graduation rates steadily increased. Individual-level analyses are needed to determine the factors underlying improved graduation rates.

**FIGURE 1.106** Retention and graduation rates of Native Hawaiian female students at UH–Mānoa [percentage, by cohort, retention into 2nd fall, and years taken to graduate, Hawai‘i, 2008 to 2015]



*Data source:* Institutional Research and Analysis Office, University of Hawai‘i; prepared at the request of Kamehameha Schools

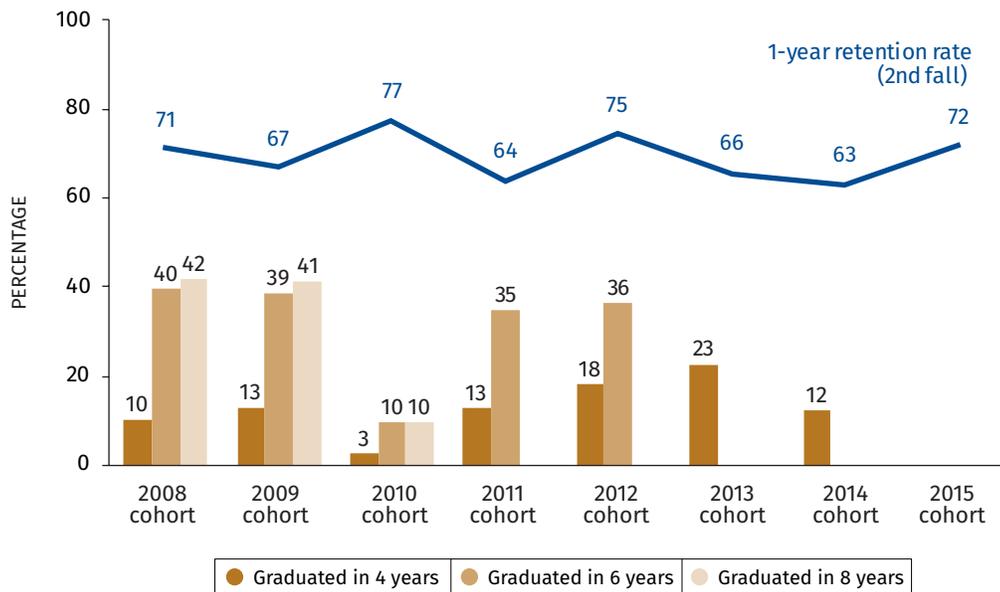
Note 1: Missing lines or bars indicate data that are unavailable, not applicable, or suppressed due to small sample size.

- Generally, we see four-year graduation rates increasing among Native Hawaiian female students at UH–Mānoa, doubling from 17 percent among the 2008 cohort to 34 percent among the 2014 cohort.
- Based on graduation data across five cohorts, an average of 27 percent of Native Hawaiian females at UH–Mānoa graduate in four years, with 54 percent graduating in six years (see [table 1.2](#)).
- The average one-year retention rate of Native Hawaiian female students is 77 percent at UH–Mānoa, based on data from eight cohorts starting between 2008 and 2015 (see [table 1.2](#)).

At UH–Hilo, most Native Hawaiian female students make it through the first year, with 69 percent enrolling in the fall semester of their second year (see [table 1.2](#)) and 31 percent not enrolling. The trends show fluctuation, with one-year retention rates increasing and decreasing slightly from cohort to cohort (fig. 1.107). Nearly one-quarter (23 percent) of Native Hawaiian females in the 2013 cohort graduated in four years, up from 10 percent of the earlier cohorts, dropping back again to 12 percent among the 2014 cohort, averaging 14 percent across all cohorts. Six-year graduation rates decreased slightly for the 2008 to 2012 cohorts, from 40 to 36 percent, averaging 38 percent across all five cohorts (see [table 1.2](#)).

Perhaps because of smaller numbers, we see a high degree of fluctuation in the retention and graduation rates of Native Hawaiian females at UH–Hilo between the 2008 and 2015 cohorts.

**FIGURE 1.107** Retention and graduation rates of Native Hawaiian female students at UH–Hilo [percentage, by cohort, retention into 2nd fall, and years taken to graduate, Hawai'i, 2008 to 2015]



Data source: Institutional Research and Analysis Office, University of Hawai'i; prepared at the request of Kamehameha Schools

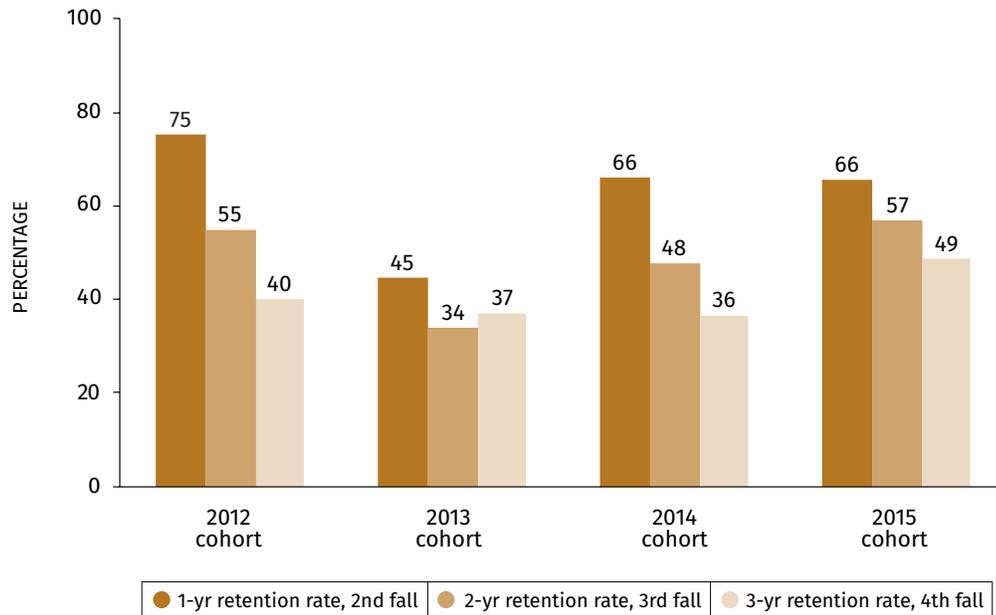
Note 1: Missing lines or bars indicate data that are unavailable, not applicable, or suppressed due to small sample size.

- The four-year graduation rate of Native Hawaiian female students at UH–Hilo increased from 10 percent among the 2008 cohort to 23 percent among the 2013 cohort, before declining to 12 percent among the 2014 cohort.
- Based on graduation data across multiple cohorts, an average of 14 percent of Native Hawaiian females at UH–Hilo graduate in four years, and 38 percent graduate in six years, on average (see [table 1.2](#)).
- The average one-year retention rate is 69 percent of Native Hawaiian female students at UH–Hilo, based on data from eight cohorts. This means that slightly more than two in three enroll in the following fall semester for their second year of college (see [table 1.2](#)).

As mentioned above, for UH–West O‘ahu, data are available for retention rates but not graduation rates. Figure 1.108 shows three retention rates for Native Hawaiian females at UH–West O‘ahu: one-year retention (second fall enrollment), two-year retention (third fall enrollment), and three-year retention (fourth fall enrollment). We compare each of these rates among four cohorts of Native Hawaiian female students.

At UH–West O‘ahu, an average of nearly two-thirds (61 percent) of Native Hawaiian females persisted into the second year of college, across the 2012 to 2015 cohorts (see [table 1.2](#)). While fewer students made it to the third year in the 2015 cohort, compared with the 2012 cohort (dropping from 75 to 66 percent), female students at UH–West O‘ahu saw more persisting into their fourth year, increasing from 40 percent for the 2012 cohort to 49 percent for the 2015 cohort. Among the four cohorts of Native Hawaiian female students, the 2012 cohort had the highest one-year retention rate (75 percent), while the 2013 cohort had the lowest one-year retention rate (45 percent)—a difference of 30 percentage points from one year to the next.

**FIGURE 1.108** Retention rates of Native Hawaiian female students at UH–West O‘ahu  
[percentage, by cohort and years retained, Hawai‘i, 2012 to 2015]



*Data source:* Institutional Research and Analysis Office, University of Hawai‘i; prepared at the request of Kamehameha Schools

- Among four cohorts of Native Hawaiian female students at UH–West O‘ahu, the 2013 cohort had the lowest rates of retention, with 45 percent enrolling in the fall semester of their second year of college, 34 percent enrolling in the fall semester of their third year, and 37 percent enrolling in the fall semester of their fourth year.
- Generally, in these same four cohorts, retention rates decreased for Native Hawaiian female students at UH–West O‘ahu over a three-year period.
- The average one-year retention rate is 61 percent of Native Hawaiian female students at UH–West O‘ahu (see [table 1.2](#)), based on data from four cohorts.

## NATIVE HAWAIIAN MALES—DETAILED DATA ON UH FOUR-YEAR COLLEGES

Among Native Hawaiian males who are first-time, full-time students at UH–Mānoa, three in four (75 percent), on average, go on to enroll for the fall semester of their second year of college (see [table 1.2](#)). Whereas 71 percent of the 2011 cohort of Native Hawaiian male students enrolled in fall of year two at UH–Mānoa—a decrease from 80 percent among the 2008 cohort—retention rates rebounded in the 2012 cohort (76 percent) and remained relatively steady thereafter (fig. 1.109). On average, about 25 percent of Native Hawaiian male students at UH–Mānoa do not make it to fall of their second year of college (not shown).

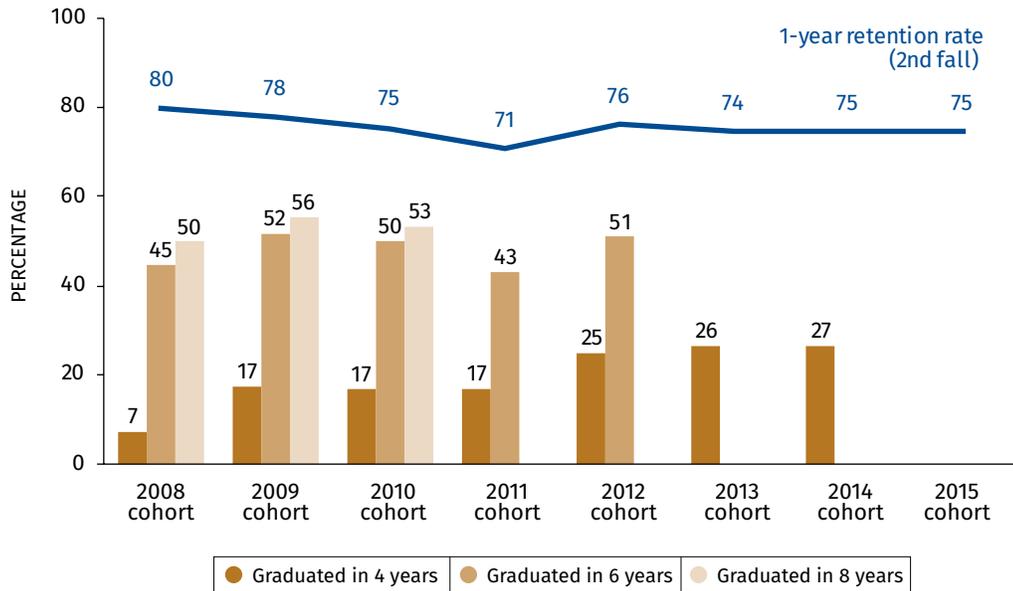
Completion data illustrate tremendous progress for Native Hawaiian males earning their bachelor’s degree at UH–Mānoa: Between the 2008 and 2014 cohorts, the four-year graduation rate among Native Hawaiian male students nearly quadrupled, increasing from 7 to 27 percent. This improvement points to notable gains for Native Hawaiian males at UH–Mānoa, though the results are comparatively lower (7 percentage points) than the four-year completion rate of Native Hawaiian females in the 2014 cohort. About half of Native Hawaiian males took six or fewer years to graduate at UH–Mānoa, with an overall rate of 48 percent across the five cohorts (see [table 1.2](#)).

Generally, one-year retention rates decreased, and four-year graduation rates increased among cohorts of Native Hawaiian male students at UH–Mānoa between the 2008 and 2015 cohorts.



Between 2008 and 2014, the four-year graduation rate for Native Hawaiian students at UH–Mānoa doubled for females (increasing from 17 to 34 percent) and nearly quadrupled for males (increasing from 7 to 27 percent).

**FIGURE 1.109** Retention and graduation rates of Native Hawaiian male students at UH–Mānoa [percentage, by cohort, retention into 2nd fall, and years taken to graduate, Hawai'i, 2008 to 2015]



Data source: Institutional Research and Analysis Office, University of Hawai'i; prepared at the request of Kamehameha Schools

Note 1: Missing lines or bars indicate data that are unavailable, not applicable, or suppressed due to small sample size.

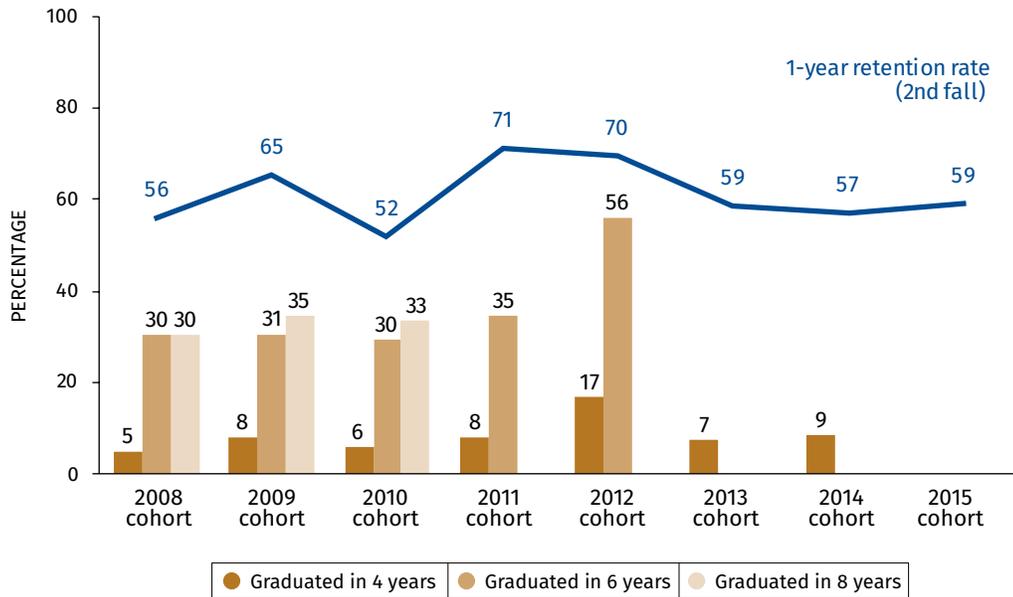
- Generally, we see four-year graduation rates increasing among Native Hawaiian male students at UH–Mānoa, nearly quadrupling from 7 percent among the 2008 cohort to 27 percent among the 2014 cohort.
- Based on graduation data across multiple cohorts, an average of 20 percent of Native Hawaiian males at UH–Mānoa graduate in four years, and 48 percent graduate in six years (see [table 1.2](#)).
- The average one-year retention rate is 75 percent of Native Hawaiian male students at UH–Mānoa, based on data from eight cohorts. This means that three in four enroll in the following fall semester for their second year of college (see [table 1.2](#)).

At UH–Hilo, 61 percent of Native Hawaiian male students, on average, persisted through the first year of college among cohorts from 2008 to 2015 (see [table 1.2](#)). One-year retention rates were notably lower for Native Hawaiian male students in the 2008 cohort (56 percent) and the 2010 cohort (52 percent), followed by a dramatic increase in 2011 (71 percent) (fig. 1.110). Since then, retention declined again and has remained steady at just under 60 percent. The fluctuation observed between 2009 and 2011 is consistent with rates observed nationally in the wake of the 2008 recession.

About 9 percent of Native Hawaiian males graduate in four years at UH–Hilo, based on cohort data from 2008 to 2015 (see [table 1.2](#)), whereas 91 percent do not. The data show changes in four-year graduation rates from 5 percent of the 2008 cohort to 17 percent of the 2012 cohort, dropping sharply again to 7 percent of the 2013 cohort. About half of the 2012 cohort had completed their degree in six years (56 percent), which was the highest six-year completion rate, compared with other cohorts. On average, 37 percent of Native Hawaiian male students graduated in six years across the 2008 to 2012 cohorts at UH–Hilo (see [table 1.2](#)), whereas 63 percent did not—almost identical to that of Native Hawaiian females at UH–Hilo (38 percent) and 12 percentage points lower than the rate for Native Hawaiian males at UH–Mānoa (48 percent).

When viewed together, retention and graduation rates among Native Hawaiian males at UH–Hilo show considerable fluctuation between 2008 and 2015—similar to patterns seen among Native Hawaiian female students at UH–Hilo (see [fig. 1.107](#)).

**FIGURE 1.110** Retention and graduation rates of Native Hawaiian male students at UH–Hilo [percentage, by cohort, retention into 2nd fall, and years taken to graduate, Hawai'i, 2008 to 2015]



Data source: Institutional Research and Analysis Office, University of Hawai'i; prepared at the request of Kamehameha Schools

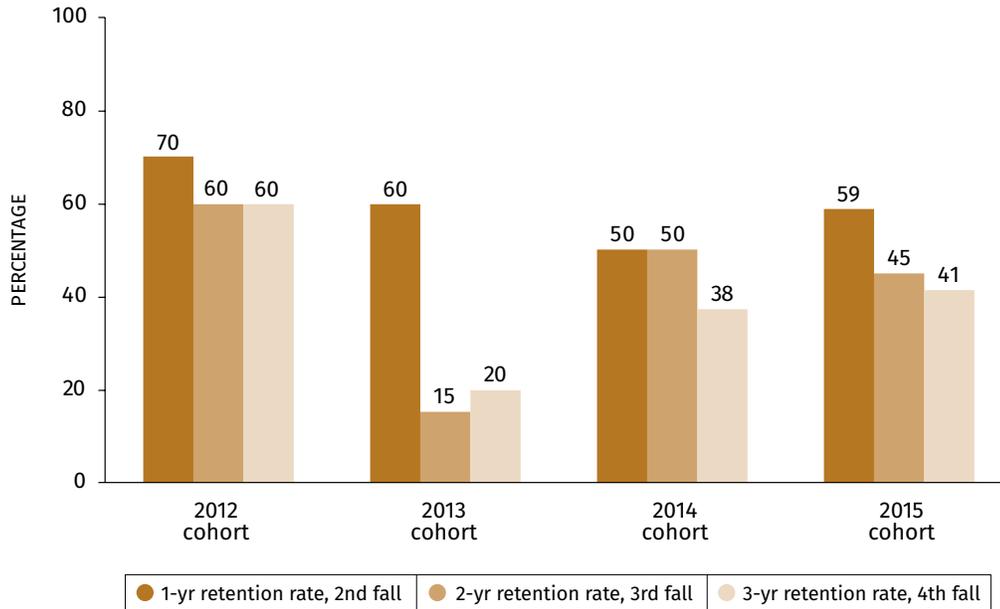
Note 1: Missing lines or bars indicate data that are unavailable, not applicable, or suppressed due to small sample size.

- The four-year graduation rate of Native Hawaiian male students at UH–Hilo increased from 5 percent among the 2008 cohort to 17 percent among the 2012, before declining to 9 percent among the 2014 cohort.
- Based on graduation data across multiple cohorts, an average of 9 percent of Native Hawaiian males at UH–Hilo graduate in four years, and 37 percent graduate in six years (see [table 1.2](#)).
- The eight-year graduation rate of Native Hawaiian male students at UH–Hilo increased from 35 percent among the 2011 cohort to 56 percent among the 2012 cohort.
- The average one-year retention rate is 61 percent of Native Hawaiian male students at UH–Hilo, based on data from eight cohorts. This means that approximately three in five enroll in the fall semester of their second year of college (see [table 1.2](#)).

At UH–West O‘ahu, the average one-year retention rate among Native Hawaiian male students in the cohorts of 2012 to 2015 is 59 percent (see [table 1.2](#)). This means that nearly three in five students enroll for the fall semester of their second year of college, whereas 41 percent do not. UH–West O‘ahu saw fluctuation in one-year retention rates, decreasing from 70 percent among the 2012 cohort to 50 percent for the 2014 cohort, before climbing to 59 percent for the 2015 cohort (fig. 1.111).

The 2012 cohort, compared with other cohorts of Native Hawaiian male students at UH–West O‘ahu, had the highest one-, two-, and three-year retention rates. Students in the 2013 cohort saw a decrease of 45 percentage points between the one-year (60 percent) and two-year retention rate (15 percent). More study is needed to determine how much of this decline is due to students dropping out versus transferring to another college or university.

**FIGURE 1.111** Retention rates of Native Hawaiian male students at UH–West O’ahu [percentage, by cohort, retention into 2nd fall, Hawai’i, 2012 to 2015]



Data source: Institutional Research and Analysis Office, University of Hawai’i; prepared at the request of Kamehameha Schools

- The highest rates of retention are seen among the 2012 cohort of Native Hawaiian male students at UH–West O’ahu, with 70 percent enrolling in the fall semester of their second year of college, 60 percent enrolling in the fall semester of their third year, and 60 percent enrolling in the fall semester of their fourth year.
- Generally, based on data from four cohorts, retention rates of Native Hawaiian male students at UH–West O’ahu decreased over a three-year period.
- The average one-year retention rate is 59 percent of Native Hawaiian male students at UH–West O’ahu, based on data from four cohorts. This means that approximately three in five enroll in the fall semester of their second year of college (see [table 1.2](#)).

## UH DEGREES CONFERRED TO NATIVE HAWAIIANS

We now turn to trends in types of degrees earned by Native Hawaiians in the UH system. The decade spanning 2009 to 2018 saw an increase in degrees conferred to Native Hawaiians across all types except for doctorate degrees. The greatest gains emerged among master's degrees, with 28 percent of all master's degrees conferred in 2018 being awarded to Native Hawaiians—more than double the rate (13 percent) in 2009. At the undergraduate level, Native Hawaiians earned more than one-quarter (27 percent) of all bachelor's degrees conferred by the University of Hawai'i—13 percentage points more than that in 2009 (14 percent). Professional practice degrees earned by Native Hawaiians rose from 14 to 23 percent of all degrees conferred between 2009 and 2018, while doctorate degrees conferred increased by only 1 percent (fig. 1.112).

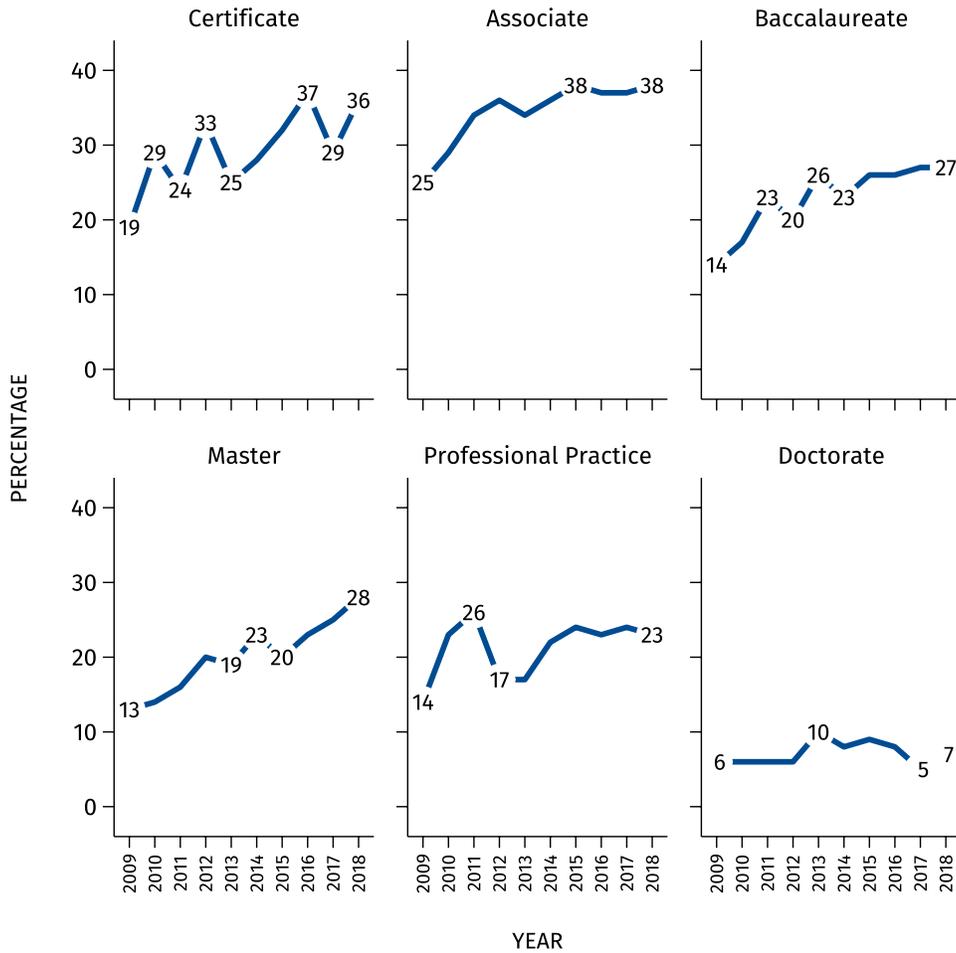


Native Hawaiians received a greater share of degrees conferred by UH between 2009 and 2018, with increases in the proportion of bachelor's degrees (13 percentage points), master's degrees (15 percentage points), and professional degrees (9 percentage points).



**FIGURE 1.112** Trends in the proportion of degrees conferred by the University of Hawai'i to Native Hawaiians

[as a percentage of degrees awarded, by degree type, Hawai'i, 2009 to 2018]



Data source: University of Hawai'i—data prepared at the request of Kamehameha Schools

Note 1: Data labels are presented for the first and last points, the maximum and minimum points, and some inflection points where the trend changes.

- Within the UH system from 2009 to 2018, there was an increase in the proportion of degrees conferred to Native Hawaiians at all degree levels except at the doctorate level.
- Of all the bachelor's degrees conferred by the UH system in 2009, 14 percent were conferred to Native Hawaiians; by 2018, the proportion had risen to 27 percent.
- A similar trend is seen at the graduate level, with an increase of 15 percentage points in the proportion of master's degrees awarded to Native Hawaiian students from 2009 to 2018.

## Select Factors Impacting College Success

The journey to college completion is impacted by a myriad of individual, institutional, and ecological factors. In this section, we highlight data on several factors known to influence college success: working while in college, financial aid, transferring, and instructional faculty representation. These variables—although not representative of all the factors that affect postsecondary enrollment, retention, and completion—are included due to current availability of data.

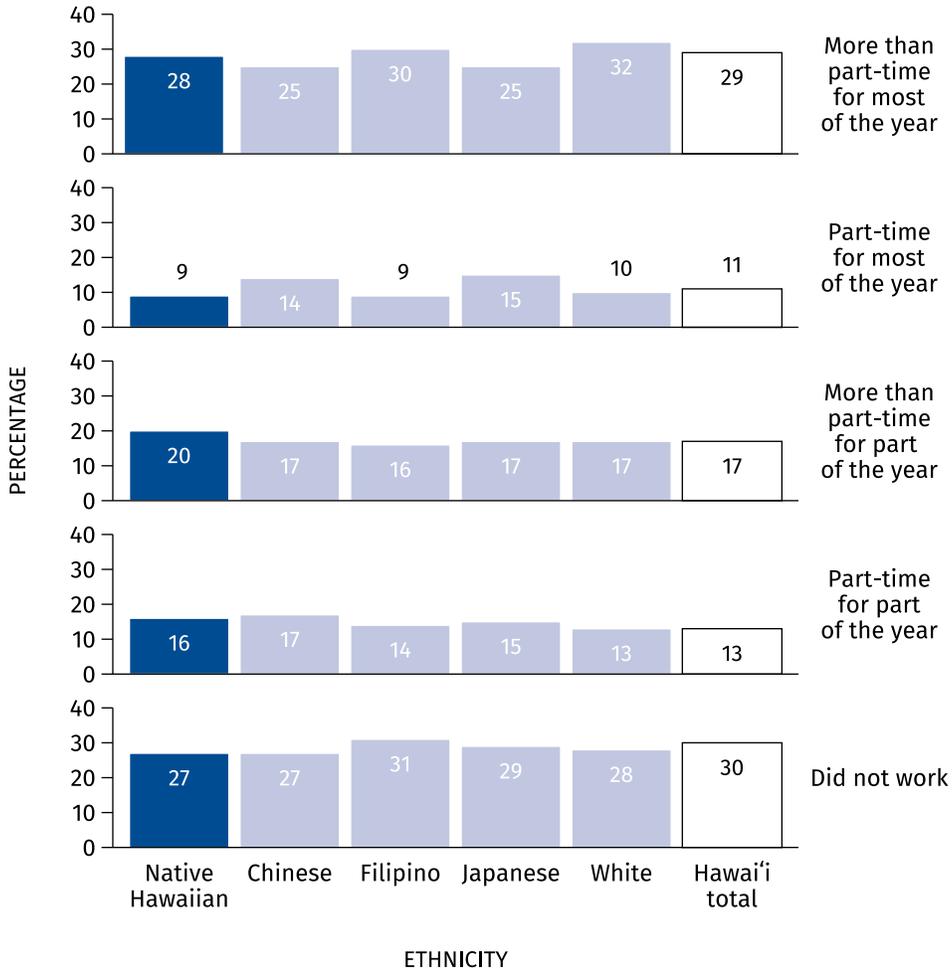
### WORKING WHILE IN COLLEGE

Working while in school is becoming more common among college students—often to cover rising tuition costs and diminishing public financial assistance (Goldrick-Rab 2016). Studies have shown that employed college students are more likely to attend part time, demonstrate lower academic achievement outcomes, and are less likely to finish school on time, compared with their peers who are not employed (Pascarella and Terenzini 2005; Stinebrickner and Stinebrickner 2003). This may be mitigated by working fewer than twenty hours per week, which is typically the structure of many on-campus jobs versus off-campus employment (Pike, Kuh, and Massa-McKinley 2008).

Among Native Hawaiian college students in general, nearly three in four (73 percent) work at least part of the year, and more than one in four (28 percent) work more than part time for most of the year (fig. 1.113). However, compared with other ethnicities (e.g., Filipino and White students), Native Hawaiian college students work fewer hours (Kamehameha Schools 2019). Looking specifically at Native Hawaiian college students who did not work, trend data show fluctuation over the past decade, with a significant decrease from 2012 to 2017. The percentage of nonworking Native Hawaiian college students (22 percent) in 2017 was 6 percentage points lower than the Hawai'i total (28 percent) (fig. 1.114).

**FIGURE 1.113** Work status of enrolled students

[as a percentage of young adults ages 18–24 who are enrolled in college, by ethnicity, Hawai'i, 2017]

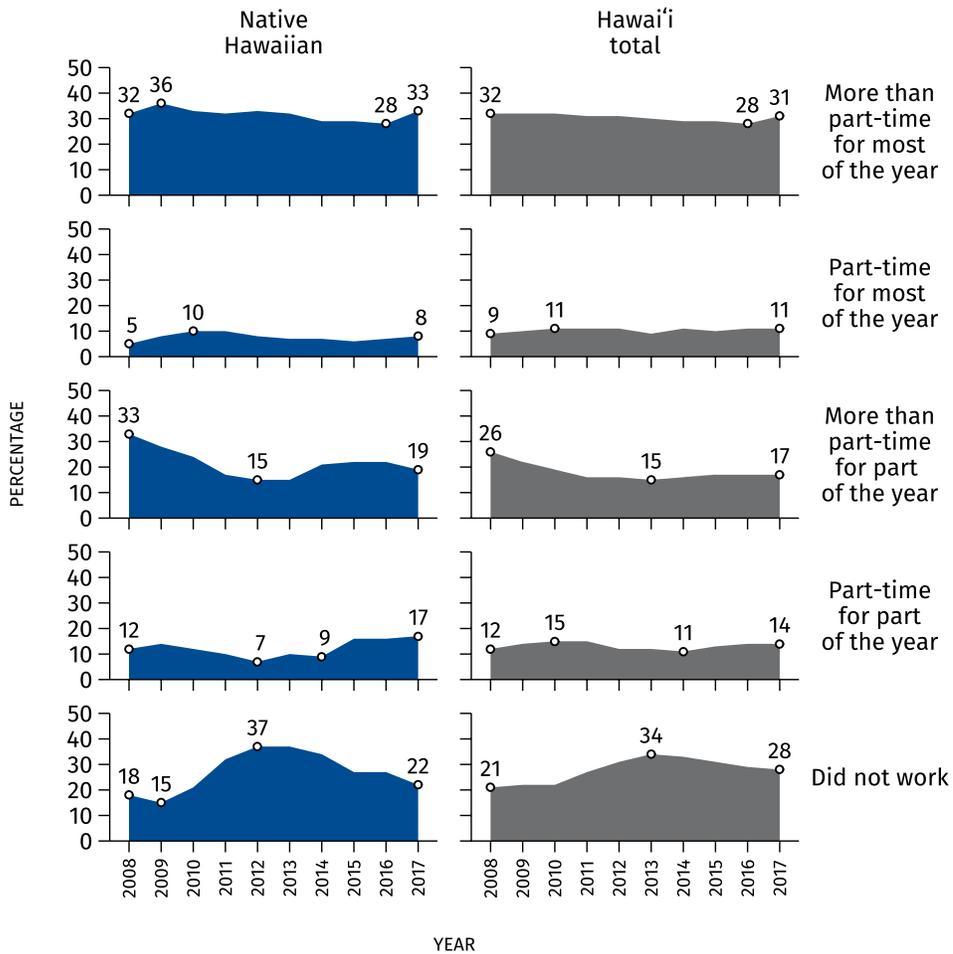


Data source: US Census Bureau, American Community Survey, Public Use Microdata Sample 5-year file

Note 1: The designation “White” in this chart refers to non-Hispanic Whites, alone or in combination with other ethnicities, as defined by the American Community Survey.

- About three-quarters of Native Hawaiian college students (73 percent) work at least part of the year—a rate comparable to that of other major ethnicities in Hawai'i.
- More than one-quarter of Native Hawaiian college students (28 percent) work more than part time throughout the year, a rate similar to the Hawai'i total.
- The percentages of students who did not work or worked for part of the year are relatively similar across ethnicities; however, there is greater variability among ethnicities for college students who worked for most of the year.
- Among Native Hawaiian college students, 9 percent work part time for most of the year, compared with 15 percent of Japanese students and 14 percent of Chinese students.

**FIGURE 1.114** Trends in work status of enrolled students  
 [as a percentage of young adults ages 18–24 who are enrolled in college, Hawai‘i, 2008 to 2017]



Data source: US Census Bureau, American Community Survey, Public Use Microdata Sample 1-year files

Note 1: Data labels are presented for the first and last points, the maximum and minimum points, and some inflection points where the trend changes.

- When looking at the ten-year period spanning 2008 to 2017, there was an upward trend in the proportion of Native Hawaiian college students who did not work.
- From 2009 to 2013, the percentage of Native Hawaiian college students who were not working increased from 15 percent to 37 percent—a trend similar to that of other ethnicities, though somewhat less pronounced among Filipino, Japanese, and Whites (not shown).
- The increase from 2009 to 2013 in the percentage of Native Hawaiian college students who did not work is explained by decreases in the percentage of those who worked for “part of the year.”
- The percentage of nonworking Native Hawaiian college students decreased significantly in recent years and was 6 percentage points lower than the Hawai‘i total in 2017.

## FINANCIAL AID (PELL GRANTS)

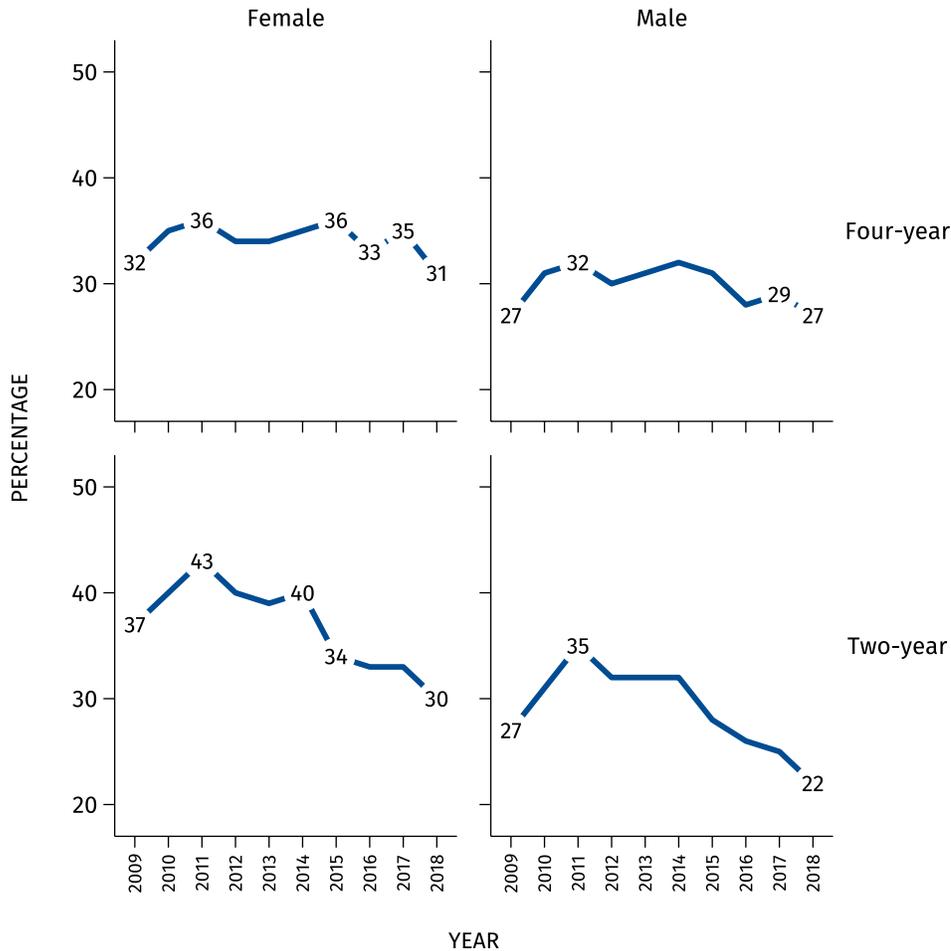
Financial aid has a direct impact on student success. Students who receive some form of financial aid—whether in loans, grants, or scholarships—tend to show higher persistence and completion rates, compared with students without financial aid (Chen and DesJardins 2010; Dynarski and Scott-Clayton 2013).

The Federal Pell Grant program provides tuition support for students attending college full time, which is defined as enrolling in at least twelve credits per semester. Within the UH system, 42 percent of full-time undergraduates received Pell grant assistance in fall 2018 (University of Hawai'i 2020). More female students receive Pell grants than do male students, likely reflecting relatively higher rates of female college enrollment.

Compared with their peers, a greater percentage of Native Hawaiians receive Pell grants, both at two-year and four-year campuses (not shown). Trend data for community colleges show fewer Native Hawaiians receiving Pell grants between 2011 and 2018, dropping by 13 percentage points for both female and male students. Although we are unable to confirm this relation at the time of writing, the decrease may be related to the overall decline of public financial assistance (Goldrick-Rab 2016).

At UH four-year institutions, changes in the percentage of Native Hawaiian students receiving Pell grants are less pronounced. For example, Pell grant reciprocity among Native Hawaiian females peaked in 2015 at 36 percent, decreasing by 5 percentage points by 2018. For Native Hawaiian males, Pell grant reciprocity reached 32 percent in 2013, dropping by 5 percentage points by 2018.

**FIGURE 1.115** Trends in Native Hawaiian Pell grant recipients at the University of Hawai'i  
 [as a percentage of enrolled students, by sex and college type, Hawai'i, 2009 to 2018]



Data source: University of Hawai'i—data prepared at the request of Kamehameha Schools

Note 1: Percentages are based on Pell grants received in fall semesters.

Note 2: Data labels are presented for the first and last points, the maximum and minimum points, and some inflection points where the trend changes.

- On the whole, female students at the University of Hawai'i are more likely than their male counterparts to receive Pell grant funding.
- Among Native Hawaiians at two-year UH colleges, Pell grant reciprocity peaked in 2011 and 2014.
- In general, Native Hawaiian students at two-year and four-year UH colleges are more likely to receive Pell grants, compared with their peers from other ethnic groups (not shown).

## INSTRUCTIONAL FACULTY REPRESENTATION

A diverse and well-represented faculty is a critical element to cultivating learning environments that validate, affirm, and nurture students' identity and development. For Native Hawaiian and other Indigenous learners, continuity and relevance between home and college environments are important for fostering a sense of belonging and for supporting academic achievement (Museus and Quaye 2009; Museus and Neville 2012). A diverse faculty increases the visibility of academia as a career path for minority students and can also perpetuate inclusive decision-making and policy planning by offering diverse perspectives and interaction that benefit all students.

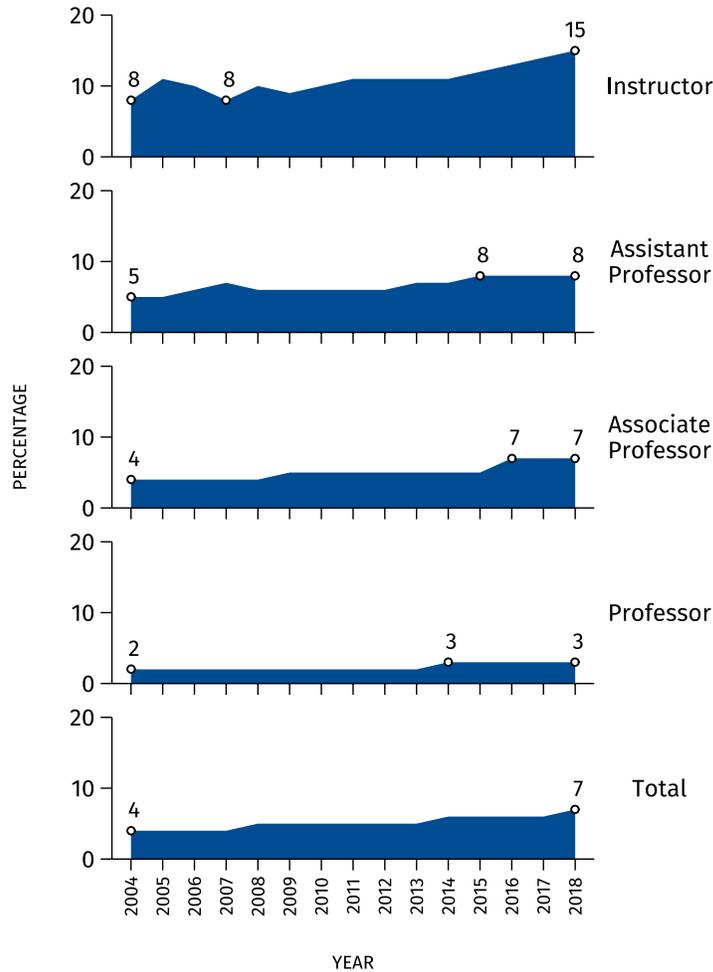
Our findings indicate an upward trend in Native Hawaiians being hired into UH faculty positions at all levels (fig. 1.116). On the whole, the percentage of Native Hawaiian instructional faculty in the UH system has nearly doubled, increasing from 4 to 7 percent between 2004 and 2018. These gains are positive; however, instructors, unlike professors, are not tenure-track positions and typically are paid per credit instead of receiving a steady salary and benefits. Moreover, Native Hawaiians are still deeply underrepresented among tenure-track faculty members, comprising only 3 percent of full professors in the UH system despite being 21 percent of Hawai'i's overall population. White faculty members continue to be the most prevalent in all position types in the UH system (not shown).



Native Hawaiian representation among UH instructional faculty has nearly doubled, growing from 4 to 7 percent between 2004 and 2018.



**FIGURE 1.116** Trends in Native Hawaiian instructional faculty at the University of Hawai'i [as a percentage of all instructional faculty in the UH system, by position, Hawai'i, 2004 to 2018]



Data source: UH, OHR Data Warehouse

Note 1: Data labels are presented for the first and last points, the maximum and minimum points, and some inflection points where the trend changes.

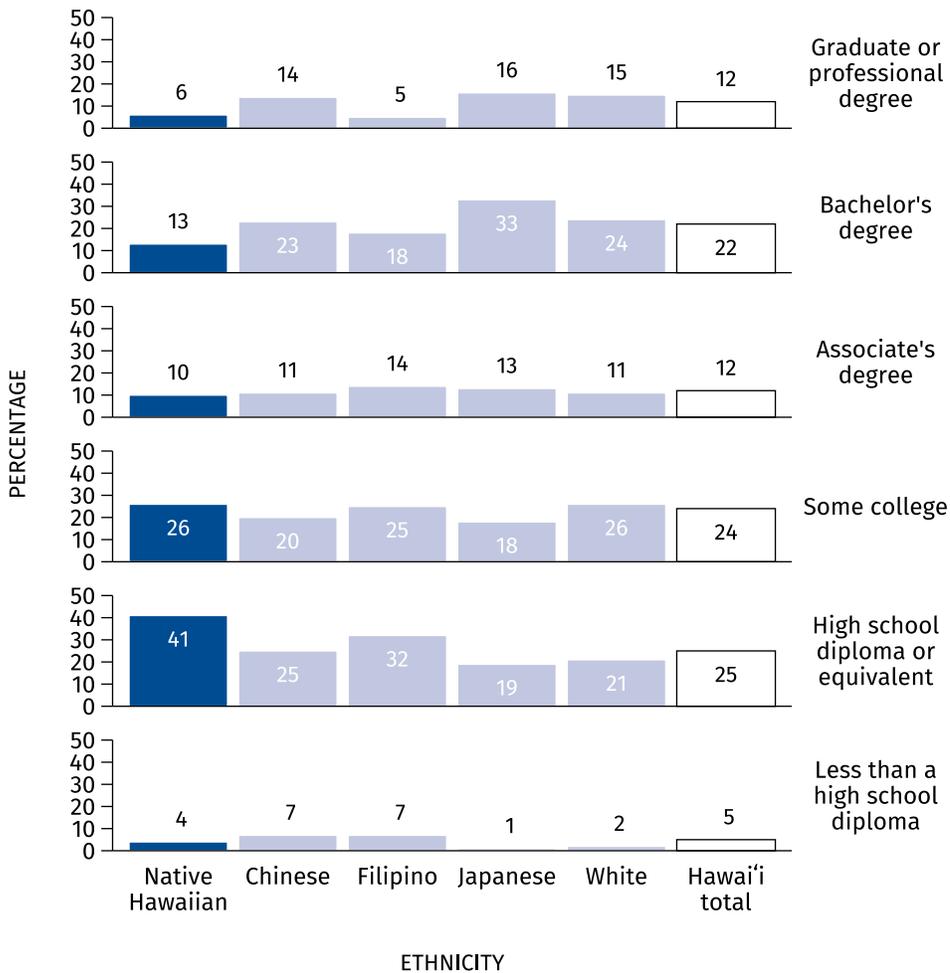
- Over the past fifteen years, Native Hawaiians have been increasingly represented among UH instructional faculty at all levels.
- The total percentage of Native Hawaiian instructional faculty has nearly doubled—from 4 to 7 percent between 2004 and 2018.
- The proportion of tenured faculty (professors and associate professors) who are Native Hawaiian has increased from a combined 6 percent to 10 percent between 2004 and 2018.
- The greatest gains in the proportion of Native Hawaiian faculty at UH have been made at the less stable instructor level—8 percent of instructors were Native Hawaiian in 2004, compared with 15 percent in 2018.
- The percentage of White faculty members at UH decreased from 62 to 50 percent between 2004 and 2018; however, Whites are still the most represented ethnic group among UH instructional faculty (not shown).

## Parental Educational Attainment

Parental educational attainment is one of the strongest predictors of a child's future educational attainment and overall well-being. Compared with their counterparts among Hawai'i's other major ethnicities, Native Hawaiian parents with children living at home are the least likely to have a college degree. For example, a combined 29 percent of Native Hawaiian parents with children living at home have a college degree (i.e., an associate's degree or higher), compared with the Hawai'i total of 46 percent (fig. 1.117).

Although the proportion of Native Hawaiian parents with a bachelor's degree was higher in 2016 than it was in 2008 (fig. 1.118), degree completion is a persistent challenge. For instance, about one in four Native Hawaiian parents has attended but not finished college (fig. 1.117). Generally, college degree attainment among Native Hawaiians is most likely to happen at younger ages, and particularly before childbirth (Kamehameha Schools 2019).

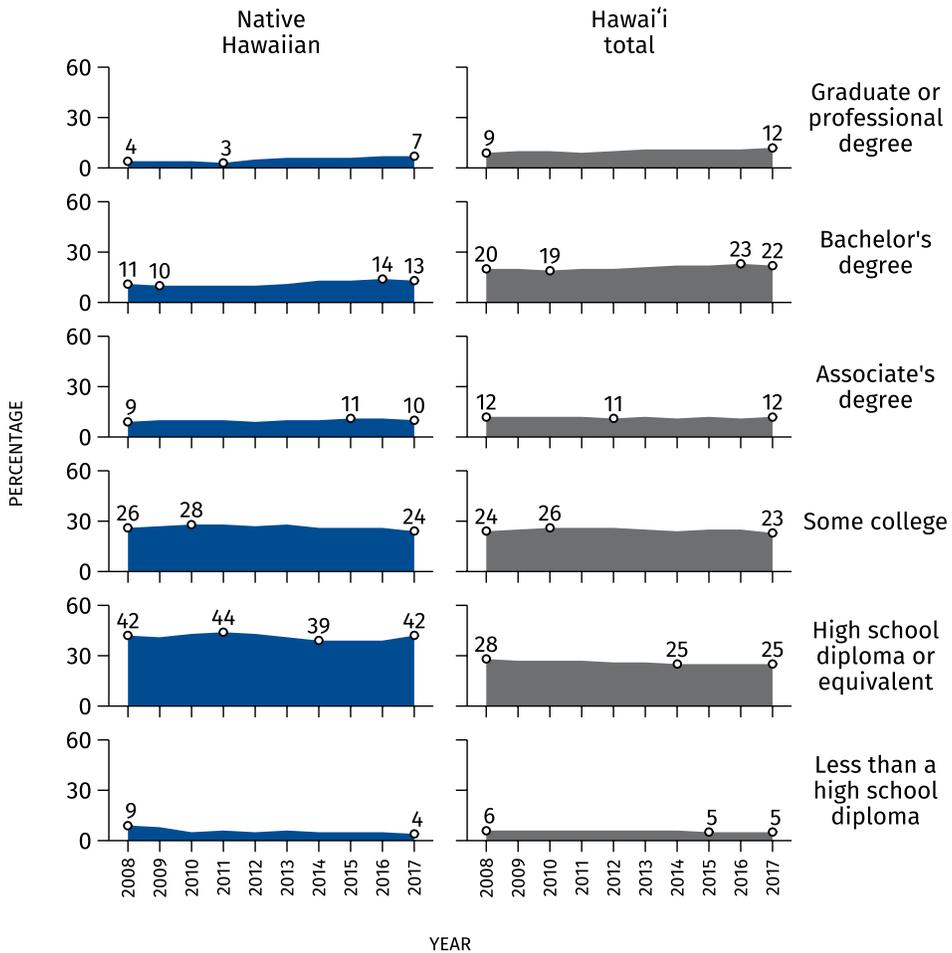
**FIGURE 1.117** Educational attainment of parents with children living at home  
 [as a percentage of parents with children ages 17 and younger living at home, by ethnicity, Hawai'i, 2017]



Data source: US Census Bureau, American Community Survey, Public Use Microdata Sample 5-year file  
 Note 1: The designation "White" in this chart refers to non-Hispanic Whites, alone or in combination with other ethnicities, as defined by the American Community Survey.

- Compared with their counterparts among Hawai'i's other major ethnicities, Native Hawaiian parents with children ages seventeen and younger living at home have the lowest rate of college degree attainment, with a combined 29 percent having earned an associate's degree or higher.
- Among Native Hawaiian parents with children living at home, nearly one in five (19 percent) has a bachelor's degree or higher.
- Among Native Hawaiian parents with children living at home, about one in four (26 percent) has attended but not completed college.

**FIGURE 1.118** Trends in educational attainment of Native Hawaiian parents with children living at home [as a percentage of parents with children ages 17 and younger living at home, by Native Hawaiian and Hawai'i total, 2008 to 2017]



Data source: US Census Bureau, American Community Survey, Public Use Microdata Sample 1-year files

Note 1: Data labels are presented for the first and last points, the maximum and minimum points, and some inflection points where the trend changes.

- Among Native Hawaiian parents with children ages seventeen and younger living at home, gains were realized in the attainment of a bachelor's or graduate degree, from a combined 15 percent to 20 percent between 2008 and 2017—an increase similar to that of the Hawai'i total.
- Among Native Hawaiian parents with children living at home, college degree attainment (i.e., associate's, bachelor's, and graduate degree) is on the rise, increasing from a combined 24 percent to 30 percent between 2008 and 2017.

- From 2008 to 2017, the percentage of parents whose highest level of educational attainment was an associate's degree did not change significantly among any ethnicity in Hawai'i (not shown).
- The percentage of Native Hawaiian parents whose highest degree is a high school diploma remained stable over time, whereas the proportion of those with less than a high school diploma declined by 5 percentage points, from 9 to 4 percent between 2008 and 2017.

Although postsecondary attainment has been the focus of our analysis of the educational well-being of adults, families, and communities, we acknowledge that quality educational experiences and pathways come from a variety of environments beyond mainstream classrooms. For Native Hawaiians, the educational journey begins with 'ohana and is augmented by kaiāulu and connections to the 'āina that surrounds us. Our formal learning also extends into diverse workspaces such as apprenticeships, internships, and employment. Key across all environments is that learners be provided with equitable opportunities to develop and facilitate character, knowledge, skills, abilities, and competencies to pursue their goals and kuleana. Ensuring access to a full range of learning opportunities prepares Native Hawaiian learners to thrive professionally and culturally in the twenty-first century and beyond.

Specific to higher education, our findings suggest some advancements in college enrollment and completion within our Native Hawaiian communities. More work is needed to improve retention and graduation rates of Native Hawaiians enrolled in the public university system of Hawai'i. We hope to see an upward trend in learning and life success as the next generation of Native Hawaiians accesses greater educational opportunities and can support the educational success of their own children. Moreover, we believe the strong, prevalent, culture-based opportunities and community efficacy will drive positive change.

On the other hand, there is still much work to be done. Native Hawaiians continue to demonstrate lower educational attainment and earnings, compared with other major ethnicities in Hawai'i. This affects the livelihood and overall well-being of Native Hawaiians and raises implications for Hawai'i's economy and industries. As a college degree generally serves as a "ticket" for greater participation in the economy and workforce, the relatively low proportion of college-educated Native Hawaiians may suggest negative impacts for Native Hawaiians' overall ability to earn livable wages. In addition to supporting college-bound pathways for Native Hawaiian learners, it is equally important that we continue to equip our Native Hawaiian youth and adults with relevant twenty-first century skills and experience so that they have opportunities to become creators of Hawai'i's future. Our kuleana extends beyond college, career, and community readiness to transforming education systems that are informed by Native Hawaiian 'ike and mana'o (ideas).

Finally, the onset of the COVID-19 pandemic has had a devastating effect on our islands and beyond. But it has also presented an opportunity to reimagine Hawai'i, including the educational pathways that lead to lifelong success and fulfillment. Indeed, with significant ancestral knowledge of these islands, and equipped with a wider educational toolset, Native Hawaiians are in a position to actively catalyze and lead in the rebuilding and directing of Hawai'i's future. The rich, innovative culture and learning systems of our ancestors have allowed our lands to thrive, and abundant lands, in turn, have nourished and inspired a robust population engaged in lifelong learning and excellence.

## CONCLUSION

Today's lāhui includes four generations of mākuā, representing a wealth of intelligence, experience, and valuable relationships. Native Hawaiian well-being is rooted in relationships—with one's mo'okū'auhau, 'āina, and extended 'ohana. These relationships are in our DNA, mutually reinforcing, and critically tied to a sense of kuleana and collective purpose in working toward a thriving lāhui.

Measuring the health of foundational relationships between people, genealogy, land, and family is a work in progress. There is still much work to be done to quantify what Native Hawaiians value most and to render a complete picture of Native Hawaiian well-being among adults, families, and communities. Nonetheless, while conventional data collection is limited, the available data enable us to assess some important areas of stagnation, progress, and worsening conditions among Native Hawaiian adults.

In a broad sense, we have reviewed how Native Hawaiian families draw upon their faith and each other as sources of strength. Overall well-being is mixed, in terms of outcomes. Our families are less likely to have children, compared with previous decades, and are increasingly likely to live outside Hawai'i, where they are able to find higher income and educational attainment. Despite facing disproportionate rates of illness, poverty, and systemic disadvantage in school settings, today's 'ohana have relatively stable health insurance coverage and employment, and growing options for Hawaiian culture-based education, civic engagement, and participation in shaping Hawai'i's future.

During the past five or ten years, the overall situation has not changed significantly across many facets of Native Hawaiian well-being. For Native Hawaiians, poverty rates and trends in households receiving public assistance are about the same as they were in 2008. Trends in employment rates among Native Hawaiians vary across regions but have had only minor ups and downs, with outliers in West Hawai'i (significant decrease) and East Hawai'i (significant increase). Most indicators of physical and mental health for Native Hawaiians have not changed significantly and continue to suggest that Native Hawaiians are generally less healthy, compared with other major ethnicities in Hawai'i.

Areas of progress include higher education, where Kānaka Maoli are seeing increased rates of enrollment, retention, and degree completion, as well as higher representation among instructional faculty as an entryway into the UH system. Other highlights include notable increases in degree attainment for Native Hawaiian parents with children living at home, and increased graduation rates of Native Hawaiian students across UH campuses. For social well-being, we are seeing less household density among housing units occupied by Native Hawaiian-headed households. In terms of health, Native Hawaiians are seeing gains in

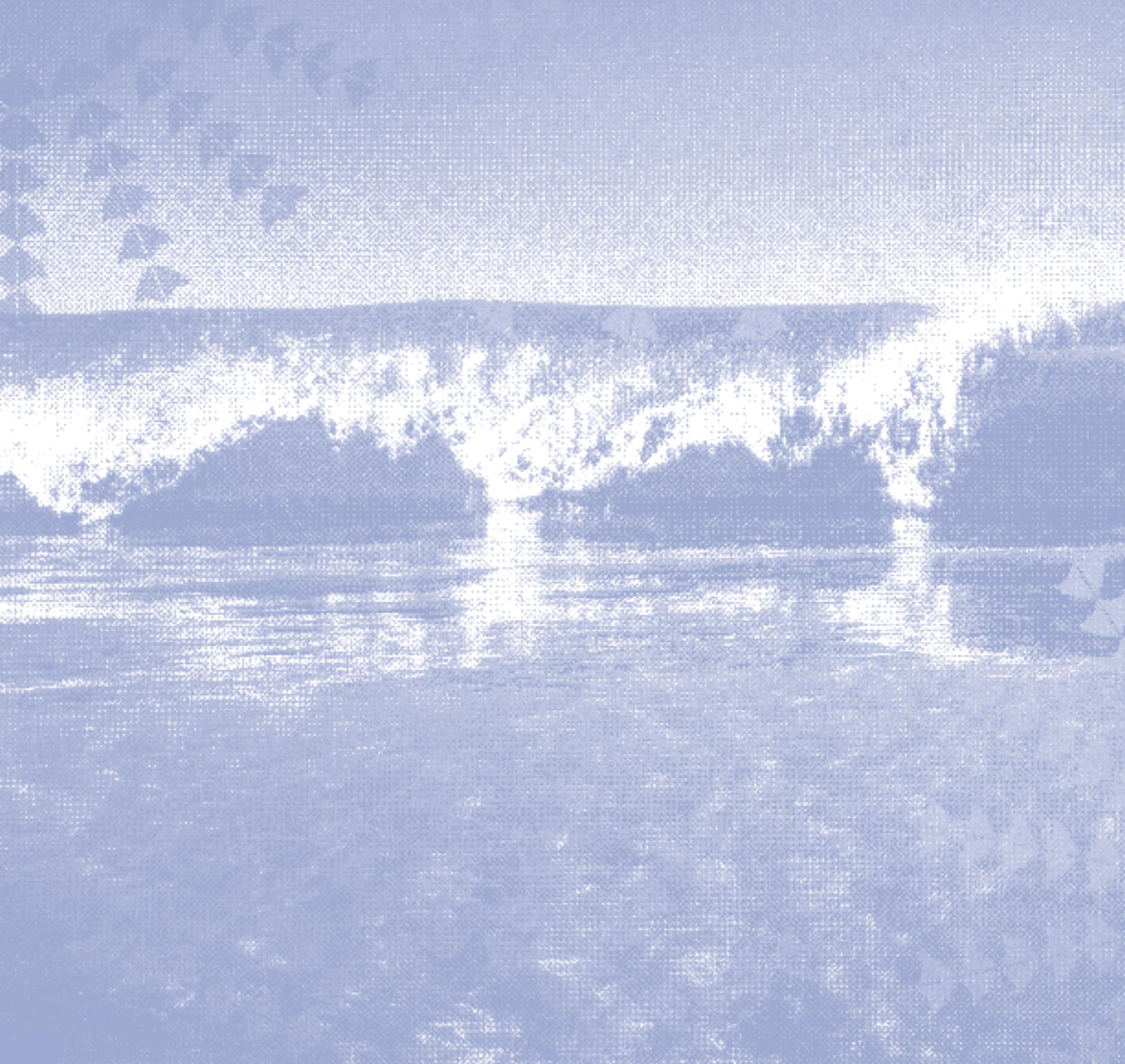
physical activity, healthy diet, health insurance coverage, and access to doctors. Financially, Native Hawaiians are showing resilience in employment, having experienced relatively greater losses following the 2008 recession and yet returning to an employment rate of 94 percent by 2017.

Areas where Native Hawaiians have lost ground include access to higher education funding, evidenced by a significant decrease of Native Hawaiian Pell grant recipients between 2012 and 2018. From a health perspective, the prevalence of heart attacks is on the rise for Native Hawaiians. Financially, the percentage of Native Hawaiian households receiving food stamps nearly doubled in the past decade. From a socioemotional standpoint, the overrepresentation of Native Hawaiians in child abuse and suicide rates—especially youth—is of particular concern.

In reflecting on the mixed results presented in this chapter, it is useful to refocus on the destination of overall well-being—being able to choose a life path, attain a desired lifestyle and livelihood, and do so in a way that is rooted in one's belief systems and worldview. For Native Hawaiians, we must capitalize on intergenerational strengths and collective efficacy to create a better future, where attainable housing options are part of supportive community and 'āina systems, and fulfilling jobs are embedded within an economic landscape supportive of, and led by, Native Hawaiians. There is strong momentum and civic engagement in our Native Hawaiian community for a sustainable Hawai'i, as manifested via mālama 'āina and aloha 'āina values and endeavors. These efforts help drive an abundance of, and access to, native flora and fauna as part of a Hawaiian landscape of medicine, food, fiber, and other natural and cultural resources. This future-forward view means that Kānaka Maoli are healthy, and that our youngest and oldest are cared for as they were in days of old, and that our people can persist through adversity, including global threats such as the COVID-19 pandemic. E ola mau ka 'ohana Hāloa—the generations of Hāloa, our first ancestor, persist!



The children of one  
were the children of the others.





A neighbor's sleepy child was put to bed and often spent the night away from his own folks. If there was trouble, word was sent to the parents or grandparents at once, but if there [was] not, nobody bothered. Thus a great attachment grew up between the adults and the children of the community that only death could eradicate. Even then, there is always a memory of aloha.

—MARY KAWENA PUKUI, 1941, "EDUCATION," IN HAWAIIAN ETHNOGRAPHIC NOTES COLLECTION, BERNICE PAUHI BISHOP MUSEUM LIBRARY AND ARCHIVES, HONOLULU.

2

# Early Childhood

## INTRODUCTION

In Native Hawaiian families, keiki (children) and mo'opuna (grandchildren) are cherished. This belief is reflected in the proverb, “He lei poina 'ole ke keiki—*A lei never forgotten is the beloved child*” (Pukui 1983, 82). Family bonds and resources protect precious keiki and mo'opuna, providing safe, healthy, and nurturing environments to grow and carry forward the 'ike (knowledge and insights) and mana (spiritual power) of the 'ohana (family, extended family).

The earliest experiences of young keiki are foundational and influence all aspects of well-being—social, emotional, material, educational, and physical. During early childhood, the brain forms more than one million new neural connections every second (Center on the Developing Child 2017), affecting behavioral, physical, and mental health, along with overall learning, throughout one's life. It is during this time that keiki learn how to interact with others, develop interests, and begin the journey of lifelong learning. This development, in large part, is nurtured through parents, caregivers, and household structures and resources.

Growing up in a positive, stable, and healthy household supports a child's development; however, the inverse also holds true. A World Health Organization review of early childhood research states that “many challenges in adult society—mental health problems, obesity/stunting, heart disease, criminality, competence in literacy and numeracy—have their roots in early childhood” (Irwin, Siddiqi, and Hertzman 2007, 5). Similarly, exposure to multiple traumatic events for children ages seventeen and younger can have negative long-term effects and contribute to chronic health problems, mental illness, and substance abuse, and can hinder education and workforce opportunities (National Center for Injury Prevention and Control 2020a). The implications are clear: Experiences in a child's early years have lasting impacts.

This chapter reviews data on several key areas that influence early childhood development, including family composition, available material and social resources, access to education, and maternal physical health. Ideally, the data and methods presented would more fully reflect Native Hawaiian values, beliefs, and practices.<sup>1</sup> For example, a Native Hawaiian worldview sees waiwai, or wealth, as much more than just money and material possessions, and likewise views the well-being of the 'ohana as extending far beyond the nuclear family. However, such measures are not easily quantifiable, and most of the available instruments for data collection are based on a Western worldview and provide population-level data. The analysis that follows acknowledges these limitations and provides a summary of available information relevant to understanding early childhood. For more information, see "[Methods, Data Sources, and Definitions](#)" at the end of this volume.

Family composition and characteristics play a vital role in shaping environments that nurture young children. As such, familial characteristics such as the caregiver's educational attainment, health status, and household income, as well as dwelling conditions such as quality parenting and the presence of cultural practices, all influence the environment in which a child lives and learns (Hertzman 2010). For example, research suggests that one of the most influential factors affecting the learning and development of young children is the educational attainment of the primary caregiver (Davis-Kean and Sexton 2009).

Extended family, such as grandparents and community networks, are also important to child well-being and can serve as additional resources for young children. "He keiki mea kupuna," which means, "That little one has a grandparent," is said in admiration of a child showered by the affection of their parents and grandparents (Pukui 1983, 77). Studies show that close relationships, and even coresidency, between grandparents and their grandchildren, can have positive impacts on cognitive, mental, and health outcomes (Pope, Whiteside, and Brooks-Gunn 1993; Fuller-Thompson 2009; Mollborn, Fomby, and Dennis 2011). In addition, mo'opuna receive both material and social-emotional benefits from these relationships, including cultural transmission, stories, life skills and guidance, and love (Mokuau et al. 2015). Research shows that having close social ties with others in the community increases access to resources and information and provides critical emotional support to families (Hertzman 2010).

While a keiki's growth can be positively influenced by strong family bonds, it can also be detrimentally impacted by a lack of financial resources. Children in poverty often have less access to educational and developmental resources than do their counterparts in higher-income households. Children from lower-income households also tend to have relatively lower rates of academic success and higher rates of dropping out of high school (Kena et al. 2016).

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<sup>1</sup> Kūkulu Kumuhana, a convening that was sponsored by Native Hawaiian organizations, generated a framework for including critical elements of Native Hawaiian well-being to inform research and data-collection activities (Kūkulu Kumuhana Planning Committee 2017). Implementation of recommendations from Kūkulu Kumuhana is a work in progress.

Ensuring equitable access to high-quality early learning experiences such as preschool can help to address these gaps. High-quality early learning can boost kindergarten readiness and, later in life, can lead to improved likelihood of graduating from high school (Schweinhart et al. 2005) and completing postsecondary degree programs (Reynolds, Ou, and Temple 2018). Among Native Hawaiian keiki, preschool enrollment reached a high point (57 percent) in 2015 (see [fig. 2.16](#)), propelled by substantial public and private efforts. As preschool models continue to expand, the knowledge base will also expand, providing a fuller picture of the long-term impact of large-scale, public preschool programs.



Native Hawaiian preschool enrollment, after experiencing ups and downs over the past decade, was 52 percent in 2017, compared with the Hawai'i total of 46 percent.

Early childcare can benefit both children and families, freeing up caregivers to pursue employment and educational opportunities. In Hawai'i, the importance of childcare was amplified at the onset of COVID-19 restrictions and during the gradual reopening, demonstrating that viable childcare and schooling options are inextricably linked to caregiver employment.

Availability of community resources such as childcare, healthcare, education, healthy foods, safe physical environments, and transportation has an impact on the environment in which a child is raised. Large-scale data on community resources throughout Hawai'i are minimal, pointing to an ongoing need for further exploration of the link between community resources and the development and well-being of keiki.

Beyond community resources, a child's development is also shaped by a larger ecosystem of local, statewide, and national policies and laws. Systemic inequities experienced by children due to gender, ethnicity, disability, income, or location extend into adulthood. For example, children in remote locations and areas with high concentrations of Native Hawaiians experience inequities in the quality, experience, and tenure of schoolteachers. Kana'iaupuni, Malone, and Ishibashi (2005) note that "children in these areas receive a different education from that of other children, impeding the development of social capital . . . and thereby perpetuating the cycle of Native Hawaiian marginalization" (236). Furthermore, many Native

Hawaiian children grow up with comparatively few Native Hawaiian teachers to look to as role models. Even though Native Hawaiian students constitute nearly one-fourth (24 percent) of the student population in Hawai'i's public schools, just 10 percent of teachers are Native Hawaiian (Hawai'i Department of Education 2020b), perhaps contributing to feelings of ethnic bias and adversity experienced by some Polynesian students considered to be at risk (Mayeda, Chesney-Lind, and Koo 2001). Similarly, systemic adverse circumstances faced by adults and families may disadvantage the health and well-being of young children. Evidence of these patterns in the lives of Native Hawaiians is demonstrated throughout *Ka Huaka'i*.

Caring for and investing in young keiki has broad societal and intergenerational implications and is directly linked to their development and future roles as good citizens, policy makers, business leaders, workforce contributors, members of 'ohana, innovators, community developers, and land stewards. It is essential to understand and protect the well-being of young keiki, because our future as Native Hawaiians, and as caretakers of Hawai'i, lies in the hands of our young people. In this chapter, we first look at the population counts of young Native Hawaiian keiki, followed by an analysis of their social, material, educational, and physical well-being. Occasional references to how COVID-19 may impact the well-being of young Native Hawaiian keiki are also included throughout the chapter.

## POPULATION—YOUNG KEIKI

In 2018 there were a total of 17,026 births to Hawai'i residents, with an estimated 35 percent being Native Hawaiian.<sup>2</sup> This section gives a snapshot of the population of Native Hawaiians ages four and younger—estimated at 42,103 (fig 2.1). These counts and projections help to inform policy making and resource planning for childcare, preschool facilities, and access to healthcare and social services.

### Native Hawaiian Population and Growth

From 1980 to 2010, the Native Hawaiian population increased by more than 200 percent. Although multirace reporting options in US Census 2000 may have affected the increase between 1990 and 2000, steady growth has continued since that time.

In 2010, the population of Native Hawaiians in the United States reached 527,077, representing a 31 percent increase over the Native Hawaiian population in 2000 (table 2.1). In Hawai'i, the Native Hawaiian birth rate was relatively steady from 2000 to 2015, accounting for slightly more than one-third of all live births. Internal analysis of 2017 data provided by the Hawai'i Health Data Warehouse shows that during this period, the percentage of Native Hawaiian births among all births in Hawai'i reached a high point in 2009 (38 percent) before reverting to the 2000 rate of 36 percent.

**TABLE 2.1** Growth of the Native Hawaiian population in Hawai'i and the United States  
[1980 to 2010]

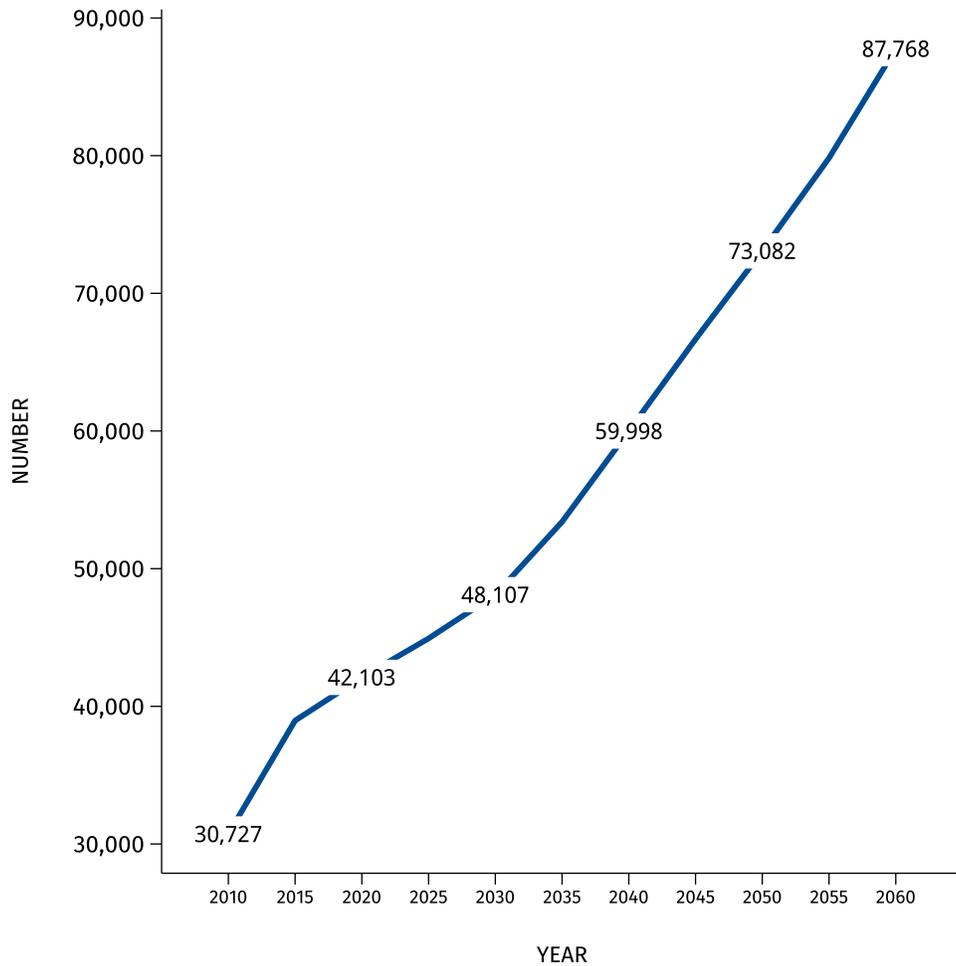
US Census year	Hawai'i	United States total
1980	115,500	166,184
1990	138,742	211,014
2000	239,655	401,162
2010	289,970	527,077

*Data source:* Gibson and Jung 2002; US Census Bureau 2010, Summary File 2

<sup>2</sup> This percentage is based on the three-year average proportion of annual Native Hawaiian births (6,402) from 2015 to 2017 (Hawai'i Health Data Warehouse 2019).

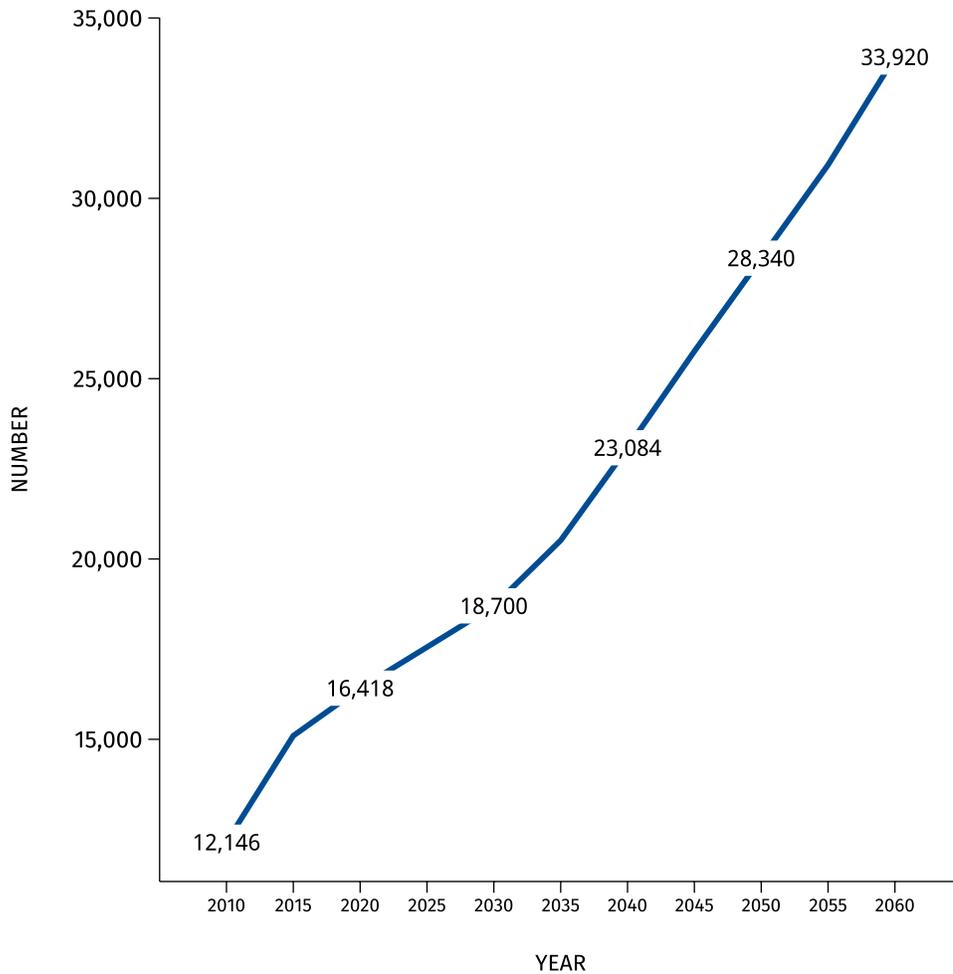
The Native Hawaiian population continues to grow. Estimates of projected growth indicate that there are about 42,000 young Native Hawaiian keiki as of 2020, a number that will grow moderately over the next decade and then rise more sharply in the following decades, reaching 87,768 by 2060 (fig. 2.1). These projections are based on the most recent available census data from 2010 and may vary with more recent estimates based on population samples. Forthcoming Census 2020 data will provide actual population counts and be available to calculate updated population projections.

**FIGURE 2.1** Projected number of young Native Hawaiian children in Hawai'i  
 [Native Hawaiian children ages 0–4, 2010 to 2060]



Data source: Hong 2012

**FIGURE 2.2** Projected number of preschool-age Native Hawaiian children in Hawai'i  
[Native Hawaiian children ages 3–4, 2010 to 2060]



Data source: Hong 2012

The projections show that the number of Native Hawaiian children ages four and younger—as well as the preschool-age population—will double between 2020 and 2060 (figs. 2.1 and 2.2). These trends signal the need to plan ahead for the continued growth of the young Native Hawaiian population.

## SOCIAL WELL-BEING

In this section, we take a closer look at the social resources available to young keiki in two main areas: family characteristics and parent (including caregiver) involvement.

For Native Hawaiians, 'ohana is our greatest social resource and is a key protective factor for our keiki and community as a whole (Kanahele 1986; Mokuau 1990; Kana'iaupuni 2004). 'Ohana transcends biological ties and encompasses spiritual relations:

As Mrs. Pukui explains, "You may be 13th or 14th cousins, as we define relationships today, but in Hawaiian terms, if you are of the same generation, you are all brothers and sisters. You are all 'ohana."

This close tie among distant cousins indicates that in the past, 'ohana meant "family clan" more often than "nuclear" or "immediate" family. Today, the word means either.

The ties of 'ohana as an extended family were closest but not limited to the living or to those born into blood relationship. The core of the 'ohana were the living pili koko (blood relatives). However, non-related persons could be admitted to 'ohana status. And when a family member died, he remained—as a spirit—very much a part of the 'ohana. (Pukui, Haertig, and Lee 1979, 167)

With such an expansive worldview, the social capital of most Native Hawaiian 'ohana extends beyond a family unit and includes ties with the broader community, providing more avenues to connect to additional resources. For example, families with community ties can increase access to social support, advice, and soft skills. In turn, this may promote better parent-child interactions and healthier child development (Turley et al. 2017). Strong family networks in the community can also further feelings of safety, working together, and civic participation (Putnam 1995).

In Native Hawaiian 'ohana, kūpuna provide important social and cultural resources to young children. Culturally, kūpuna are revered and valued for their 'ike, which includes family and cultural practices and lived experiences that can be passed to future generations. The 'ōlelo no'eau (wise saying, proverb), "He hulu makua" (Pukui 1983, 69) alludes to this reverence, likening those of the older generations to the precious feathers used to make intricate lei hulu (feathered lei). Pukui also describes the role of grandparents as caretakers who carry "authority, knowledge, privilege, and clan responsibility" (Pukui, Haertig, and Lee 1979, 49). Traditionally, the hiapo, or firstborn, was given to the grandparents to raise as their own, solidifying the intimate bond between keiki and kūpuna. The practical benefits of kūpuna-mo'opuna bonds today are wide ranging, including material support, food, shelter, transportation and financial support; life skills and guidance; discipline; and the transmission of culture through values and stories, including spiritual support (Mokuau et al. 2015).

In this context, family structure refers to the relationships among, and characteristics of, families<sup>3</sup> and family households.<sup>4</sup> Family structure influences child well-being and is related to underlying mechanisms such as “parental resources, parental mental health, parental relationship quality, parenting quality, and father involvement” (Waldfogel, Craigie, and Brooks-Gunn 2010). While the association of family structure and child outcomes is evident, the association is complex and not always clear (Musick and Meier 2010). Factors mediating the relationship between family structure and child outcomes are difficult to measure, making it a challenge to draw causal claims and consistent findings (Musick and Meier 2010; Amato, Patterson, and Beattie 2015).

Previous research shows that children raised in households with two parents are generally more likely than those raised in households with a single parent to experience positive benefits such as a higher standard of living, more effective and cooperative parenting, emotional closeness to their parents, and fewer stressful events (Amato 2005). More recent findings indicate that living in poverty increases the likelihood of becoming a single parent and influences children’s academic performance (Amato, Patterson, and Beattie 2015). These considerations are relevant for Native Hawaiians, given that nearly half of young Native Hawaiian children are in single-mother or single-father families (see [fig. 2.4](#)).

Our findings indicate that Native Hawaiian families (along with Filipinos) are more likely to have young children and be headed by a single parent, compared with families of other major ethnicities in Hawai‘i (consistent with previous findings from *Ka Huaka‘i* 2005).

In discussing our findings, we acknowledge the disconnect between Western definitions of family and family structure—which tend to be linear and specific—and definitions of Native Hawaiian ‘ohana. Consistent with cultural values surrounding the importance of ‘ohana and the value and impact of kūpuna and mo‘opuna bonds, our findings show that many young Native Hawaiian keiki are in households where a grandparent is present. Multigenerational and extended ‘ohana living together can be an effective strategy to alleviate the effects of socioeconomic disadvantage among families with young children, specifically by increasing access to social networks and financial support (Kana‘iaupuni, Malone, and Ishibashi 2005). The benefits are especially pertinent to children in mother-only families (Mutchler and Baker 2009).

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<sup>3</sup> A family is defined as a householder and one or more other people living in the same household who are related to the householder by birth, marriage, or adoption.

<sup>4</sup> A family household is defined as a household consisting of a family and may also include people not related to the householder or a single person living alone. It is possible to have multiple families within a single household.

## Family Structure

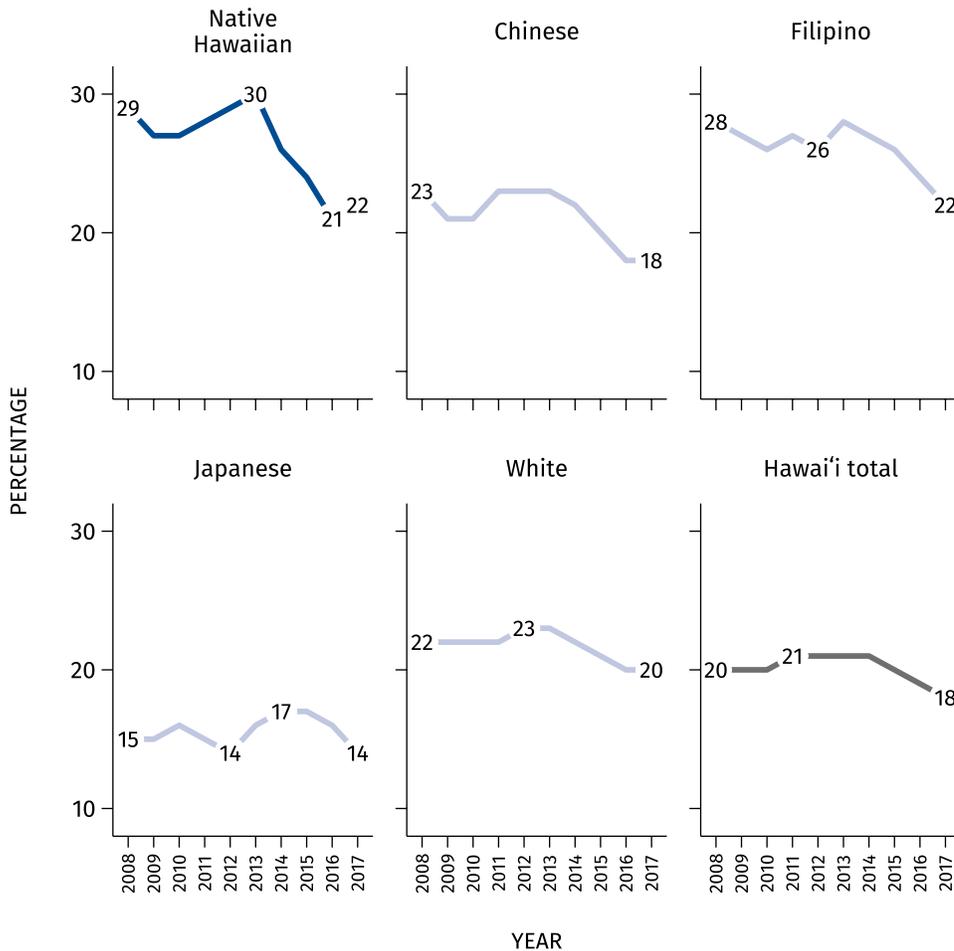
Across Hawai'i, the proportion of family households with children ages four and younger declined slightly over the past decade. For Native Hawaiians, however, the decrease was larger, declining from 29 to 22 percent between 2008 and 2017 (fig. 2.3). Despite this significant decline, Native Hawaiians, along with Filipinos, are still the most likely family households in Hawai'i to have young keiki.

Compared with their peers, young Native Hawaiian keiki are among the most likely to live in single-mother or single-father families.<sup>5</sup> For example, of all Native Hawaiian keiki ages four and younger, about one in three (34 percent) lives with a single mother, compared with roughly one in five (22 percent) across Hawai'i as a whole (fig. 2.4). Over time, the proportion of Native Hawaiian single-mother families—regardless of the number or age of children—has remained relatively constant from 2008 to 2017, accounting for roughly one in every three families (see [fig. 1.14](#)).

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<sup>5</sup>A single-mother family is defined as a family whose household is led by a female without a spouse present. A single-father family is defined as a family whose household is led by a male without a spouse present.

**FIGURE 2.3** Trends in family households with children ages 0–4  
 [as a percentage of family households, by family household ethnicity, Hawai‘i, 2008 to 2017]



Data source: US Census Bureau, American Community Survey, Public Use Microdata Sample 1-year file

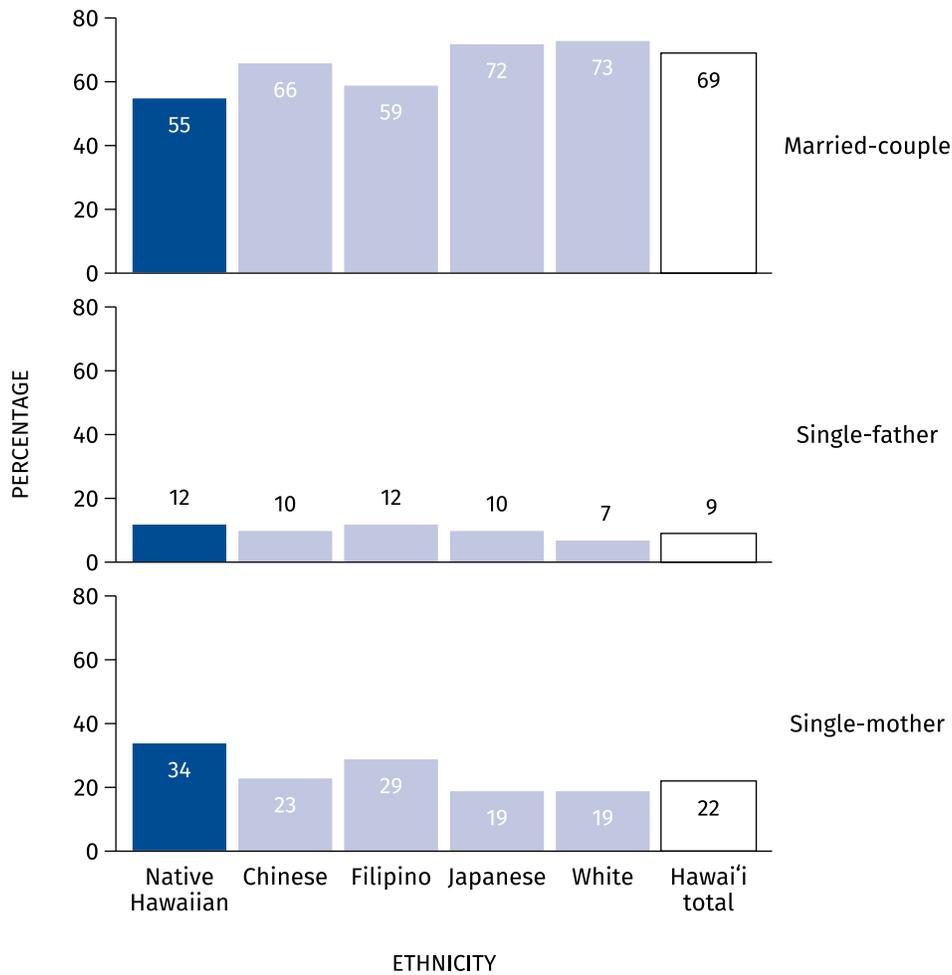
Note 1: A family household consists of a family and may also include people not related to the householder. A family is defined as a householder and one or more other people living in the same household who are related to the householder by birth, marriage, or adoption.

Note 2: The designation “White” in this chart refers to non-Hispanic Whites, alone or in combination with other ethnicities, as defined by the American Community Survey.

Note 3: Data labels are presented for the first and last points, the maximum and minimum points, and some inflection points where the trend changes.

- From 2008 to 2017, the percentage of family households with children ages four and younger decreased significantly across all major ethnicities (except Japanese).
- For Native Hawaiians, Chinese, and Filipinos, the years between 2013 and 2016 mark the greatest decrease in the percentage of family households with young children.

**FIGURE 2.4** Family types of young children  
 [as a percentage of children ages 0–4, by ethnicity, Hawai'i, 2017]



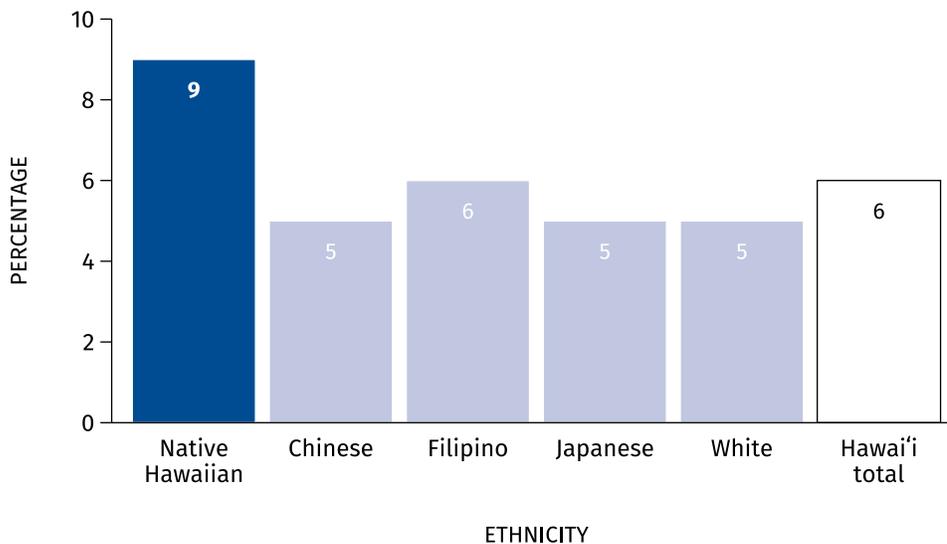
*Data source:* US Census Bureau, American Community Survey, Public Use Microdata Sample 5-year file  
 Note 1: The designation “White” in this chart refers to non-Hispanic Whites, alone or in combination with other ethnicities, as defined by the American Community Survey.

- About one-third (34 percent) of Native Hawaiian keiki ages four and younger live in single-mother families—the highest rate among the major ethnicities in Hawai'i.
- The combined proportion of young Native Hawaiian keiki living in single-mother or single-father families (46 percent) is the highest rate among all major ethnicities in Hawai'i.
- Young Native Hawaiian keiki are the least likely to live in married-couple families (55 percent), a rate that is slightly lower than that of Filipino children (59 percent).
- White and Japanese young children are the most likely to live in married-couple families (73 percent and 72 percent, respectively).

Generally speaking, most young Native Hawaiian keiki live with a biological parent. However, compared with children of other major ethnicities in Hawai'i, young Native Hawaiian keiki are the least likely to live with a biological parent (fig. 2.5).

The prevalence of Native Hawaiian keiki not living with a biological parent persists through childhood. A related analysis of Native Hawaiian keiki ages five to seventeen shows that one in eleven does not live with a biological parent (see [fig. 3.7](#)). In such circumstances, keiki may live with caregivers including relatives (e.g., grandparents or siblings) or nonrelatives (e.g., adopted parents or foster parents). Such caregivers tend to be about twenty years older than the caregivers of children living with their biological parents and have lower levels of income, education, and employment (Kamehameha Schools 2019).

**FIGURE 2.5** Young children not living with a biological parent  
[as a percentage of children ages 0–4, by ethnicity, Hawai'i, 2017]



*Data source:* US Census Bureau, American Community Survey, Public Use Microdata Sample 5-year file

Note 1: In this analysis, a biological parent may actually be present if they live in the same house as the child but are not married to the householder; in this case, the child may be living with one of their biological parents but not both of them.

Note 2: The designation “White” in this chart refers to non-Hispanic Whites, alone or in combination with other ethnicities, as defined by the American Community Survey.

- Approximately one in eleven Native Hawaiian children ages four and younger (9 percent) do not live with a biological parent—the highest rate among the major ethnicities in Hawai'i.
- For the Hawai'i total, nearly one in sixteen young children (6 percent) do not live with a biological parent.

## FOSTER CARE

Children who enter the foster care system receive temporary care with the end goal of finding a stable, supportive, and permanent long-term home. Native Hawaiian children historically have comprised nearly half of all children in foster care across Hawai'i. This percentage decreased slightly in recent years, from 49 to 46 percent between 2014 and 2018 (Hawai'i Department of Human Services 2019). Despite this downward trend, there remains "serious concern about the disproportionality of Native Hawaiians in the foster care system" (Hawai'i Department of Human Services 2017, 135).

## CHILD ABUSE AND NEGLECT

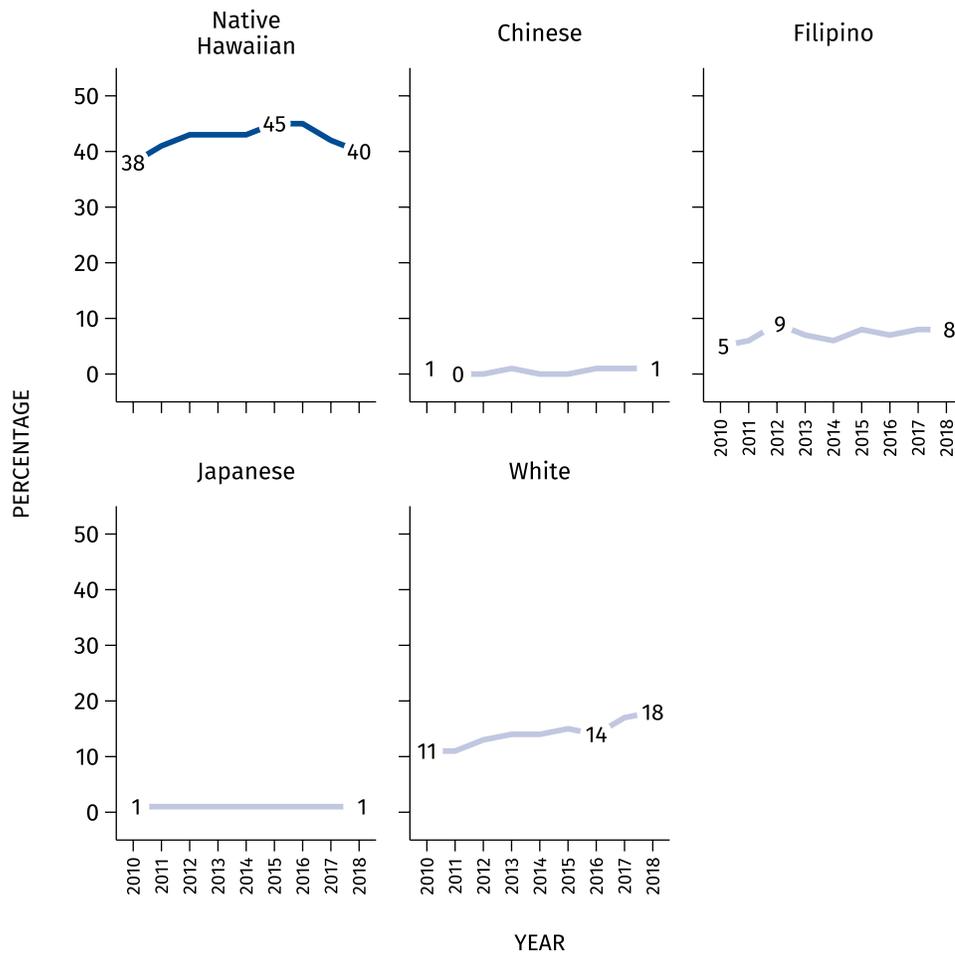
Child abuse and neglect represent a troubling extreme of social dysfunction and, while the vast majority of children do not experience it, Native Hawaiian and other low-income groups are disproportionately represented among those who do. In 2018, among all children in Hawai'i, there were 1,296 confirmed cases of child abuse and neglect.<sup>6</sup> Of these, four in ten cases (41 percent) involved children younger than age five, and roughly one in six (17 percent) involved children younger than one year old (Hawai'i Department of Human Services 2018).

Native Hawaiian keiki have historically been overrepresented among confirmed cases of child abuse and neglect, representing 40 percent (524) of all cases affecting children ages seventeen and younger in 2018. Looking at data from the past decade, we see that the proportion of child abuse victims who are Native Hawaiian increased in 2015 and has since decreased to 40 percent in 2018 (fig. 2.6).

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<sup>6</sup> A single child may be counted multiple times in these figures because each time they are indicated to be a victim.

**FIGURE 2.6** Trends in child abuse  
 [as a percentage of uniquely confirmed incidents, by ethnicity, Hawai'i, 2010 to 2018]



Data source: Hawai'i Department of Human Services, Audit, Quality Control and Research Office

Note 1: In this dataset, a child is counted only once, regardless of the number of responses or occurrences.

Note 2: Data labels are presented for the first and last points, the maximum and minimum points, and some inflection points where the trend changes.

- Looking at the span of years from 2010 to 2018, there was an upward trend in child abuse among Native Hawaiians.
- Native Hawaiians have the highest incidence of child abuse, constituting 40 percent of all confirmed cases in 2018.

A study by the Hawai'i Department of Human Services (2018) reports that among caregivers of abused or neglected children in Hawai'i, the biggest contributing factors to abuse include inability to cope with parenting responsibility (60 percent), unacceptable child-rearing method (59 percent), and drug abuse (42 percent). It is also possible that rates of child abuse and neglect in Hawai'i may escalate under conditions such as the COVID-19 pandemic due to increased stressors like unemployment, wage loss, stay-at-home protocols, and lack of childcare.

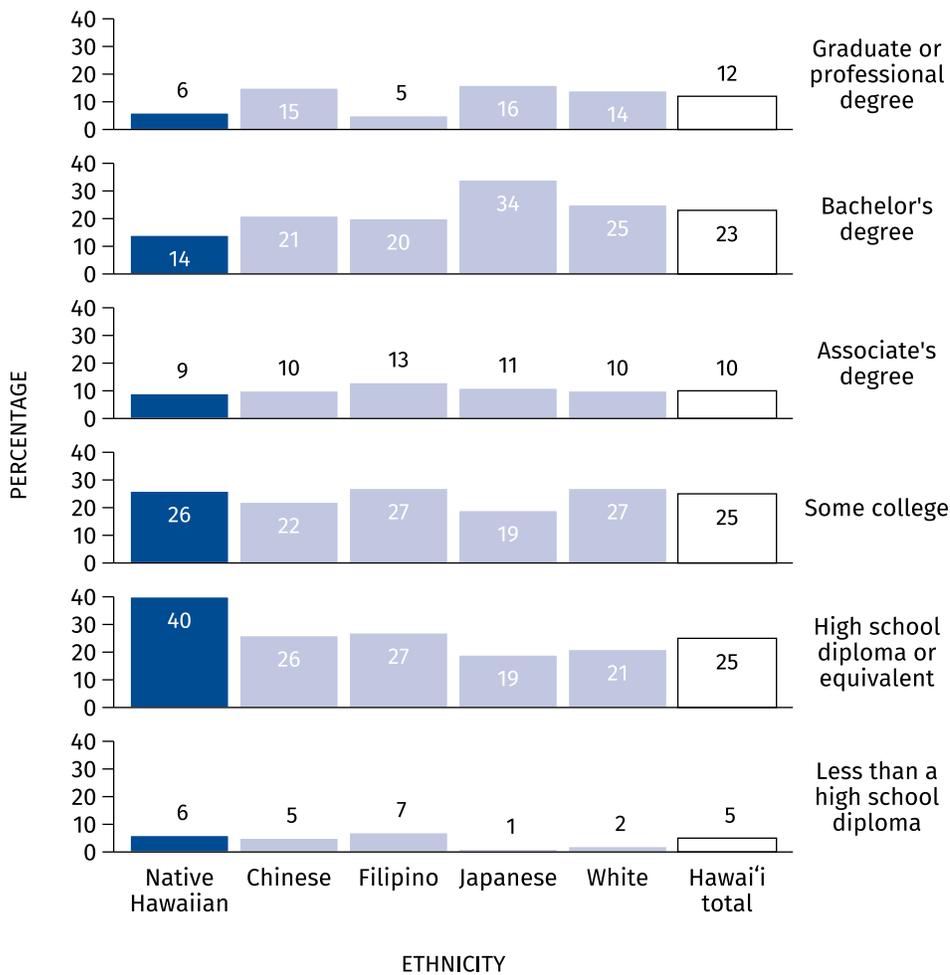
Research on reducing the risk of child abuse and increasing well-being for families and children cites successful programs, policies, and practices that build social networks, strengthen economic supports to families, provide quality care and education early in life, and enhance parenting skills (Fortson et al. 2016). Additionally, characteristics such as parental employment and education, adequate housing, and access to healthcare and social services also may reduce the likelihood of child abuse and neglect (National Center for Injury Prevention and Control 2020b). Holistic efforts to reduce child abuse must support family environments while addressing poverty and other root causes of stress and anxiety. Along with addressing systemic issues, policies and programs are needed to reinforce effective parenting strategies, galvanize available family support, and draw upon cultural assets as sources of strength.

## Educational Attainment of Parents with Young Children

As suggested above, the educational attainment of parents and caregivers is associated with the social and economic resources available to children. Our findings reveal that young Native Hawaiian children are more likely to have parents with less formal education, compared with their non-Hawaiian peers. Figure 2.7 highlights these differences, showing that nearly three out of four Native Hawaiian parents with children ages four and younger (combined percentage of 72 percent) do not have a college degree, compared with the Hawai'i total of 55 percent. Native Hawaiian parents of school-aged children face similar disparities (see [fig. 3.9](#)).

However, Native Hawaiian parents have higher rates of obtaining a college degree in comparison with Native Hawaiian adults in general. For example, a combined proportion of 29 percent of Native Hawaiian parents with children ages four and younger have a college degree (fig. 2.7), compared with 17 percent of the total population of Native Hawaiian adults ages twenty-five and older (not shown). Further analysis shows that college degree attainment among the Native Hawaiian population is most likely to happen at younger ages and before having children (Kamehameha Schools 2019).

**FIGURE 2.7** Educational attainment of parents with young children living at home  
 [as a percentage of parents with children ages 0–4 living at home, by ethnicity, Hawai‘i, 2017]



Data source: US Census Bureau, American Community Survey, Public Use Microdata Sample 5-year file

Note 1: The designation “White” in this chart refers to non-Hispanic Whites, alone or in combination with other ethnicities, as defined by the American Community Survey.

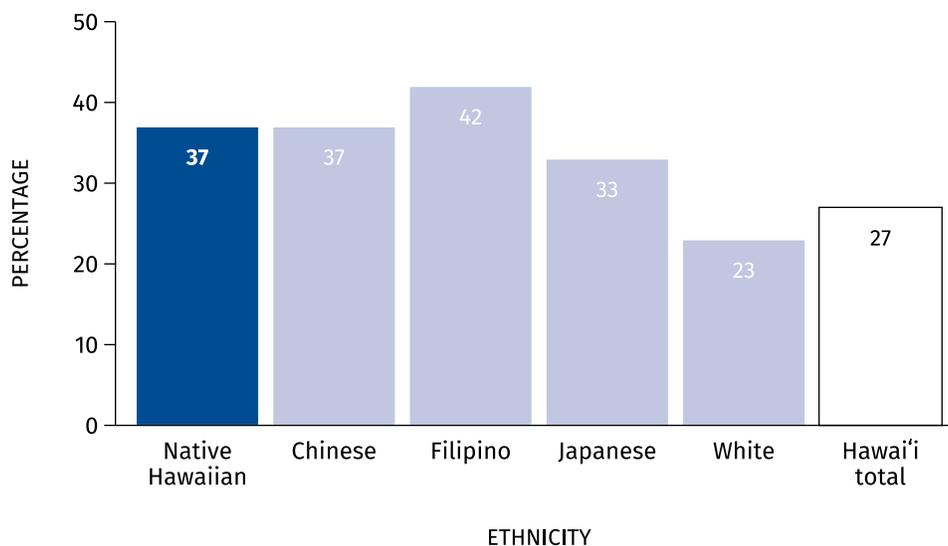
- Among Native Hawaiian parents with children ages four and younger living at home, 29 percent have a college degree (combined percentages), compared with the Hawai‘i total of 45 percent.
- Comparing ethnicities, Japanese and White parents with young children living at home are the most likely to have a high school diploma or higher.
- Half (50 percent) of Japanese parents with young children living at home have a bachelor’s degree or higher (combined percentages)—the highest rate among the major ethnicities in Hawai‘i.

The educational attainment of Native Hawaiian parents of young keiki has fluctuated over the past fifteen years, perhaps reflecting the effects of the recession years (2007 to 2009). For example, based on 2017 data, 20 percent of Native Hawaiian parents with young children living at home have a bachelor's degree or higher, compared with 27 percent in 2010 and 21 percent in 2005 (not shown). Looking ahead, we anticipate college attendance of Native Hawaiians to be impacted by the economic upheaval and restructuring of schooling and learning caused by COVID-19.

## Young Keiki and Grandparents

Many young Native Hawaiian keiki live with their grandparents, which may provide increased access to the social support and networks offered by their kūpuna. Figure 2.8 shows that more than one-third (37 percent) of Native Hawaiian households with children ages four and younger have kūpuna living in the same home—a rate that has remained constant since 2005 (Kana'iaupuni, Malone, and Ishibashi 2005) and is higher than the Hawai'i total of 27 percent. The data show that the same is true for Native Hawaiian households with children ages seventeen and younger (see [fig. 1.7](#)).

**FIGURE 2.8** Households with young children where a grandparent is present  
[as a percentage of households with children ages 0–4, by household ethnicity, Hawai'i, 2017]



*Data source:* US Census Bureau, American Community Survey, Public Use Microdata Sample 5-year file

Note 1: Grandchildren are defined as the grandparents' own grandchildren who are younger than 18 years old.

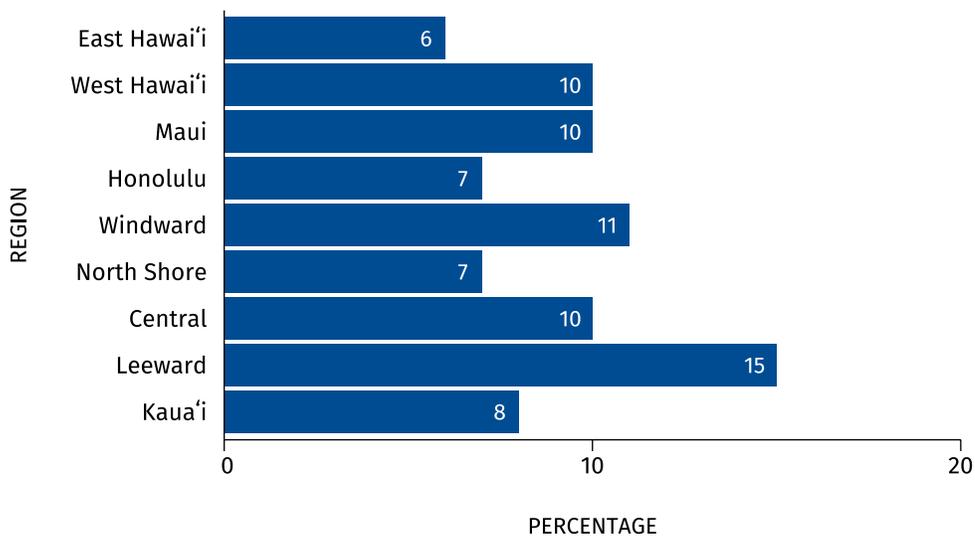
Note 2: The designation "White" in this chart refers to non-Hispanic Whites, alone or in combination with other ethnicities, as defined by the American Community Survey.

- For the Hawai‘i total, 27 percent of households with young children have a grandparent living in the household.
- Among Native Hawaiian and Chinese households with young children, 37 percent have a grandparent living in the household—10 percentage points higher than the Hawai‘i total.
- Comparing households across ethnicities, White households with young children have the lowest prevalence of a grandparent living in the household (23 percent).

### YOUNG KEIKI AND GRANDPARENTS—REGIONAL HIGHLIGHTS

Coresidency among kūpuna and mo‘opuna is reflected in a similar analysis based on individuals rather than households. Looking across regions, the prevalence of Native Hawaiians ages thirty and older who are grandparents living with their grandchildren is highest in Leeward and Windward (fig. 2.9). Over time, we find a downward trend in these multigenerational living arrangements across all regions except for West Hawai‘i, Maui, and Central (fig. 2.10).

**FIGURE 2.9** Native Hawaiian grandparents living with their grandchildren—regional comparison  
[as a percentage of Native Hawaiian individuals ages 30 and older, by region, Hawai‘i, 2015]

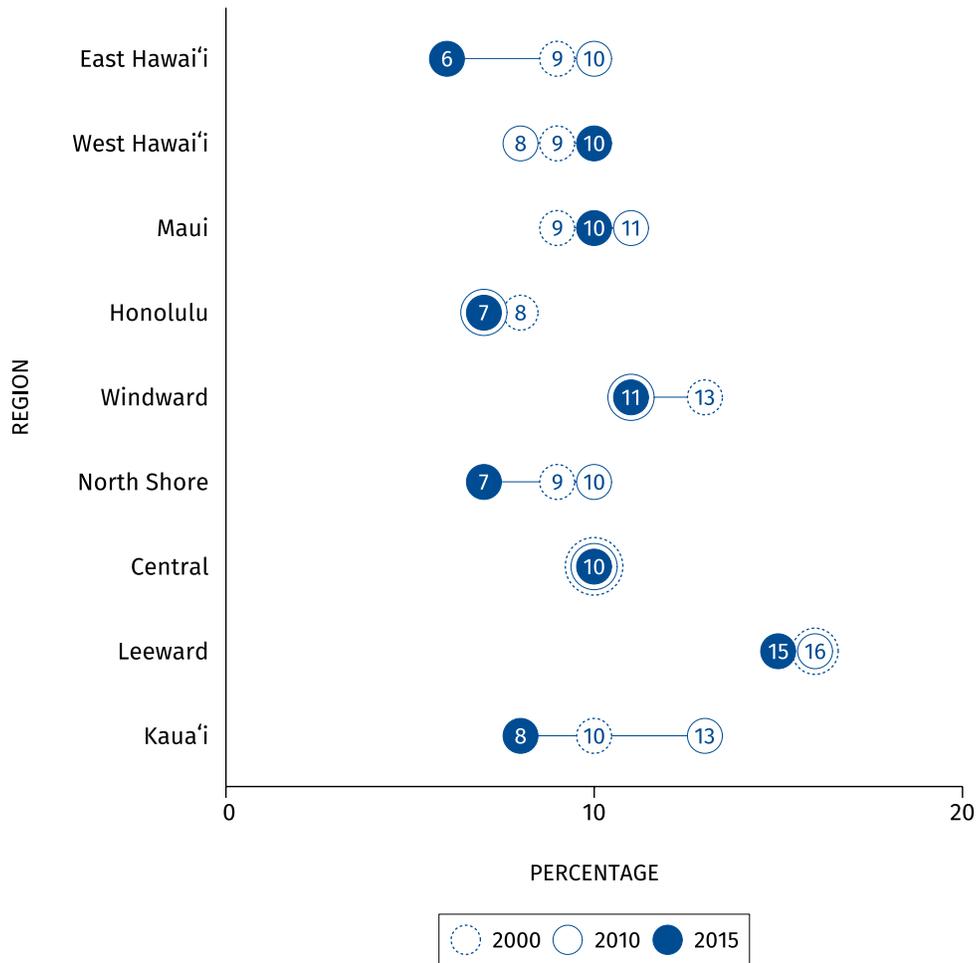


Data source: US Census Bureau, American Community Survey, Selected Population Tables

Note 1: Grandchildren are defined as the grandparents’ own grandchildren who are younger than 18 years old.

- In the Leeward region, more than one in seven Native Hawaiians ages thirty and older (15 percent) are grandparents who live with their grandchildren—the highest rate across regions.
- Regions with the lowest proportion of Native Hawaiians who are grandparents living with their grandchildren are East Hawai‘i (6 percent), Honolulu (7 percent), and North Shore (7 percent).

**FIGURE 2.10** Trends in Native Hawaiian grandparents living with their grandchildren—regional comparison  
 [as a percentage of Native Hawaiian individuals ages 30 and older, by region, Hawai'i; 2000, 2010, 2015]



Data source: US Census Bureau, 2011 to 2015 American Community Survey, Selected Population Tables; US Census Bureau, 2006 to 2010 American Community Survey, Selected Population Tables; Census 2000, Summary File 4

Note 1: Grandchildren are defined as the grandparents' own grandchildren who are younger than 18 years old.

- From 2000 to 2015, Maui, West Hawai'i, and Central were the only regions that did not experience a downward trend in the percentage of Native Hawaiians who are grandparents living with their grandchildren.
- On Kaua'i, the percentage of Native Hawaiians ages thirty and older who are grandparents living with their own grandchildren decreased from 13 to 8 percent between 2010 and 2015.

While the mutual benefits of caregiving are clear, there are notable risks and challenges facing grandparents who function as “second-time parents.” For example, it can be difficult for grandparents to manage health needs associated with aging while caring for their grandchildren in their earliest, and often most demanding years (Mokuau et al. 2015). As such, and among all scenarios where keiki do not live with their biological parents, it is important to assess and holistically support the wide range of needs of these caregivers, including financial assistance, culturally appropriate respite, and grandparent rights (Yancura 2009; Mokuau et al. 2015).

The social well-being of young keiki starts at home. A well-supported family structure, paired with loving and appropriate caregiver involvement, can provide a strong foundation for the healthy development and nurturance of young keiki. The foregoing analysis has shown that, compared with many of their peers, young Native Hawaiian keiki are more likely to live without a biological parent, in single-parent families, and in households where a grandparent is present. Young Native Hawaiian keiki, on the whole, are disproportionately more likely than their peers to have less-educated parents and to have experiences with child abuse and neglect—situations that may be mitigated somewhat by the presence of additional supports such as grandparents. Taken together, our findings underscore the need for systemic support to promote and strengthen the whole ‘ohana as a child’s most important social resource.

## MATERIAL AND ECONOMIC WELL-BEING

The economic resources available to 'ohana, including savings, income, and assets, ensure a child's basic needs are being met, enhance the quality of a child's physical environment, and facilitate access to stimulating learning materials like books and technology, as well as healthy developmental services such as childcare and medical care. Research finds that economic status and available material resources influence behavioral and cognitive outcomes of preschool-age children (Yeung, Linver, and Brooks-Gunn 2002). As such, child outcomes are influenced by the financial stability of parents, which is influenced by parental educational attainment and employment status.

Our findings show that Native Hawaiian adults in general have lower rates of bachelor's degree attainment and household income in comparison with other major ethnic groups (see Chapter 1). The same is true for Native Hawaiians with young keiki, where rates of poverty among Native Hawaiian households and use of public assistance such as the Preschool Open Doors program are higher than for other ethnic groups. Caregiver educational attainment levels may partially explain why the rate of young Native Hawaiian keiki living in poverty is the highest among their peers of other ethnic backgrounds. Recent findings show that four in every seven Native Hawaiian households are living below the ALICE (asset limited, income constrained, employed) threshold, where income levels are above the federal poverty level but below the basic cost of living (Aloha United Way 2020).

Additionally, high usage rates of public assistance benefits such as the Supplemental Nutrition Assistance Program (SNAP) (see [fig. 1.42](#)), public assistance income (see [fig. 1.40](#)), and Child Care Connection Hawai'i subsidies (see [fig. 2.18](#)) suggest that many Native Hawaiian families have difficulty financing the needs of their young children.

A prominent need in Hawai'i is obtaining early childhood care, which is costly and, for some, unaffordable—especially for ALICE households. Among families with children ages four and younger, about one in six (16 percent) were considered low income in 2017 (see [fig. 2.12](#)). For many such families, barriers to early learning are multifaceted and include, among other factors, availability, accessibility, quality, and expense. A 2017 study by the University of Hawai'i Center on the Family found that the average cost of center-based care for one child is about \$9,500 per year. This expense represents 13 percent of the Hawai'i median family income, 32 percent of the median income of a single mother, and 50 percent of the

annual minimum-wage salary for a full-time worker (DeBaryshe et al. 2017). For a Hawai'i family with an infant and a preschool-age child in center care, the average cost is nearly \$23,000 annually.

High costs for early childhood care exacerbate an already strained economic situation for many Native Hawaiian families. However, perhaps as a testament to community organizations mobilizing to support young keiki, enrollment rates of Native Hawaiian preschoolers are higher than the Hawai'i total (see "[Preschool Enrollment](#)" later in this chapter).

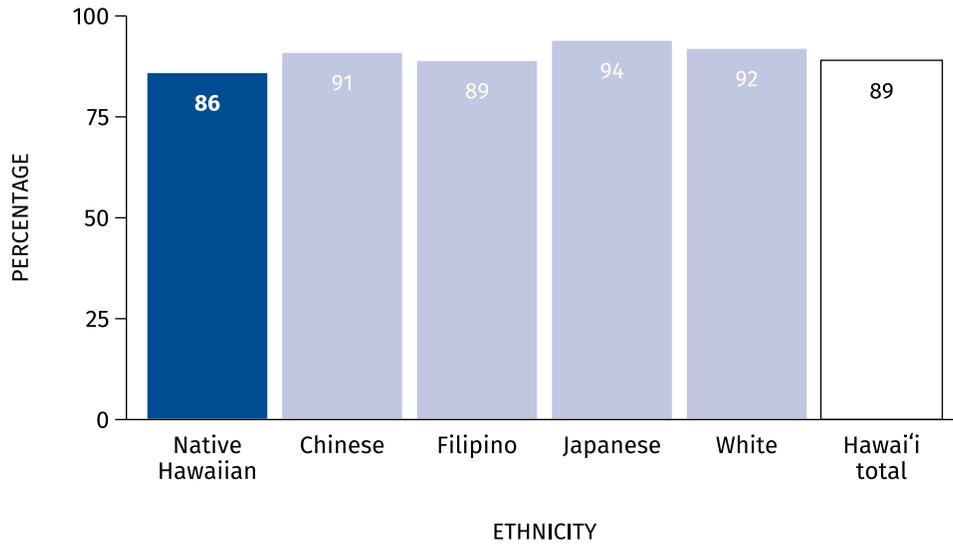
Threats to Hawai'i's economy greatly compromise the availability of quality early learning. For example, pandemics like COVID-19 can shut down 100 percent of all preschools in Hawai'i and also impact longer-term job security. Between March and April 2020, Hawai'i's seasonally adjusted unemployment rate increased from 3 to 22 percent (Gomes 2020; Kawano 2020; McAvoy 2020). Such pervasive unemployment among Hawai'i's families is likely to influence the economic resources available to support healthy development for young children.

In the following section, we examine economic indicators such as employment, income, poverty, and public investments in early learning, which influence the educational successes of young Native Hawaiian children. Overall, we see some encouraging movement toward greater potential for early learning for Native Hawaiians.

## Employment

For most families, employment is a key determinant of material and economic well-being. For Native Hawaiian 'ohana in general, relatively lower employment rates and wages are part of the context in which many children are raised (see [figs. 1.28](#) and [1.25](#)). For example, compared with their peers from other ethnicities, young Native Hawaiian children are the least likely to have a parent who works ([fig. 2.11](#)).

**FIGURE 2.11** Young children with at least one working parent  
[as a percentage of children ages 0–4, by ethnicity, Hawai'i, 2017]



*Data source:* US Census Bureau, American Community Survey, Public Use Microdata Sample 5-year file

Note 1: Children, in this context, refers to “own children,” which are defined as children ages 17 and younger who have never married and are sons or daughters by birth, marriage, or adoption.

Note 2: The designation “White” in this chart refers to non-Hispanic Whites, alone or in combination with other ethnicities, as defined by the American Community Survey.

- Among Native Hawaiian children ages four and younger, 86 percent have at least one working parent—the lowest percentage among all major ethnicities in Hawai'i.
- Nearly nine out of ten young children in Hawai'i (89 percent) have at least one parent who works.

## Income and Poverty

Income is directly related to employment and is a key factor in measuring economic well-being. In the analysis below, we use the following categories to examine trends in income:

1. Livable income: annual income required to provide the basic necessities for a comfortable life (based on the concept of living wage)
2. Gap: income that is more than 185 percent of the poverty guideline, but below the threshold for a livable income
3. Low income: income between 101 and 185 percent of the poverty guideline (the cutoff used for most income subsidy benefits in Hawai'i)
4. Poverty: income at or below poverty guidelines defined by federal guidelines for Hawai'i

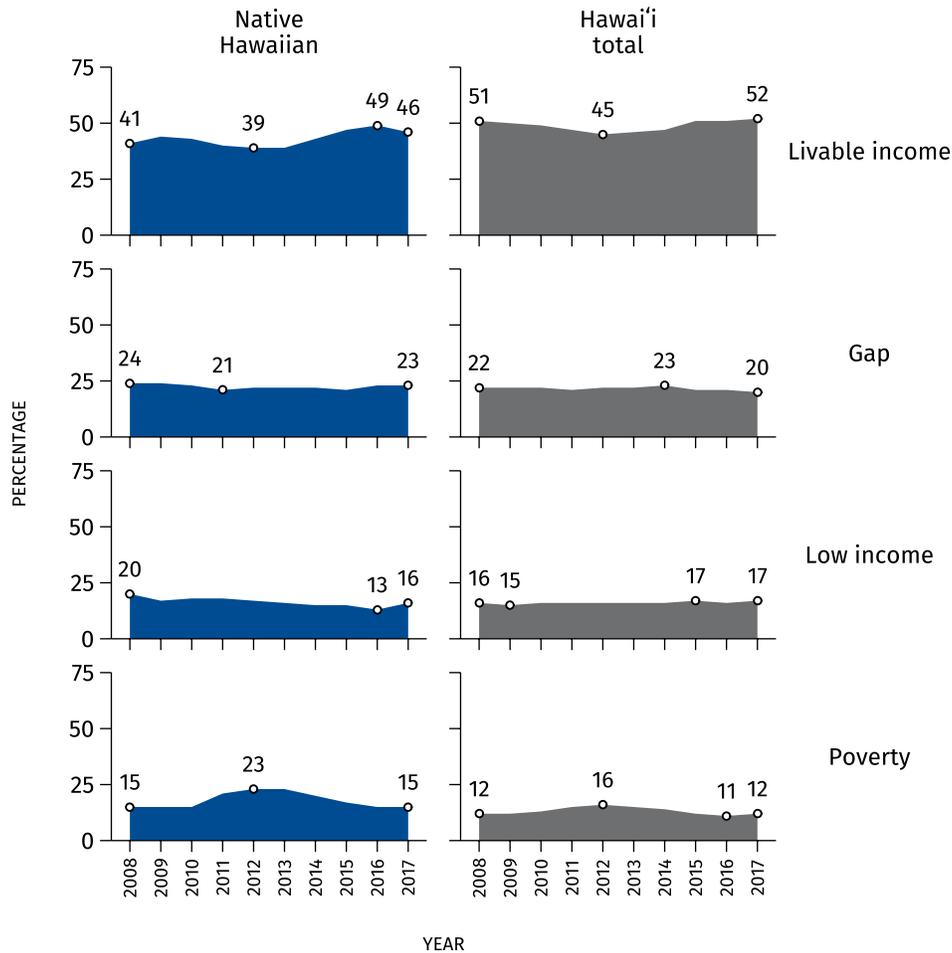
Similar to Native Hawaiian adults in general, Native Hawaiian families with young children experience disproportionately high rates of poverty. For example, from 2008 to 2017, Native Hawaiian families with children ages four and younger were consistently overrepresented in the poverty category—exceeding the Hawai'i total and the percentages of all other major ethnic groups in Hawai'i. During the same time period, Native Hawaiian families with young children experienced an upward trend in the livable income category (i.e., being able to afford basic necessities for a comfortable life); however, the proportion of such families remained significantly below the Hawai'i total (fig. 2.12).



Native Hawaiian families with young children experienced a slight upward trend in livable income, rising slowly from 41 to 46 percent between 2008 and 2017.



**FIGURE 2.12** Trends in income categories of families with young children  
 [among families with children ages 0–4, by ethnicity, Hawai'i, 2008 to 2017]



Data source: US Census Bureau, American Community Survey, Public Use Microdata Sample 1-year files

Note 1: The data include subfamilies, which are defined as families that do not maintain their own household but live in a household where the householder or householder's spouse is a relative.

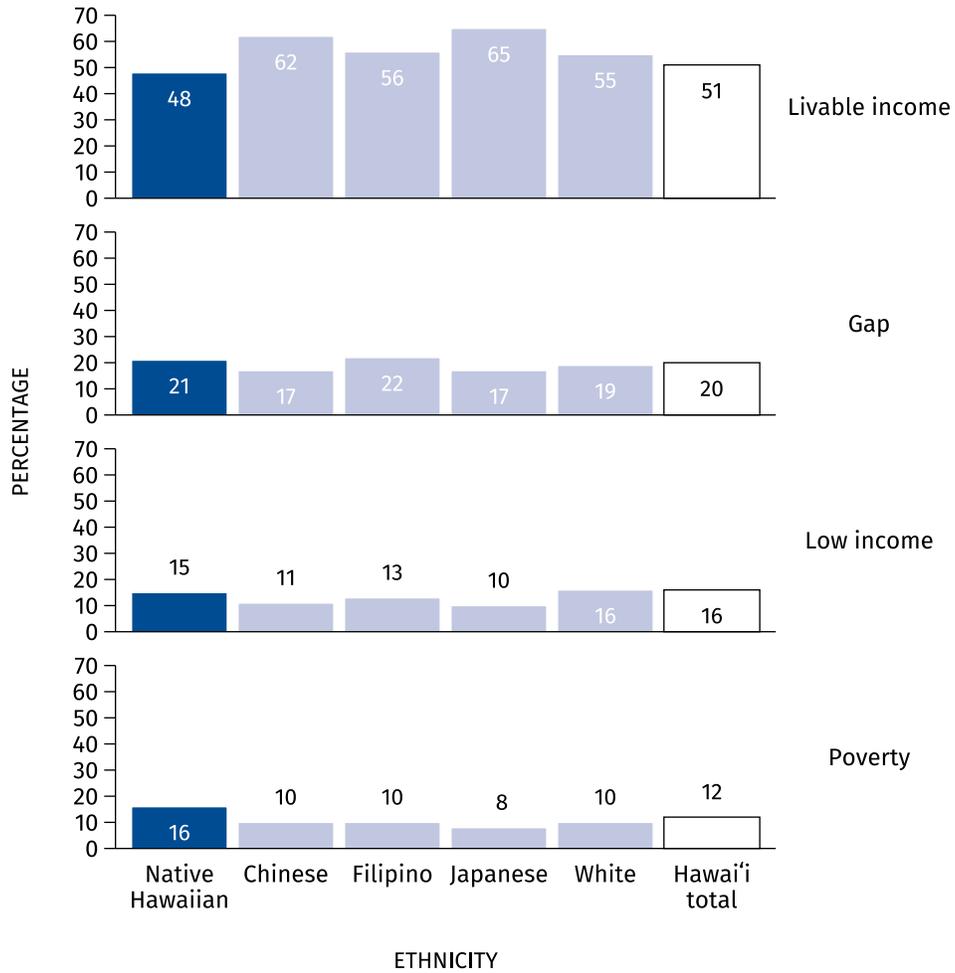
Note 2: Data labels are presented for the first and last points, the maximum and minimum points, and some inflection points where the trend changes.

- From 2008 to 2017, Native Hawaiian families with children ages four and younger experienced an upward trend in livable income rates and a downward trend in low-income rates.
- During the ten-year period from 2008 to 2017, livable income rates among Native Hawaiian families with young children were at the highest point (49 percent) in 2016.
- Among Native Hawaiian families with young children, poverty rates increased significantly (8 percentage points) from 2008 to 2012 but began to decline in 2013, reaching 15 percent in 2017—the same percentage it was in 2008.

- Among Native Hawaiian families with young children, there is an inverse relationship between poverty and livable income; for example, in 2012, when poverty rates were highest (23 percent), livable income rates were lowest (39 percent).
- Comparing families with young children across ethnic groups (not shown), Native Hawaiians were consistently underrepresented in the livable income category from 2008 to 2017 and mostly overrepresented in the poverty category.

Despite upward movement in livable income over time, poverty remains a persistent issue for Native Hawaiians as a whole. For example, when averaging the most recent five years of Census data ending in 2017, the poverty rate among Native Hawaiian families with young children (16 percent) is significantly higher than the Hawai'i total of 12 percent (fig. 2.13).

**FIGURE 2.13** Income categories of families with young children  
 [among families with children ages 0–4, by ethnicity, Hawai'i, 2017]



Data source: US Census Bureau, American Community Survey, Public Use Microdata Sample 5-year file

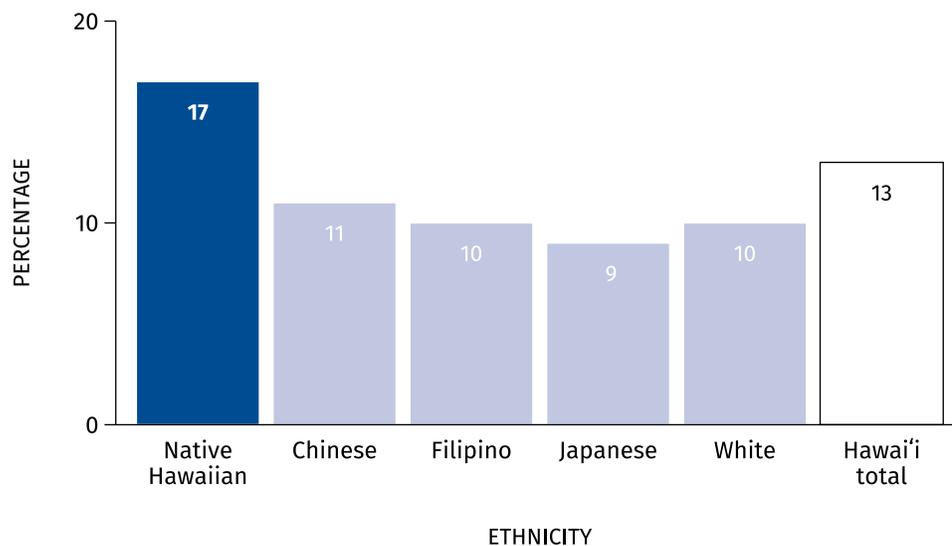
Note 1: The data include subfamilies, which are defined as families that do not maintain their own household but live in a household where the householder or householder's spouse is a relative.

Note 2: The designation "White" in this chart refers to non-Hispanic Whites, alone or in combination with other ethnicities, as defined by the American Community Survey.

- Among Native Hawaiian families with young children, the percentage of those with a livable income (48 percent) is close to the Hawai'i total (51 percent) but is the lowest among the major ethnicities in Hawai'i.
- Looking across ethnicities, Native Hawaiian families with young children have the highest rates of poverty (16 percent).

Poverty among Native Hawaiians reflects a troubling reality for our youngest keiki: 17 percent of Native Hawaiian keiki ages four and younger live in poverty (fig. 2.14), followed by 16 percent of school-age Native Hawaiian children (not shown) and 14 percent of Native Hawaiians ages fifteen and older (not shown). Overall, 10 percent of Native Hawaiian family households are impoverished (Kamehameha Schools 2019), suggesting the relative disadvantage faced by young Native Hawaiian children and underscoring the need for more jobs that pay a living wage.

**FIGURE 2.14** Young children in poverty  
[as a percentage of children ages 0–4, by ethnicity, Hawai‘i, 2017]



*Data source:* US Census Bureau, American Community Survey, Public Use Microdata Sample 5-year file

*Note 1:* The designation “White” in this chart refers to non-Hispanic Whites, alone or in combination with other ethnicities, as defined by the American Community Survey.

- Among Native Hawaiian children ages four and younger, 17 percent are in poverty—the highest rate among the major ethnicities in Hawai‘i.
- The poverty rates of young children are similar among Chinese (11 percent), Filipinos (10 percent), Whites (10 percent), and Japanese (9 percent).

## EDUCATIONAL WELL-BEING

The 'ōlelo nō'eau, "Ka 'ōpu'u pua i mōhala—*A flower that began to unfold*" (Pukui 1983, 164), which is a poetic way to refer to a baby, can be likened to the cognitive development of young keiki. Like a flower beginning to bloom into its full expression, so too do the minds of young children blossom in this critical developmental period.

Even before birth, neural connections in the brain begin to form an architecture that lays a foundation to support positive physical, cognitive, and emotional development through adulthood (Center on the Developing Child 2017). In this section, we gather available data to analyze inputs that affect the educational development of young children.

It is well documented that safe, affordable, and high-quality early childcare and learning experiences support the positive growth of young children. Quality care is marked by key effectiveness factors including "a language-rich environment, with warm and responsive serve-and-return interactions" and "structural factors, such as a safe physical setting, small group sizes, and high ratios of adults to children" (Center on the Developing Child 2016, 25). Educational settings are also transitioning to include more virtual and personalized opportunities. For example, COVID-19 catalyzed increased possibilities for online and remote learning opportunities in early childcare and preschool environments.

Regarding preschool, research strongly suggests that high-quality programming promotes school readiness (Baydar, Brooks-Gunn, and Furstenberg 1993; Magnuson, Ruhm, and Waldfogel 2007; Barnett 2011; Yoshikawa, Weiland, and Brooks-Gunn 2016). Additionally, research confirms that the benefits of preschool depend not only on children's experiences prior to preschool, but also on their experiences after, and that benefits are more likely to last if prekindergarten is followed by high-quality elementary schooling (Weiland et al. 2019). A substantial body of research identifies elements of quality among preschool and early learning programs that successfully prepare children for school (Lamy 2013; Wechsler et al. 2016). For example:

- Sufficient learning time and small class sizes with low student-to-teacher ratios
- Well-prepared teachers who provide engaging interactions and classroom environments that support learning
- Ongoing support for teachers, including coaching and mentoring, with program assessments that measure the quality of classroom interactions and provide actionable feedback for teachers to improve instruction

- Research-based, developmentally appropriate early learning standards and curricula
- Assessments that consider children’s academic, social-emotional, and physical progress and that contribute to instructional and program planning
- Meaningful family engagement (Meloy, Gardner, and Darling-Hammond 2019)

Hawaiian culture-based education, though not included in the list above, also supports the development of a keiki’s cultural identity. In a study of nearly three thousand children across Hawai’i high schools, culture-based educational strategies were linked to student educational outcomes in a set of “nested relationships,” whereby culture-based education positively impacts socioemotional well-being, which in turn positively affects math and reading test scores (Kana’iaupuni, Ledward, and Jensen 2010). As such, Hawaiian culture-based education is becoming an increasingly effective component of learning materials, processes, and family engagement for Native Hawaiian learners. For example, Hawaiian culture-based education is central to the operations of many preschools and k–12 schools serving Native Hawaiians, such as Hawaiian-focused charter schools, immersion schools, and Kamehameha Schools. Measures to gauge Native Hawaiian success and the effectiveness of Hawaiian culture-based education, including in early learning settings, are in development.

Rigorous longitudinal analyses show positive results from three small-scale, high-quality preschool programs (the Perry Preschool study, the Abecedarian study, and the Chicago Child–Parent Centers study). These studies showed that program participants, compared with students who did not participate in a quality early learning program, later experienced higher rates of high school graduation and college attendance (Campbell and Pungello 2000; Campbell et al. 2012) and completion (Reynolds, Ou, and Temple 2018), as well as improved health and reduced joblessness, crime, and teen parenthood (Barnett 1995; Muennig et al. 2011).

The following section provides an overview of early learning considerations and opportunities. Outcome and trend data are limited; however, information about enrollment and access is included, followed by a call to action to expand access to public preschool as a first step toward a statewide system for quality early childhood development and learning that serves all learners and is accessible by all families.

## Early Learning Access and Equity

A review of Hawai'i's learning system in *Our Keiki, Our Future: Hawai'i Early Childhood State Plan 2019–2024* identifies a strong foundation of existing collaborative efforts, diverse providers and settings, and established public and private sources of financial support for childcare settings. Challenges include limited access and equity (especially for vulnerable populations), regional shortages of childcare options, and workforce shortages in care (Executive Office on Early Learning 2019a). This workforce gap is perpetuated by low incentives to enter or stay in the field, with Hawai'i childcare workers earning the lowest hourly pay in the nation. For example, wages for childcare workers in Hawai'i, after adjusting for the cost of living, are approximately \$8 per hour. Preschool teachers earn about \$13 per hour, and directors of preschools or childcare centers make about \$17 per hour (Whitebook et al. 2018).

Availability and access are important considerations for childcare. Availability refers to the quantity of open seats and proximity of care options in existence. In Hawai'i, for every two children under the age of six who potentially need childcare, there is only one seat available. In effect, 65,000 children are vying for 30,706 open seats (Child Care Aware of America 2019). Taking a look across all licensed facilities in Hawai'i, enrollment in 2019 was near full desired capacity at 93 percent (PATCH 2019), signaling healthy demand and dwindling supply.

Geographic areas with a limited availability of childcare options are referred to as “childcare deserts.”<sup>7</sup> Compared with other states across the nation, Hawai'i has the third-highest share of families living in childcare deserts (68 percent), with low-income families being disproportionately impacted (Malik et al. 2018). This deficit points to the well-known absence of licensed infant-toddler childcare centers available in rural areas, including Kaua'i, Moloka'i, and Lāna'i (Executive Office on Early Learning 2019a). These data suggest that greater public investment in Hawai'i's early learning landscape is a pressing need to ensure greater equity for all young learners.

Compounding scarce availability, access can be an even greater barrier for families with limited economic, time, and social resources. In this context, access refers to the ability of families to enroll their child in a program of their choice. Options for and access to specialized care are especially limited for children with special needs, such as mental and/or behavioral challenges. Taken together, a lack of program availability, in addition to barriers to access, results in families needing to make difficult choices between limited care options.

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<sup>7</sup> A childcare desert is any census tract with more than fifty children ages five and younger that contains either no childcare providers or so few options that there are more than three times as many children as licensed childcare seats.

Program types include both licensed and unlicensed: family childcare (family or group home care), center-based childcare (before- and after-school programs), family–child interaction learning programs, public or private preschool, and other initiatives that provide opportunities to learn and enhance kindergarten readiness.

Family childcare (FCC) providers may care for up to six children at a time from their own home. In many communities across Hawai‘i, this type of care is the only option for parents needing infant-toddler, evening, or weekend care. The University of Hawai‘i Center on the Family estimates that licensed FCC providers care for more than 2,400 keiki statewide, and more than three in four providers have a wait list. While less expensive than center care, the average cost for FCC is just under \$8,000 a year—the equivalent of 76 percent of the annual undergraduate tuition at UH–Mānoa (DeBaryshe et al. 2017b).

Center-based childcare includes both infant-toddler centers (serving children ages six weeks to two years old) and group childcare centers (serving children ages two through five). Roughly 12 percent of center seats in Hawai‘i are federally funded as part of the Head Start or Early Head Start programs, which serve children living in poverty (DeBaryshe et al. 2017). However, for the vast majority of families who do not qualify for assistance, affording this type of care may be out of reach. Hawai‘i leads the nation in having the least affordable center-based care (Schulman and Blank 2016), averaging about \$9,500 a year, with annual tuition for infant care exceeding \$13,000 (DeBaryshe et al. 2017). Despite high costs to families, there still exists a shortage in the number of infant-toddler center seats available for children under age three—a wait list of thirty-seven children per every available seat (DeBaryshe et al. 2017a).

Family–child interaction learning (FCIL) programs are offered free of charge and provide a high-value, part-time alternative to other forms of early learning. In this model, parents are considered the child’s first teacher, and young keiki and their family members attend group meetings twice a week (for a total of four to six hours). The family strengthening program model mirrors its name in encouraging simultaneous parent participation and child learning.

FCILs in Hawai‘i serve more than 3,400 young children, representing about 3 percent of the total early childhood population. Many FCILs target families who are low income, immigrant, or homeless. FCILs also serve a large proportion of Native Hawaiians, with meeting sites located predominantly in areas with a high concentration of Native Hawaiians (DeBaryshe et al. 2017c). Programming in FCIL programs tends to include Native Hawaiian cultural content, suggesting that these programs may be an important community asset that can provide insights on the needs and learning capabilities of young keiki and their families.

Program evaluations of Tūtū and Me, a well-established FCIL program of Partners in Development Foundation, suggest program efficacy, with graduates exhibiting gains in both language and engagement scores (Porter and Vuong 2008) and, more recently, showing that 97 percent of 2019 graduates met all Hawai'i State School Readiness Assessment benchmarks (Ray 2019). Another program called Keiki Steps, administered by INPEACE, reports that 95 percent of its 2019 graduates met the majority of the Hawai'i State School Readiness Assessment benchmarks (INPEACE 2020).

Public and private preschools offer a relatively structured learning environment, with the latter posing significant cost barriers. A 2019 tuition report reveals prekindergarten tuition costs for private schools across Hawai'i range from \$5,000 to \$30,000 annually (Hawai'i Association of Independent Schools 2019).

Many families in Hawai'i struggle to find preschool options that are affordable and available in their community. In addition, the number of preschool applicants is often higher than the number of available seats. These limitations result in only 46 percent of three- and four-year-olds in Hawai'i attending preschool (see [fig. 2.15](#)). Among four-year-olds, preschool enrollment is higher, at 60 percent, but still falls far short of access for all. Equitable access is especially challenging in rural areas across Hawai'i, where the largest gaps exist (see [table 2.2](#)). The establishment of a universal prekindergarten system may be a viable solution to this issue. Evidence suggests that investment in universal prekindergarten can yield strong economic growth (Dickens, Sawhill, and Tebbs 2006) and cognitive gains (Gormley et al. 2005). Additionally, it may reduce inequities for vulnerable communities and at-risk children whose access to any kind of early learning may be limited or nonexistent. One effort that addresses such inequities, in the absence of universal prekindergarten in Hawai'i, is Ka Pa'alana, a unique model of accredited preschool programs for homeless families that provides services at beach sites and campgrounds and serves about five hundred homeless and at-risk young children and caregivers annually (*Hawai'i Tribune Herald* 2019).

At the national level, states vary in their application of universal prekindergarten and their capacity to support every eligible child. For prekindergarten to be considered fully universal, every child must be able to enroll, with virtually all doing so. According to the Education Commission of the States, fully universal prekindergarten programs exist only in Florida, Vermont, and the District of Columbia; states that have mostly universal prekindergarten programs include Georgia, Illinois, Iowa, New York, Oklahoma, West Virginia, and Wisconsin (Parker, Diffey, and Atchison 2018). As more states move toward implementing and studying statewide preschool programs, research on their long-term impacts will continue to grow. Currently, "the available evidence about the long-term effects of state pre-k programs offers some promising potential but is not yet sufficient to support confident overall and general conclusions about long-term effects" (Phillips et al. 2017, 27).

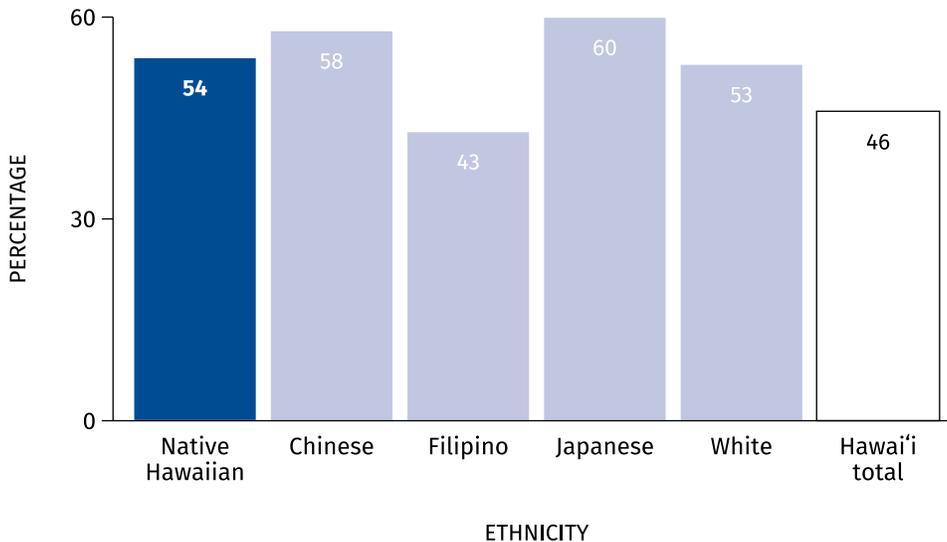
While Hawai'i does not yet have universal prekindergarten, forward progress is evident through efforts such as the 2012 establishment of the Executive Office on Early Learning and the collaborative development of *Our Keiki, Our Future: Hawai'i Early Childhood State Plan 2019–2024*. The five-year plan focuses on supporting keiki, from prenatal through their eighth year, and complements proposed legislation (House Bill 2543, "Access to Learning") to expand affordable childcare so that, "by the end of this decade . . . every three- and four-year-old in Hawai'i [will] have the opportunity to attend a childcare or preschool program" (Ige 2020). As of this writing, this bill has been delayed due to COVID-19 and the resulting disruption of the 2020 legislative session.

Charged with "developing an early learning system that shall ensure a spectrum of high-quality, developmentally appropriate early learning opportunities for Hawai'i's children throughout the state" (Moriguchi 2019, 1), the Executive Office on Early Learning launched Hawai'i's first publicly funded prekindergarten program in fall 2014. As of this writing, the program serves 880 students in the year prior to their kindergarten eligibility and operates across forty-four prekindergarten classrooms statewide in partnership with the Hawai'i Department of Education (DOE) and the Hawai'i Public Charter School Commission (Executive Office on Early Learning 2019b). In the most recent school year (2019–20), 439 students were served in Hawai'i DOE schools (an increase from the prior year's enrollment of 426), with 231 students served in charter schools (Moriguchi 2019). Ongoing programmatic challenges include an absence of extended or after-school care and a shortage of DOE-licensed staff to accommodate expansion statewide.

## Preschool Enrollment

With this backdrop of a universal early learning system under development in Hawai'i, we now turn to a review of preschool enrollment figures. Many things play into the decision of whether to enroll a child in preschool, including affordability, accessibility, and availability of seats. A Kamehameha Schools study finds that parental educational attainment, income, ethnicity, and the presence of caregivers at home are all correlated with preschool enrollment in Hawai'i. These variables do not represent all the factors affecting preschool enrollment but are considered to be the strongest predictors (Kamehameha Schools 2017). Recent data indicate that 54 percent of young Native Hawaiian keiki enroll in preschool, compared with the Hawai'i total of 46 percent (fig. 2.15).

**FIGURE 2.15** Preschool enrollment  
[as a percentage of children ages 3–4, by ethnicity, Hawai'i, 2017]



*Data source:* US Census Bureau, American Community Survey, Public Use Microdata Sample 5-year file

*Note 1:* The designation “White” in this chart refers to non-Hispanic Whites, alone or in combination with other ethnicities, as defined by the American Community Survey.

- Among Native Hawaiian three- and four-year-olds, more than half (54 percent) are enrolled in preschool.
- Filipino three- and four-year-olds have the lowest preschool enrollment rate (43 percent) among the major ethnicities in Hawai'i.
- The rates of preschool enrollment among Chinese and Japanese children are the highest in Hawai'i.

Trend data from 2008 to 2017 show a similar pattern, with Native Hawaiian preschool enrollment higher than the Hawai'i total but generally lower than that of other major ethnicities (except Filipinos). Looking at the ten-year period as a whole, preschool enrollment among Native Hawaiian keiki was relatively stable, increasing slightly from 51 to 52 percent between 2008 and 2017. Over a shorter time frame, from 2009 to 2015, there was a pronounced increase in Native Hawaiian preschool enrollment—perhaps resulting from collective efforts during those years as public and private collaborators worked together to address gaps in Native Hawaiian early childhood education—but these gains subsided, resulting in a downward trend from 2015 to 2017. Even at the highest point of Native Hawaiian preschool enrollment, nearly half of all keiki did not access preschool education (fig 2.16).

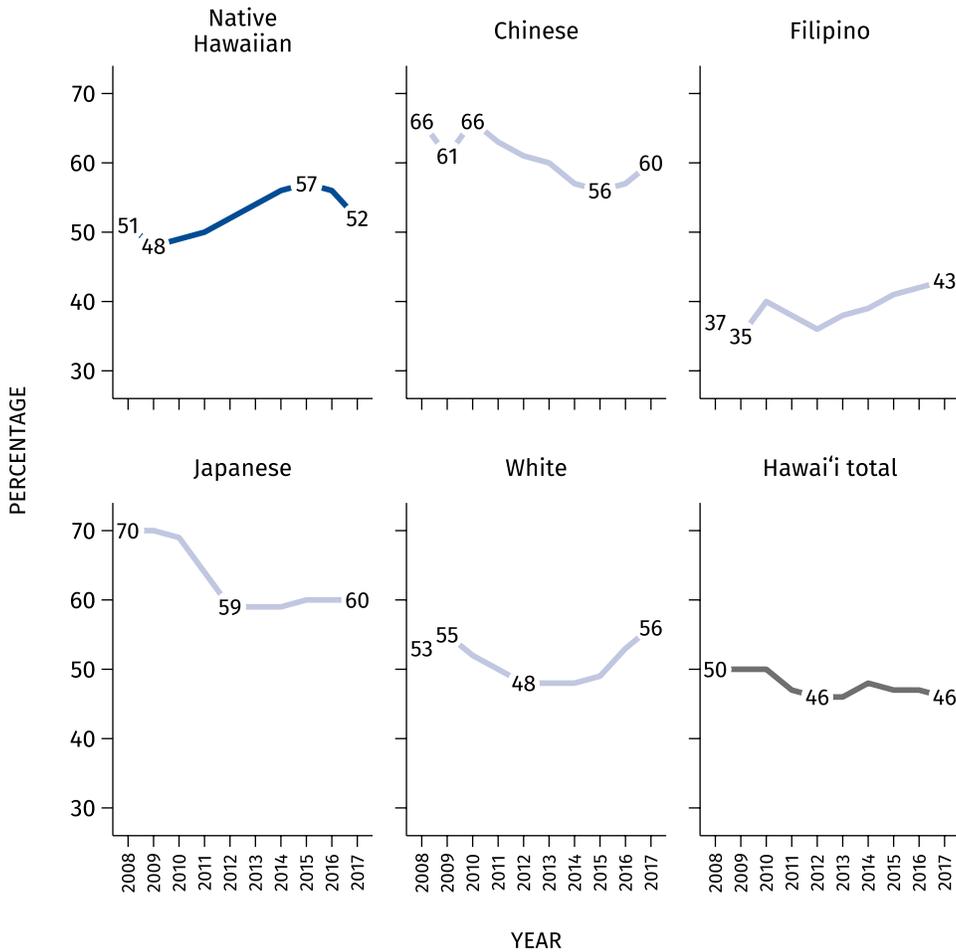
Among Hawai'i's other major ethnic groups, trends in preschool enrollment have varied over time. For example, enrollment rates of Chinese and Japanese<sup>8</sup> preschoolers trended downward over the past decade, while Whites trended upward and Filipinos realized gains (fig. 2.16).

When looking specifically at ethnicity, 39 percent of all preschoolers in Hawai'i are Native Hawaiian, with White being the most common ethnicity (fig. 2.17).

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<sup>8</sup> We are not able to explain the notable decline in enrollment among Japanese preschoolers in Hawai'i. It could be related to a variety of factors (e.g., parental educational attainment, income, presence of caregivers in the home, and the affordability, accessibility, and availability of preschool seats). In examining parental educational attainment specifically, we find that Japanese college completion rates are among the highest in Hawai'i and are rising, making the decline in preschool enrollment seem counterintuitive.

**FIGURE 2.16 Trends in preschool enrollment**  
 [as a percentage of children ages 3–4, by ethnicity, Hawai'i, 2008 to 2017]

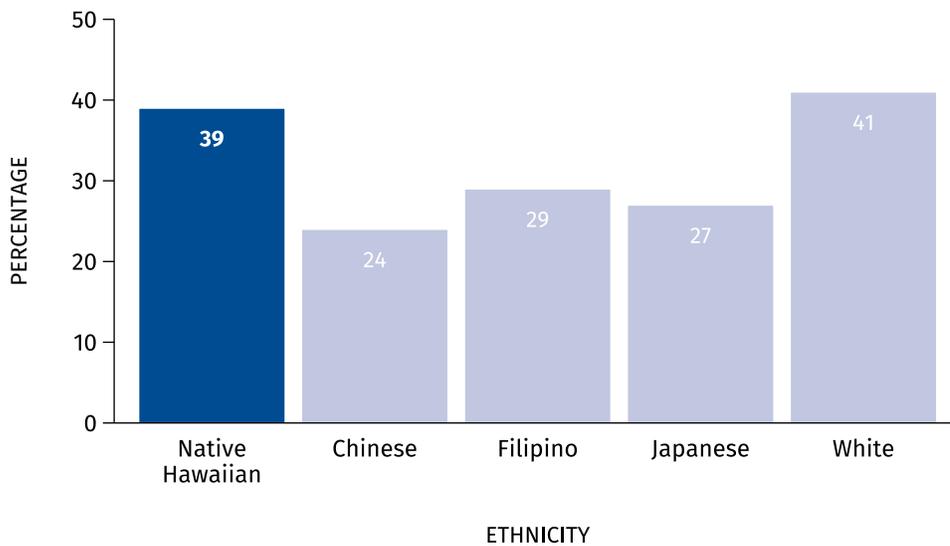


Data source: US Census Bureau, American Community Survey, Public Use Microdata Sample 1-year files  
 Note 1: The designation “White” in this chart refers to non-Hispanic Whites, alone or in combination with other ethnicities, as defined by the American Community Survey.  
 Note 2: Data labels are presented for the first and last points, the maximum and minimum points, and some inflection points where the trend changes.

- Comparing 2008 with 2017, preschool enrollment among Native Hawaiian three- and four-year-olds did not change significantly.
- Starting in 2009, preschool enrollment among Native Hawaiian keiki began a significant upward trend, reaching a high point of 57 percent before declining from 2015 to 2017; during the same three-year period, preschool enrollment among other major ethnicities increased or remained steady.
- Although enrollment rates among Japanese preschoolers are relatively high, the percentage of Japanese children enrolled in preschool decreased from 69 to 59 percent between 2010 and 2012.

- In 2008, Native Hawaiian preschool enrollment was comparable to the Hawai'i total; however, by 2017 there was a difference of 6 percentage points, with 52 percent of Native Hawaiian keiki enrolled in preschool, compared with the Hawai'i total of 46 percent.
- Compared with other ethnicities, Filipinos realized the greatest gains (6 percentage points) in preschool enrollment from 2008 to 2017.

**FIGURE 2.17** Ethnicity of preschoolers  
[as a percentage of children enrolled in preschool, Hawai'i, 2017]



*Data source:* US Census Bureau, American Community Survey, Public Use Microdata Sample 5-year file

Note 1: These percentages represent a distribution; the total percentage exceeds 100 percent, because children who have more than one ethnicity are counted in multiple ethnic groups.

Note 2: The designation "White" in this chart refers to non-Hispanic Whites, alone or in combination with other ethnicities, as defined by the American Community Survey.

- Among children enrolled in preschool, 39 percent are Native Hawaiian—the second-most common ethnicity of all preschoolers in Hawai'i.
- The most common ethnicity of preschoolers in Hawai'i is White (41 percent).

## PRESCHOOL ENROLLMENT—REGIONAL HIGHLIGHTS

Across regions, out of all Native Hawaiian children ages zero to four, the greatest proportion (21 percent) reside in Central O'ahu. Central also has the highest proportion (20 percent) of all Native Hawaiian keiki enrolled in preschool. Comparing regions, North Shore and Kaua'i have much smaller proportions of the overall population of Native Hawaiian keiki enrolled in preschool (4 percent and 3 percent, respectively) (table 2.2). In general, research shows that childcare availability varies greatly by location and is less available in rural areas and Kaua'i, Moloka'i, and Lāna'i (DeBaryshe et al. 2017).

**TABLE 2.2** Regional distribution of young Native Hawaiian children and preschool enrollment  
[number and percentage of Native Hawaiian children ages 0–4, and number and percentage of Native Hawaiian children in preschool, by region, Hawai'i, 2015]

Region	Native Hawaiian children ages 0–4		Native Hawaiian children enrolled in preschool	
	Number	Percentage ages 0–4	Number	Percentage enrolled
East Hawai'i	3,138	10	861	11
West Hawai'i	2,882	10	819	10
Maui	3,778	13	1,142	14
Honolulu	4,303	14	1,282	16
Windward	3,421	11	1,021	12
North Shore	1,742	6	335	4
Central	6,290	21	1,652	20
Leeward	3,160	10	799	10
Kaua'i	1,456	5	276	3
Total	30,170	100	8,187	100

Data source: US Census Bureau, American Community Survey, Selected Population Tables

- Native Hawaiian preschool enrollment in each region is mostly proportionate to that region's population of young Native Hawaiian keiki ages zero to four.
- Among all Native Hawaiian keiki ages zero to four in Hawai'i, slightly more than one in five (21 percent) live in the Central region—approximately the same as Central's proportion of all Native Hawaiian keiki enrolled in preschool (20 percent).
- Nearly two-thirds (62 percent) of all Native Hawaiian children ages zero to four—and of all Native Hawaiian preschoolers—live on O'ahu (combining percentages from five regions).
- One-fifth (20 percent) of all Native Hawaiian children ages zero to four live on Hawai'i Island; slightly more than one-fifth (21 percent) of all Native Hawaiian preschoolers live on Hawai'i Island (combining percentages from two regions).

In sum, our findings show that preschool enrollment among Native Hawaiian keiki exceeds that of the Hawai'i total. Slightly more than half (52 percent) of all Native Hawaiian three- and four-year-olds were enrolled in preschool in 2017—similar to enrollment rates in 2008. Out of all Native Hawaiian keiki enrolled in preschool, the largest proportion is in Central O'ahu.

## Preschool Outcomes

Because Hawai'i does not have a universal preschool system with shared measures of success, data collection and monitoring vary from program to program and over time, making preschool outcomes difficult to quantify. However, there are encouraging results from Hawai'i's first publicly funded prekindergarten program that was initiated in 2014 at eighteen Hawai'i DOE schools by the Executive Office on Early Learning.

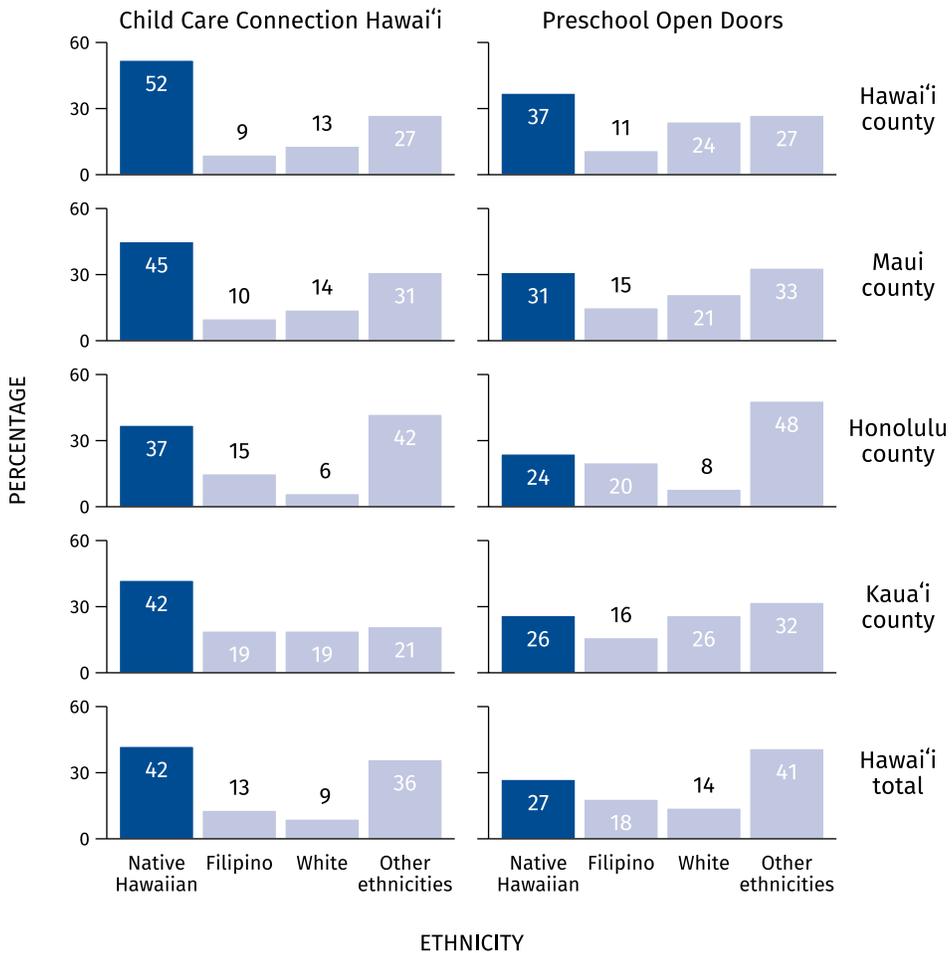
A study by the Hawai'i P-20 Partnerships for Education found that participants in the public prekindergarten program for school year 2014–15 were more likely to meet or exceed standards on third grade standards-based assessments and remain enrolled at the same school from kindergarten to third grade, compared with their peers at the same elementary school who did not participate in the program. Results among Native Hawaiian students mirror these statewide findings, with Native Hawaiian participants scoring 6 percentage points higher in meeting or exceeding English standards by grade three, and 3 percentage points higher in math standards. Although these are preliminary findings from only one year of implementation without controlling for prior prekindergarten experiences, findings illustrate the potential for positive cognitive development outcomes associated with early learning (Hawai'i P-20 Partnerships for Education 2020).

## Public and Private Investments in Early Learning

The urgent need for quality early learning programs in Hawai'i has been articulated by the Hawai'i Early Learning Advisory Board and Connors-Tadros et al. (2012), emphasizing that the Hawai'i DOE and other state agencies are committed to coordinating funding. Despite progress over the past decade, including the formation of Hawai'i's Executive Office on Early Learning, only 46 percent of Hawai'i's three- and four-year-olds attend preschool (see [fig. 2.15](#)). Because more than half of Hawai'i's children do not attend preschool, a closer examination of public and private options and support is warranted, including funding resources for preschool.

Affordability of early learning for Native Hawaiians is a goal shared among public officials and organizations statewide. One such effort to increase access to early learning opportunities for families in need is the Preschool Open Doors program, a subsidy program offered through the Department of Human Services Child Care Connection Hawai'i program. While the program provides subsidies to families with children ages twelve and younger (or, in some cases, up to age eighteen if the child is unable to perform self-care and lives with their parents or caretakers), Preschool Open Doors supports school readiness by providing subsidies for young children to attend a licensed childcare program (including preschools) during the year prior to kindergarten. About one-fourth of Preschool Open Doors participants are Native Hawaiian, with the highest proportion of Native Hawaiian participants (37 percent) in Hawai'i county ([fig. 2.18](#)). Focused attention and collaborations such as these, as well as public-private initiatives, may contribute to expanded and more accessible options for early learning.

**FIGURE 2.18** Ethnic distribution of childcare and preschool subsidy recipients—county comparison [by program, ethnicity, and county, Hawai'i, 2017]



Data source: Hawai'i Department of Human Services, Benefit, Employment, and Support Services, via special request by Kamehameha Schools (years 2015, 2016, and 2017 combined)

- For the Preschool Open Doors program, Native Hawaiians represent slightly more than one-quarter of all program participants—27 percent of the Hawai'i total.
- Across counties, Hawai'i county has the highest proportion of Native Hawaiian participants (37 percent) in the Preschool Open Doors program.
- For Child Care Connection Hawai'i recipients, Native Hawaiians represent 42 percent of the Hawai'i total—the highest proportion among Hawai'i's major ethnicities.
- In Hawai'i county, more than half (52 percent) of Child Care Connection Hawai'i recipients are Native Hawaiian.

Scholarships and financial aid are additional mechanisms to expand options for Native Hawaiian 'ohana and increase access to preschools. For example, about four thousand young Native Hawaiian keiki receive preschool scholarships, financial aid, and subsidies from Kamehameha Schools each year. This impacts about one-third of the total population

of Native Hawaiian three- and four-year-olds, contributing to the high representation of Native Hawaiian keiki among the preschool-attending population. Kamehameha Schools' substantial contributions toward early learning also include public and private collaborations and investments in FCILs.

Affordable and subsidized early learning opportunities have a direct benefit to families and society as a whole. For example, when children are enrolled in early learning, parents have the option to return to work—potentially strengthening the workforce, increasing savings, and decreasing reliance on social services and remediation. Such conditions open avenues for enhanced formal and informal learning opportunities for keiki, supporting greater educational gains over time.

On the whole, there has been notable progress in Hawai'i in increasing access to early childhood programs, especially through the establishment of the Early Learning Board and continued expansion of prekindergarten classrooms under the five-year *Hawai'i Early Childhood State Plan* enacted in 2019. However, even with increased access, families still experience deep equity gaps that need to be addressed to provide choice and expanded opportunities for our youngest learners to grow and thrive. To do this, existing tools can be implemented and optimized, and resources can be leveraged collaboratively. This includes:

- Expanding public and private funds to increase the number of public preschool programs and classrooms to support high-quality learning opportunities, including in rural and remote areas, eliminating childcare deserts
- Streamlining need-based financial assistance for childcare via Department of Human Services' Child Care Connection Hawai'i and Preschool Open Doors
- Allocating state funding for multigenerational programs that bring together young keiki, caretakers, and elders
- Expanding high-quality early learning opportunities throughout Hawai'i with availability to adequately provide families with options, especially those in rural communities
- Developing pathways for early childhood educators within higher education institutions
- Strengthening the current workforce, in collaboration with the business community, to give families greater ability to direct resources toward early learning
- Engaging philanthropic support for collaborative community-driven and system-building efforts in early learning

Overall, it is clear that young children need rich, engaging, and high-quality experiences in preschool and subsequent grades that capitalize on their readiness to learn so that they make meaningful gains.

## PHYSICAL WELL-BEING

The healthy development of young keiki hinges in large part on the physical health and well-being of their parents and immediate caregivers and surroundings. Socioeconomic status, lifestyle, environment, genetics, history, and social environments have been shown to impact the development, educational achievement, and overall well-being of young children throughout all life stages (Adler and Newman 2002; Huynh et al. 2005; Poston, Harthoorn, and van der Beek 2011; Stephenson et al. 2018).

Research has shown that maternal health conditions prior to conception, such as the absence of asthma, diabetes, high blood pressure, and stress (Hayes et al. 2014), as well as actively abstaining from alcohol, drugs, and cigarettes, are linked to positive childbirth outcomes, including a healthy birthweight (Denny et al. 2012; Hayes et al. 2014) and reduction of infant mortality (Hirai et al. 2013), a widely used indicator of overall population health. Our findings show that in Hawai'i, Native Hawaiian adults are disproportionately affected by diabetes and high blood pressure (see [figs. 1.69](#) and [1.71](#)). Furthermore, maternal health measures such as obesity and substance use are higher among Native Hawaiian women who gave birth than the Hawai'i total. These aspects of maternal health and physical well-being are an important part of the multidimensional influences affecting our youngest keiki.

Timely prenatal care is essential to healthy child development (Kahn et al. 2002). Research demonstrates that prenatal care during the first trimester of pregnancy improves the chances of survival for the fetus, helps to ensure the good health of the mother, and enhances child development (US Public Health Service 1989). Our findings indicate that prenatal care for Native Hawaiian women—although not as prevalent as it is for some ethnicities in Hawai'i—is generally on par with the Hawai'i total in terms of timely and adequate care.

Receiving perinatal care during the weeks preceding and following birth has positive impacts on the physical health of both mother and child and is linked to health and behavioral developmental gains for children (Kahn et al. 2002).

The following analysis describes some of the conditions that set the stage for early childhood development among Native Hawaiian keiki. Overall, we find several areas of parity, where indicators for Native Hawaiian women are similar to Hawai'i totals, such as prenatal care, alcohol consumption and use of illicit drugs during pregnancy, abortion rates, preterm deliveries, normal birthweight, and postpartum depression. There is a downward trend in infant mortality among Native Hawaiians; however, disproportionate rates of death among

Native Hawaiian infants persist. Areas of concern for Native Hawaiian maternal health include obesity, unintended pregnancies, binge drinking and smoking during pregnancy, and low rates of breastfeeding.

In the analyses that follow, we examine factors that influence the physical well-being of young children by comparing maternal characteristics (e.g., ethnicity, age, prenatal care) and birth outcomes (e.g., preterm birth, infant deaths, birthweight, and breastfeeding) of Native Hawaiian women against the Hawai'i total. Similarities between Native Hawaiians and the Hawai'i total can be partially explained by the fact that Native Hawaiian births constitute more than one-third of all births in Hawai'i. Thus, data on Native Hawaiian mothers may heavily inform statewide findings.

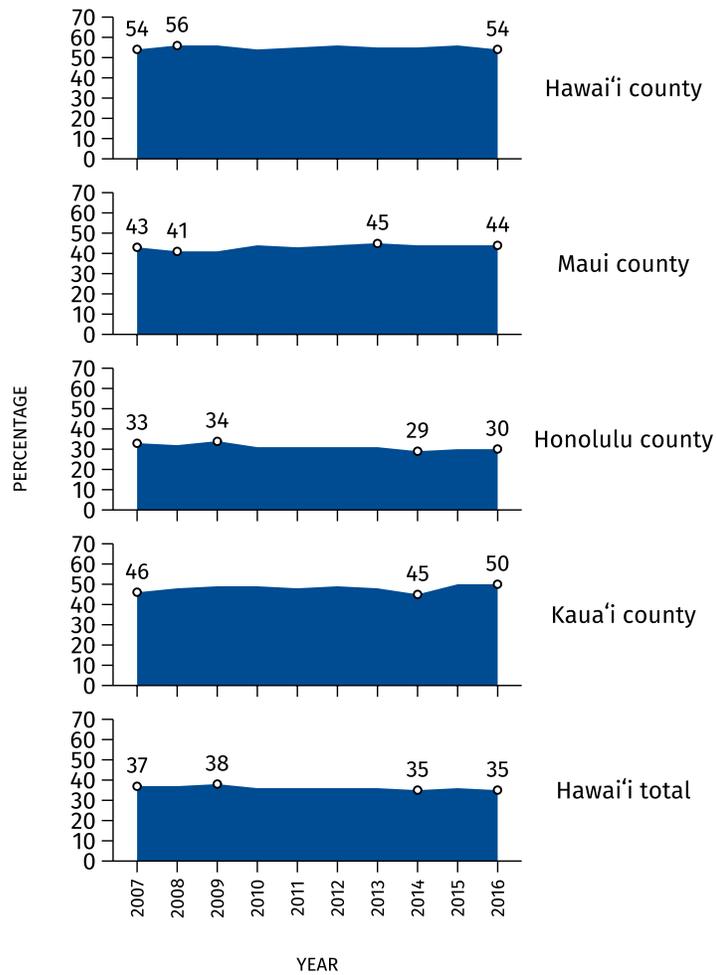
## Maternal Characteristics

The Office of Hawaiian Affairs (2018) notes that Native Hawaiian wāhine, or women, play an essential role in nurturing both keiki and the lāhui (nation, people) through the unique mana they possess as wāhine. Monitoring maternal characteristics can help anticipate changes in well-being for subsequent generations. “When one of us [wāhine] is well, in balance and full of ola [life], and eight of us, and four thousand of us, so too shall [be] our ‘ohana, our Hawaiian communities and our lāhui” (Office of Hawaiian Affairs 2018, 118).

Maternal characteristics such as age of childbearing and ethnicity highlight differences among racial groups and demographics. From a demographic perspective, women who give birth at younger ages may delay their career and education progression, which impacts their current and future income and employment status. For example, women with college degrees tend to have children an average of seven years later than women without and focus on education completion and career establishment before having children (Bui and Miller 2018). From a cultural perspective, there may be additional implications for Native Hawaiians with regard to the decision to start a family later in life, such as the time available for kūpuna to spend with their mo'opuna—a scenario that could affect some of the known benefits of grandparent–grandchild interaction.

Based on the Hawai'i total in 2016, more than one-third (35 percent) of all births in Hawai'i are to Native Hawaiian mothers (fig. 2.19), followed by 21 percent among “other” ethnicities and 19 percent among Whites (not shown). There is variation from county to county in the proportion of births attributed to Native Hawaiian women. For example, in 2016, out of the 2,341 total births in Hawai'i county, 1,265 (54 percent) were to Native Hawaiian women, compared with 30 percent in Honolulu county (fig. 2.19).

**FIGURE 2.19** Trends in Native Hawaiian mothers who gave birth—county comparison  
 [as a percentage of all births, by county and year, Hawai'i, 2007 to 2016]



Data source: Hawai'i Department of Health, *Vital Statistics Report*, Hawai'i Health Data Warehouse, Office of Health Status Monitoring, 2018

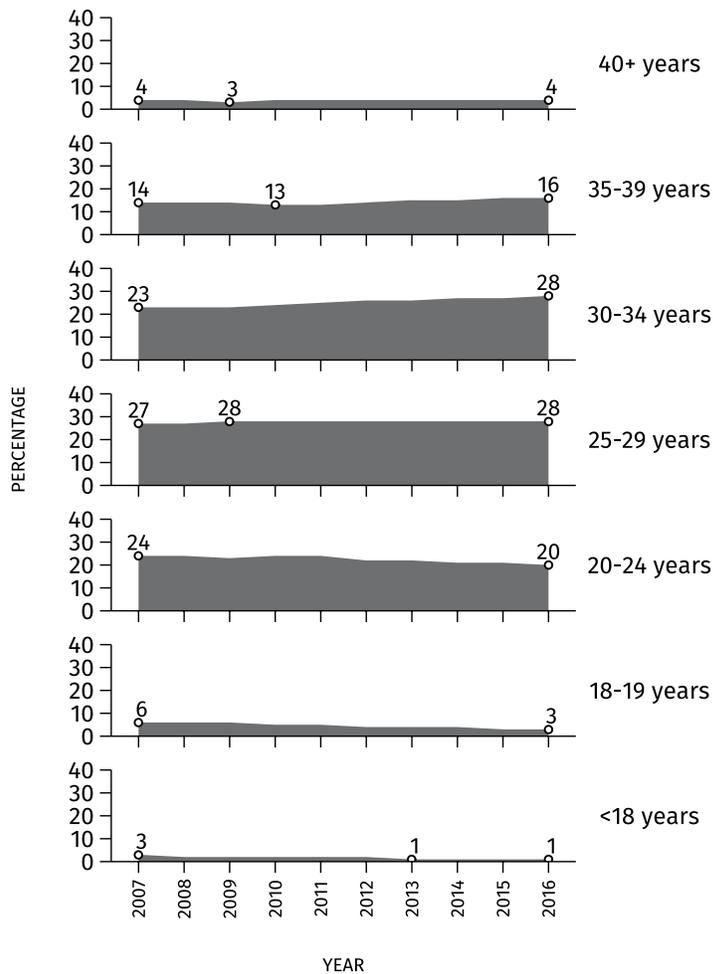
Note 1: These percentages are based on actual counts, not sample data.

Note 2: Data labels are presented for the first and last points, the maximum and minimum points, and some inflection points where the trend changes.

- For the Hawai'i total, approximately one-third (35 percent) of all births in 2016 were to Native Hawaiian women—a slight decrease from the 2007 rate (37 percent).
- From 2007 to 2016, Honolulu county consistently had the lowest rate of Native Hawaiian mothers who gave birth, while Hawai'i county consistently had the highest rate.
- Of all births in Hawai'i between 2007 and 2016, the most common ethnicity of women who gave birth was Native Hawaiian (not shown).

The ages at which women give birth in Hawai'i mirror national (Mathews and Hamilton 2016) and international trends (Organisation for Economic Co-operation and Development 2019), suggesting that women are waiting longer to have children. For example, out of all births in Hawai'i, the percentage of births to women ages thirty to thirty-four increased from 23 to 28 percent between 2007 and 2016. Conversely, giving birth at age twenty-four and younger is becoming less common, declining from 24 to 20 percent over the same period of time (fig. 2.20).

**FIGURE 2.20** Trends in the age of mothers at childbirth  
[as a percentage of all births, by year, Hawai'i, 2007 to 2016]



Data source: Hawai'i Department of Health, *Vital Statistics Report*, Hawai'i Health Data Warehouse, Office of Health Status Monitoring, 2018

Note 1: These percentages are based on actual counts, not sample data.

Note 2: Data labels are presented for the first and last points, the maximum and minimum points, and some inflection points where the trend changes.

- On the whole, women in Hawai'i are increasingly likely to give birth at older ages.
- From 2007 to 2016, there was an increase in the proportion of births to women in their thirties; during the same span of years, there was a decrease in the percentage of births to women ages twenty-four and younger.
- Compared with other age groups, women ages thirty to thirty-four saw the greatest increase (5 percentage points) in the proportion of births from 2007 to 2016.

Based on county-level data sources from the Hawai'i Department of Health in 2018, Maui shows the greatest increase in the proportion of births to women ages thirty to thirty-four, rising from 21 to 29 percent between 2007 and 2016. Hawai'i county—which has a high concentration of Native Hawaiians—has a relatively greater proportion of women giving birth at younger ages. Among Native Hawaiians specifically, the majority of births (56 percent) are to women in their twenties, and teenage births are more prevalent than they are among Hawai'i's other ethnicities (not shown).

In the analyses that follow, we present select measures of maternal health and behavioral characteristics that are tracked by the Hawai'i Pregnancy Risk Assessment Monitoring System (PRAMS), a population-based data surveillance system.

## PRECONCEPTION OBESITY

Native Hawaiian mothers have the second-highest rate of preconception obesity (28 percent), which is significantly higher than the Hawai'i total (19 percent) (Hawai'i PRAMS 2019). Preconception obesity is associated with pregnancy complications including hypertension, diabetes, preeclampsia, increased cesarean delivery rates, and a range of other multi-generational impacts. For example, children born to obese mothers are also more likely to experience obesity as they grow older, and daughters born to obese mothers are more likely to experience diabetes and obesity during their own pregnancies (Zeng et al. 2010). In Hawai'i, preconception obesity is also correlated with poverty, meaning that higher poverty generally equates to higher likelihood of preconception obesity (Hawai'i PRAMS 2019). This has negative implications for young Native Hawaiian keiki, given that Native Hawaiians, on average, face disproportionate rates of poverty and obesity (see [figs. 1.34](#) and [1.61](#)).

## PRENATAL SUBSTANCE USE

Prenatal substance use such as alcohol consumption, smoking, and drug abuse has detrimental effects on mothers and their children. Data from 2015 show that Native Hawaiian women are more likely to report binge drinking prior to pregnancy (24 percent compared with the Hawai'i average of 19 percent) but slightly less likely to binge drink in the last three months of pregnancy (7 percent compared with the Hawai'i average of 9 percent) (Hawai'i PRAMS 2019). Alcohol consumption is linked to complications and conditions such as birth

defects, developmental disabilities, miscarriage, stillbirth, preterm birth, and sudden infant death syndrome.

Compared with mothers of other ethnicities in Hawai'i, Native Hawaiians have the highest proportion of mothers who smoked at least one cigarette per day in the last three months of pregnancy (9 percent)—a rate that is higher than the Hawai'i total (5 percent) (Hawai'i PRAMS 2019). Smoking during pregnancy exposes the mother and baby to harmful chemicals and leads to health problems such as reduced birthweight, preterm birth, birth defects, and loss of the baby. Risks continue after birth, with an increased likelihood of sudden infant death syndrome, colic, asthma, and childhood obesity (Mayo Clinic 2020b).

The use of illicit drugs is associated with a range of negative birth outcomes. Among Native Hawaiian mothers, nearly one in ten (9 percent) used illicit drugs at least one time in the month before pregnancy, although this rate did not differ significantly from the Hawai'i total (5 percent) (Hawai'i PRAMS 2019).

## UNINTENDED PREGNANCIES AND ABORTION

In 2015, nearly half (48 percent) of pregnancies in Hawai'i were unintended—a slight decrease from 2012 findings (51 percent). Unintended pregnancies are most common among mothers ages twenty-four and younger, as well as those facing the greatest levels of poverty. The rate of unintended pregnancies among all Native Hawaiian mothers (60 percent) is significantly higher than the Hawai'i average and is the third-highest relative to other ethnicities (Hawai'i PRAMS 2019).

Based on 2018 data sources from the Hawai'i Department of Health, abortion rates in Hawai'i are generally highest among women of younger ages. Among women younger than age eighteen, the Hawai'i total is 42 abortions performed for every 100 live births, compared with 7 per 100 among women ages thirty to thirty-four. Within the youngest age groups (i.e., twenty-four and younger), Native Hawaiians have the lowest abortion rates of the major ethnicities in Hawai'i. When looking at averages for all age groups, Native Hawaiians and Japanese have the lowest abortion rates among Hawai'i's major ethnicities—9 abortions for every 100 live births (not shown).

## TIMELY PRENATAL CARE

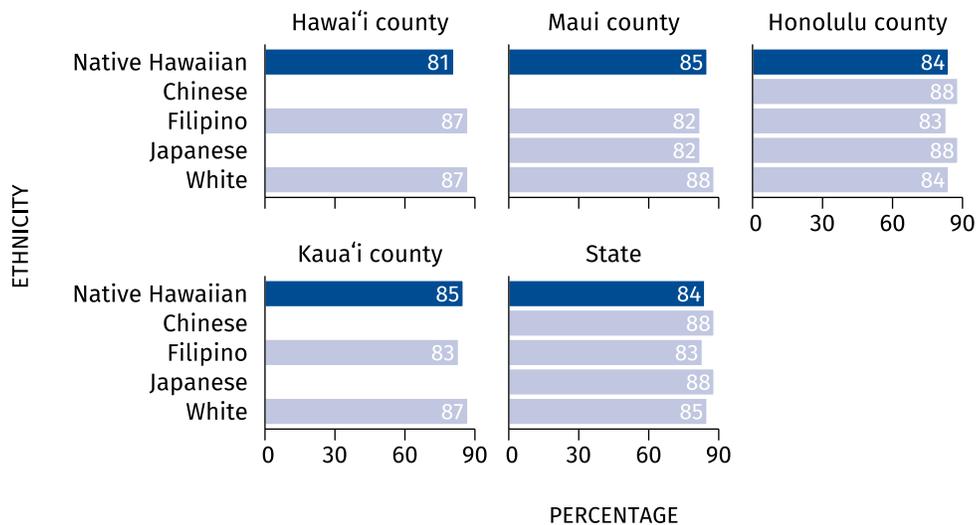
More than eight in ten Native Hawaiian women receive prenatal care as early as they want—a positive indication that soon-to-be mothers are getting the support and care they need for a successful pregnancy and birth (fig. 2.21). Regular doctor visits, prenatal tests, counseling, discussion of medical history and conditions, and taking folic acid supplements are routine practices for healthy prenatal care.

### Risk Factors and Prenatal Care—County Highlights

County-specific data show certain counties are at greater risk for issues related to health during pregnancy. For example, Kaua'i has the highest proportion of mothers who use alcohol during pregnancy. Maui has the highest rate of illicit drug use among mothers. Hawai'i county has the greatest prevalence of smoking among mothers and unintended pregnancies (Hawai'i PRAMS 2019). These findings, although not specific to Native Hawaiians, provide contextual information particularly relevant to counties with high concentrations of Native Hawaiians.

The percentage of timely prenatal care among Native Hawaiians across counties does not show variation with the Hawai'i total of 84 percent (not shown). Among women who gave birth in Hawai'i county, Native Hawaiian mothers were the least likely to receive timely prenatal care (fig. 2.21).

**FIGURE 2.21** Women who received prenatal care as early as they wanted—county comparison  
[as a percentage of women who recently gave birth, by ethnicity and county, 2011]



Data source: Hawai'i Health Data Warehouse, Hawai'i Department of Health, Pregnancy Risk Assessment Monitoring System, 2011 (years 2009 to 2011 combined)

Note 1: Missing lines or bars indicate data that are unavailable, not applicable, or suppressed due to small sample size.

- Among women who gave birth in Hawai'i county, Native Hawaiian mothers were the least likely to receive prenatal care as early as they wanted.
- At the state level, 84 percent of Native Hawaiian women who gave birth received prenatal care as early as they wanted—the same proportion as the Hawai'i total for all ethnicities (not shown).

## Birth Outcomes

Positive birth outcomes and nurturing parent practices help to further the health and well-being of infants. Available data within this area include preterm delivery, birthweight, breastfeeding, postpartum depression, and infant mortality.

### PRETERM DELIVERY

Based on data from the Hawai'i Pregnancy Risk Assessment Monitoring System, 9 percent of Native Hawaiian women who gave birth had a preterm delivery (Hawai'i PRAMS 2019)—a percentage that is on par with the Hawai'i total and with national rates from 2018 (Centers for Disease Control and Prevention 2019d). Preterm birth is related to a variety of health problems such as breathing and feeding difficulties, developmental delays, hearing and vision problems, and other conditions that can persist for a lifetime, leading to emotional hardships and financial pressures that affect one's quality of life (Hawai'i PRAMS 2019; Centers for Disease Control and Prevention 2019d).

Across Hawai'i, disparities are seen across ethnic groups, with Japanese women having the lowest percentage of preterm deliveries (7 percent) and Filipino women having the highest percentage (12 percent). A regional perspective shows that in Hawai'i county, 13 percent of Native Hawaiian women who recently gave birth had a preterm delivery—the highest percentage among Native Hawaiian women across counties (Hawai'i PRAMS 2019).

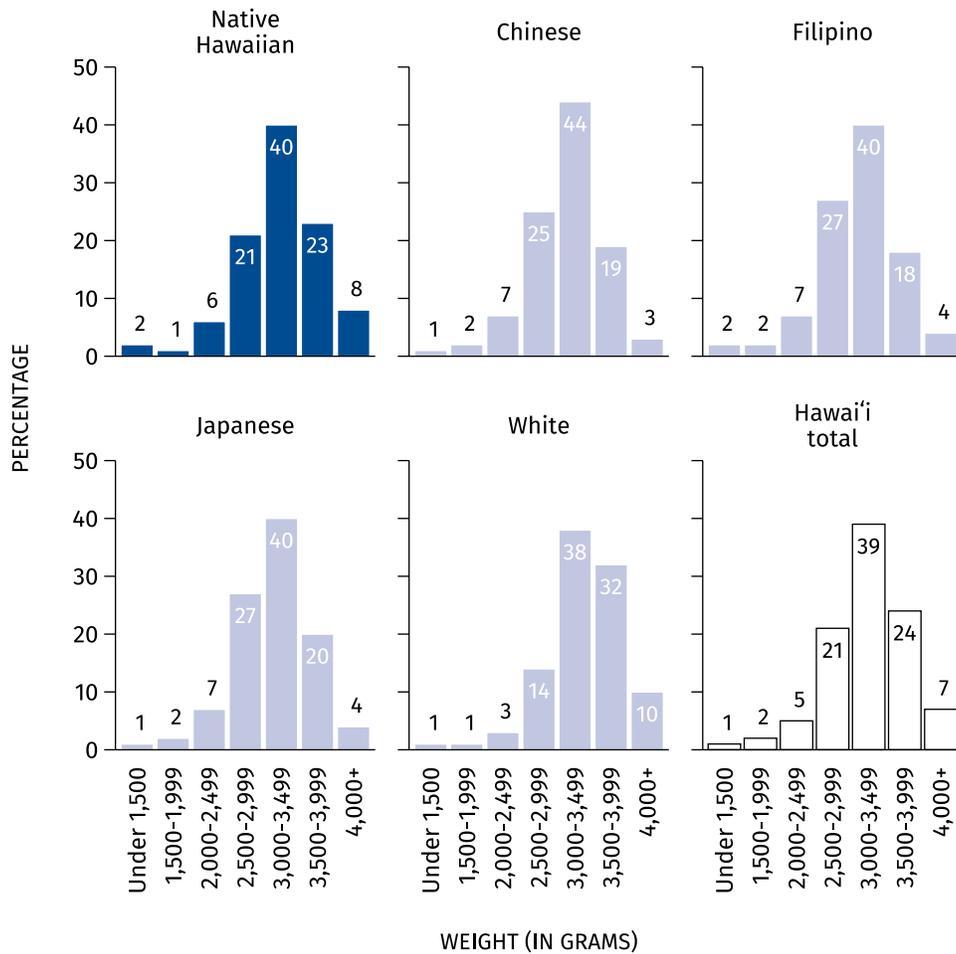
### BIRTHWEIGHT

Birthweight is an important measure of physical well-being. The average weight of a newborn is around eight pounds, or 3,600 grams, with normal birthweight considered to be between 2,500 and 4,000 grams (Desiraju 2018). Of Hawai'i births in 2015, more than four out of five Native Hawaiian newborns (84 percent) were born within this normal range.<sup>9</sup> This percentage is on par with the Hawai'i total (84 percent) (fig. 2.22).

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<sup>9</sup> Figure 2.22 shows this range to be 2,500 to 3,999 grams, per available data presented by the Hawai'i Department of Health, Office of Health Status Monitoring.

**FIGURE 2.22 Birthweight of newborns**  
 [as a percentage of all live births, by ethnicity, Hawai'i, 2015]



Data source: Hawai'i Department of Health, *Vital Statistics Report*, Hawai'i Health Data Warehouse, Office of Health Status Monitoring, 2015, via special request by Kamehameha Schools

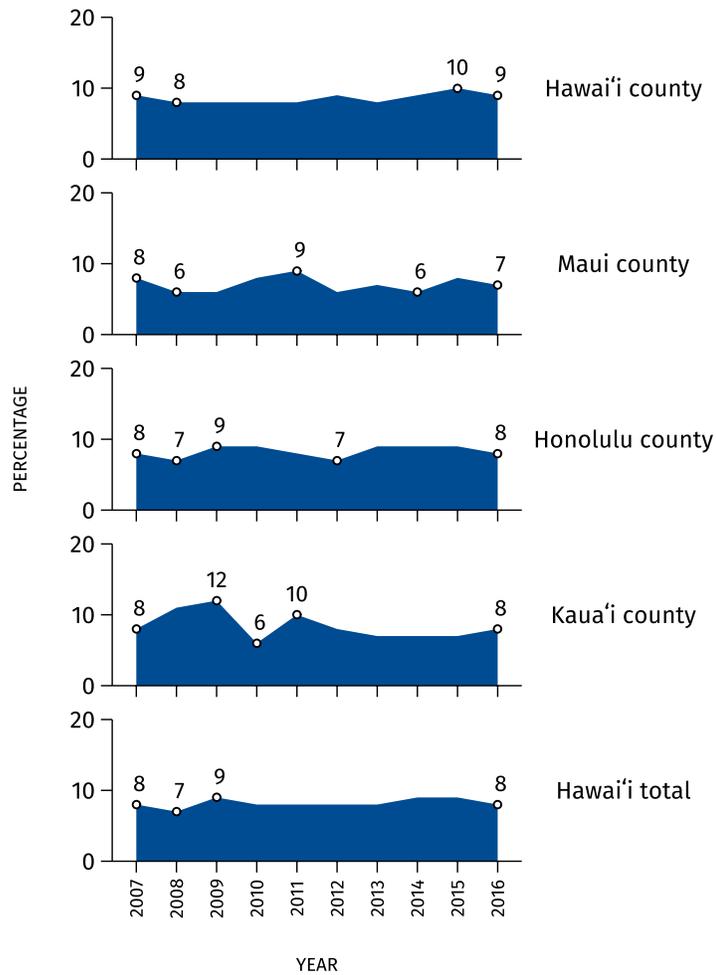
Note 1: These percentages are based on actual counts, not sample data.

- The proportion of Native Hawaiian newborns with a birthweight at or above 3,000 grams (71 percent) is similar to the Hawai'i total (70 percent).
- Compared with other ethnicities, Chinese, Filipino, and Japanese newborns are the most likely to have birthweights of less than 3,000 grams.
- Relative to other ethnicities, White newborns have the highest percentage (80 percent) of birthweights at or above 3,000 grams.

Low birthweight, defined as a newborn weighing less than 5.5 pounds (2,500 grams) at birth, can be caused by premature birth and has implications for early childhood development. In the decade spanning 2007 to 2016, the proportion of Native Hawaiian newborns with low birthweight remained relatively steady (fig. 2.23). In 2016, the percentage of low-birthweight Native Hawaiian infants (8 percent) was lower than that of other major ethnicities except for Whites (not shown).

Low birthweight among Native Hawaiian infants is statistically associated with infant mortality (Hirai et al. 2013) as well as a range of health challenges with eating, gaining weight, fighting infection, breathing, and digestive and nervous system problems (University of Rochester Medical Center, n.d.).

**FIGURE 2.23** Trends in Native Hawaiian newborns with low birthweight—county comparison  
 [as a percentage of all births, by county and year, Hawai'i, 2007 to 2016]



Data source: Hawai'i Department of Health, *Vital Statistics Report*, Hawai'i Health Data Warehouse, Office of Health Status Monitoring, 2018

Note 1: Low birthweight is defined as a newborn weighing less than 2,500 grams (5.5 lbs.) at birth.

Note 2: These percentages are based on actual counts, not sample data.

Note 3: Data labels are presented for the first and last points, the maximum and minimum points, and some inflection points where the trend changes.

- Compared with other counties, Kaua'i saw the greatest fluctuation in the proportion of Native Hawaiian newborns with low birthweight in the years between 2007 and 2016.
- In 2016, Maui county had the lowest rate of Native Hawaiian newborns with low birthweight, while Hawai'i county had the highest rate.
- The proportion of Native Hawaiian newborns with low birthweight in Honolulu and Kaua'i is on par with the Hawai'i total (8 percent), while Hawai'i county was 1 percentage point higher than the Hawai'i total, and Maui county was 1 percentage point lower.

## BREASTFEEDING

Breastfeeding is associated with numerous benefits to both child and mother. For Native Hawaiians, breastfeeding and lactation practices are viewed as a longstanding cultural tradition that is reinforced by scientific fact (Office of Hawaiian Affairs 2018). In addition to providing nutrition, breastfeeding can increase survival rates of infants and protect them from infection and illness. Breastfeeding can also help mothers heal following childbirth and improve their health by lowering the risk of type 2 diabetes, ovarian cancer, and certain types of breast cancer (American College of Obstetricians and Gynecologists 2013; Schwarz et al. 2009). Beyond physical benefits, breastfeeding is related to societal benefits such as increased workforce productivity (breastfed infants have lower risk of sickness, so mothers are less likely to miss work to care for a sick child) and lower healthcare costs due to fewer doctor or hospital visits (United States Breastfeeding Committee, n.d.).

More mothers in Hawai'i are breastfeeding for at least eight weeks after delivery, with data showing an increase from 71 to 80 percent between 2009 and 2015 (Hawai'i PRAMS 2019). Among Native Hawaiian mothers, breastfeeding was somewhat less likely, trailing about 10 percentage points below the Hawai'i average from 2009 to 2015 (not shown). A study of breastfeeding among a small group of Native Hawaiian mothers on the Wai'anae Coast found that access to resources and information, physical discomfort, time, and feeling comfortable asking for help were among the factors that influenced their decision to breastfeed (Oneha and Dodgson 2009).

## POSTPARTUM DEPRESSION

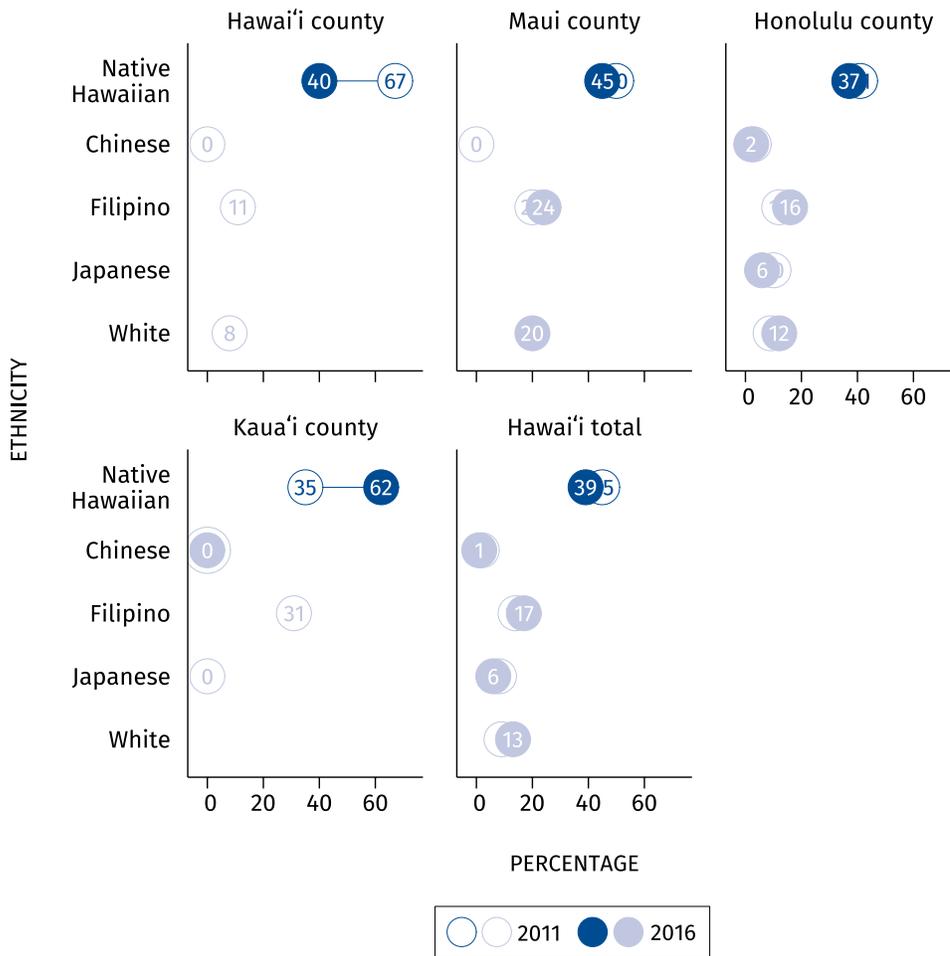
Following the birth of a child, some mothers experience prolonged, severe depression that affects their ability to care for their infant, complete daily tasks, and maintain a healthy outlook to keep both mother and baby safe (Mayo Clinic 2018b). The prevalence of postpartum depression among Native Hawaiian mothers (12 percent) is slightly above that of other ethnicities and the state total (9 percent) (Hawai'i PRAMS 2019).

## INFANT DEATH

Recent data indicate that Native Hawaiians experience the greatest proportion of infant deaths in Hawai'i, accounting for 39 percent of the Hawai'i total in 2016. This percentage is disproportionately high, even when considering that Native Hawaiians account for slightly more than one-third of all births. Despite this, there has been improvement in recent years. For example, compared with other ethnic groups in Hawai'i, Native Hawaiians had the greatest decrease (6 percentage points) in the proportion of overall infant mortality, declining from 45 to 39 percent between 2011 and 2016 (fig. 2.24).

In a study of infant mortality among Native Hawaiians, educational disparities among mothers accounted for part of the neonatal mortality gap (Hirai et al. 2013), underscoring the critical role of education in infant health.

**FIGURE 2.24** Ethnicity of infants who have died—county comparison  
 [as a percentage of infants who died before age 1, by county and year, Hawai‘i, 2011 and 2016]



Data source: Hawai‘i Department of Health, *Vital Statistics Report*, Hawai‘i Health Data Warehouse, Office of Health Status Monitoring, 2011 (years 2007 to 2011 combined) and 2016 (years 2012 to 2016 combined)

Note 1: These percentages are based on actual counts, not sample data.

Note 2: Missing circles indicate data that are unavailable, not applicable, or suppressed due to small sample size.

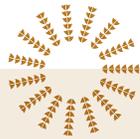
Note 3: This chart includes overlapping and sometimes obscured data points. The most recent data points are all visible; older data points that are not discernible suggest little or no change over time.

- Across counties and time periods, Native Hawaiians experience the highest incidence of infant deaths.
- Compared with other major ethnicities in Hawai‘i, Native Hawaiians had the greatest decrease (6 percentage points) in the proportion of overall infant mortality, declining from 45 to 39 percent between 2011 and 2016.
- Among Native Hawaiians, the most notable changes in the proportion of overall infant deaths from 2011 to 2016 were in Hawai‘i county (decreasing from 67 to 40 percent) and Kaua‘i (increasing from 35 to 62 percent).

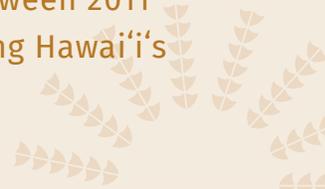
## BIRTH OUTCOMES—COUNTY HIGHLIGHTS

Compared with other counties, Hawai'i county has the highest rate (13 percent) of preterm deliveries among Native Hawaiian mothers (Hawai'i PRAMS 2019). Hawai'i county also had the greatest decline in the proportion of Native Hawaiian infant deaths, decreasing from 67 to 40 percent between 2001 and 2016. Kaua'i county, however, had a notable uptick in the proportion of Native Hawaiian infant deaths, increasing from 35 to 62 percent during the same period (fig. 2.24).

Physical health of young keiki is shaped by a multitude of factors including individual genetics; 'ohana characteristics, lifestyles, and structures; community resources, including access to quality healthcare; and local and national policies. Prior to birth, the health and lifestyle of a mother shape childbirth outcomes, which in turn impact a child's future physical growth and development. Optimal physical development during this critical life stage can be supported through the care and well-being of a young keiki's immediate caregivers, 'ohana, and community.



Infant mortality rates among Native Hawaiians decreased from 45 to 39 percent between 2011 and 2016—the greatest decline among Hawai'i's major ethnicities.



## CONCLUSION

The writings of Dr. Kekuni Blaisdell remind us of life in Hawai'i before Western contact: "Each Kanaka Maoli (Indigenous Hawaiian) as a child learned to be self-sufficient, living off of the land and the sea. But each Native also learned to share with others in the ahupua'a geographical unit, which extended from the ocean to the inland mountain ridge. The essence of wellness was lōkahi (oneness) and pono (harmony) with self, others and all in the cosmos. Lōkahi was inherent, having resulted from the mating of sky father Wākea with earth mother Papa. Since all things had this common parentage, all things were also living, conscious and communicating siblings" (Blaisdell 1997).

Spiritual relationships in this worldview are reflected in the concept of nā piko 'ekolu, or three body points: The piko po'o, at the top of the head—also evident as the open fontanel in an infant's skull—represents the past. This piko connects the individual to that from which they came and to 'aumākua, departed but ever-present ancestors, since the beginning of time. Piko waena, or the navel, represents the present. This piko is the umbilical connection to mākua, or parents, and covers the na'au (gut), which is the seat of knowledge, wisdom, and emotions. Piko ma'i is the genitalia, linking us to our descendants forever into the future (Blaisdell 1997). Thus, a keiki's birth at once represents these most precious connections to our past, present, and future. Mākua, kūpuna, and extended 'ohana share in the responsibility to mālama (care for) each child and ensure they know how to navigate a complex web of social, spiritual, and physical relationships.

The early years of life are pivotal for each individual and the well-being of the broader collective lāhui. In thriving conditions, young Native Hawaiian keiki grow and develop rapidly, their young minds soaking in as much as they can, creating neural synapses that will last a lifetime. Much of their development depends on the environment around them. Our review of early childhood well-being suggests challenges in these environmental conditions amid pockets of tentative progress. Overall, the policy implications clearly indicate that greater levels of focused commitment are required to combat long-standing inequities and to sustain gains in well-being more widely, rather than bursts of activity that generate short-term improvements for a few. For example, despite signs of progress, Native Hawaiian families with young keiki continue to face economic disadvantage, with livable income rates that are significantly below the Hawai'i total. Income of young children's households increased slightly in the years between 2008 and 2017, with the proportion earning a livable income

climbing 5 percentage points, resulting in a 4 percentage point decline in the proportion of low-income households among Native Hawaiian families with young keiki (from 20 to 16 percent).

In the area of health, the past decade has brought some improvements for young Native Hawaiian keiki. For instance, infant mortality rates among Native Hawaiians decreased by 6 percentage points from 2011 to 2016. However, Native Hawaiian infant mortality rates, as a critical indicator of overall well-being in a population, remain unacceptably high and vary greatly by county. In looking at foster care, fewer Native Hawaiian keiki were in the system between 2014 and 2018; however, Native Hawaiians remain disproportionately represented overall.

Other indicators related to the well-being of young Native Hawaiian keiki have remained consistent over time, including the percentages of single-parent households, coresidency of grandparents and grandchildren, and preschool enrollment. Although the proportion of single-parent families among Native Hawaiians in 2017 mirrors the rates seen in 2005, Native Hawaiians continue to make up the largest proportion of single-mother and single-father households among Hawai'i's major ethnicities, which often means that children have lengthier exposure to poverty. On the brighter side, we see stability in the percentages of Native Hawaiian households with keiki ages four or younger living with their grandparents in recent decades. About one in every three young Native Hawaiian keiki is able to build intergenerational relationships and benefit from strong social support networks within their households, provided there are adequate resources and support to assist such families. In the area of early learning, preschool enrollment among Native Hawaiians did not change significantly between 2008 and 2017, despite a positive spike in between these years. These results suggest a continued need to double down on efforts to improve access to early childhood education.

Finally, there are some areas that have worsened over time for young Native Hawaiian keiki, including parent educational attainment and child abuse. Rates of child abuse among Native Hawaiians increased by 4 percentage points from 2010 to 2017—which is particularly concerning, given that four in ten confirmed cases in Hawai'i involve children younger than age five. And in the area of education, there has been a decrease in the attainment of a bachelor's degree or higher among Native Hawaiian adults with young keiki at home—suggesting that our youngest learners may have fewer advantages associated with having more educated parents as they grow up, relative to their peers.

On the whole, well-being indicators for young Native Hawaiian keiki show mixed results: We see promising trends, improvement, and stability, all set against a stubborn backdrop of disparity that has persisted across generations and geographies. As the COVID-19 pandemic unfolds, we expect that Native Hawaiian families with young children may be relatively more vulnerable to conditions such as unemployment and poverty, which would have implications for early learning and other aspects of well-being. Together, existing data and newly emerging impacts of COVID-19 call for heightened monitoring of socioeconomic and other indicators of well-being and wellness, and their effect on our youngest keiki.



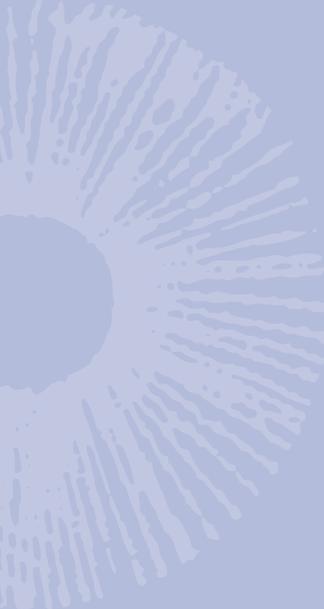


E na'lii a me na makaainana,

*To all ali'i and commoners alike,*

he aupuni palapala ko'u,

*mine is a literate country,*





a o ke kanaka pono a naauao

*and the just and intelligent man*

oia ko'u kanaka.

*is my countryman.*

—KAUIKEAOULI, AS QUOTED BY T. PUUOHAU IN *KA NUPEPA KUOKOA*, MAY 23, 1868 (TRANS. BY PUETTE AND NESMITH, 2014)

The image features a large, white, serif-style number '3' centered on a textured orange background. The background has a wood-grain-like pattern with varying shades of orange and brown. The number '3' is composed of two rounded, bowl-like shapes stacked vertically, with a small gap between them. The overall aesthetic is clean and modern.

# School-Age Children

## INTRODUCTION

The experiences we have from childhood to early adulthood are critical in our life journey. During this time we learn skills, form preferences, build habits, and test boundaries as we come to know ourselves better and encounter a wider world. School is a key setting where these dynamics play out. Personal and social development during school-age years influence outcomes later in life.

“I maika’i ke kalo i ka ‘ohā—*The goodness of the taro is judged by the young plant it produces*” (Pukui 1983, 133). When we look at the formative years of childhood and adolescence, schools are critical contributors to a keiki’s (child’s) identity and self-worth. For some Kānaka Maoli (Native, Indigenous people), school is a positive experience. For others, the delivery of education may not resonate with their beliefs or reflect their backgrounds. At worst, formal learning can be openly dismissive and hostile to Native culture.

Beyond simply teaching curricula, schools socialize children and perpetuate the values of the dominant culture. Schools are microcosms of larger society; they reflect our highest and lowest behaviors. When teachers, students, and others grapple with real-world problems, schools can be transformative spaces.

Over the last decade, Hawai‘i’s k–12 public education system has made significant progress that stands to benefit Native Hawaiian learners. Areas of improvement include more equitable distribution of human capital (e.g., teachers), the expansion of college pathways (AP and dual credit courses), and the establishment of the Office of Hawaiian Education in the Hawai‘i Department of Education (DOE). Greater visibility and acceptance of Kanaka Maoli perspectives via Hawaiian culture-based education are especially noteworthy.

Between 2015 and 2019, the Office of Hawaiian Education developed Nā Hopena A'o (HĀ) and championed its system-wide adoption. HĀ, referring to breath, is an Ōiwi (Native) framework for schools, teachers, and learners “to develop the skills, behaviors and dispositions that are reminiscent of Hawai'i's unique context, and to honor the qualities and values of the Indigenous language and culture of Hawai'i” (Hawai'i Department of Education, n.d.[d]). Instilling a deep commitment to Hawai'i within all learners is one of the Hawai'i DOE's “Five Promises” highlighted in the 2030 Promise Plan (Hawai'i Department of Education, n.d.[a]).

Increased awareness of and appreciation for Hawaiian culture-based education are the result of decades of work by teachers, learners, 'ohana (families), community leaders, and cultural practitioners. Kula kaiapuni (immersion schools) and Hawaiian-focused charter schools continue to pioneer new ways to harness the value of our culture and communities. The mission of Kanaeokana, a network of Hawaiian schools and organizations, is to “collaboratively develop and strengthen a Native Hawaiian education system—built on a strong 'ōlelo Hawai'i [Hawaiian language] and 'ike Hawai'i [Hawaiian knowledge] foundation” (Kanaeokana 2017).

Growth of Hawaiian culture-based education across Hawai'i's k-12 system coincides with other significant trends. Increased threats to our environment and anxiety over food security fuel concern for Hawai'i's ecological health. 'Āina (land) is arguably the core of Hawaiian culture-based education. Kānaka view our land as a teacher, a classroom, a textbook, and a laboratory for learning (Ledward 2013). Increasingly, we see 'āina-based programs reinforcing the value of mālama 'āina (land stewardship) among school-age and adult learners (Blaich 2003; ho'omanawanui 2008).

Arguably, these advancements contribute to the (re)normalization of Kanaka ways of knowing and being. We see less of a dichotomy between Western and Native Hawaiian framings of education, especially through the eyes of our youth. Instead, what is increasingly familiar are stories of renewal and pride—a testimony of learners uplifting 'ohana and 'ohana uplifting communities. A persistent obstacle, however, is that while these stories are unfolding across our 'āina, they have yet to translate into population-level impacts captured in current data.

Nevertheless, these trends and shifts underscore the growing strength and influence of the Hawaiian education movement. We welcome the Hawai'i DOE—as Hawai'i's key actor in public education—owning its responsibility to Kanaka Maoli learners, becoming more responsive to community, and being open to further developments in Hawaiian education. Similarly, many leaders of current social movements, some with global visibility (e.g., Mauna Kea and Mālama Honua), are graduates of schools that prioritize Hawaiian culture-based education. Their actions are generating cohesion and greater urgency for change across our community. We are as confident as ever that the legacy of Hawaiian education will result in a more equitable, resilient, and innovative Hawai'i.

In fact, the continued rise of Hawaiian education is echoed by a global push toward progressive education. Student-centered learning (Kaput 2018), social-emotional learning (Zins et al. 2004), project-based learning (English and Kitsantas 2013), experiential learning (Estes 2004), career-connected learning (Verrenti Consulting, n.d.), and place-based learning (Sobel 2004) all can be addressed through Hawaiian culture-based education. When education is employed to liberate rather than assimilate Native and minority learners, our society moves closer to normalizing antiracist classrooms (Block 2015).

While progress has been made, stubborn challenges remain for school-age Kānaka in public schools. Sadly, achievement gaps between Native Hawaiians and other major ethnic groups are enduring, reflected in standardized test scores, persistence and completion rates, college enrollment, and degree attainment. Regional comparisons provide insight into these trends, as communities with lower educational outcomes have relatively higher rates of economic disadvantage. This situation highlights a recurring issue: Educational reforms move the needle only so far and do not always attend to broader societal inequities (e.g., socioeconomic disparities, high unemployment, and limited economic opportunity).

In addition to historical injustices that affect school-age learner outcomes, there are barriers to accessing and implementing high-quality, consistent Hawaiian culture-based education. Within k–12 education, struggles over limited resources and competing priorities prevent many schools from successfully implementing Hawaiian education. Federal requirements, along with state policy and funding challenges, complicate rather than expedite matters. At the classroom level, it can be difficult for kumu (teachers) to find time to learn new practices, redesign lesson plans, and create new resources. Hawaiian culture-based education challenges our current education system, but systems have a habit of outlasting change.

At the time of this writing, the COVID-19 pandemic continues to disrupt the delivery of education around the world. “By mid-April 2020, 94 percent of learners worldwide were affected by the pandemic, representing 1.58 billion children and youth, from pre-primary to higher education, in two hundred countries” (United Nations 2020, 5). Like many places, Hawai‘i instituted travel restrictions, issued stay-at-home orders, banned sports, and closed schools. Almost overnight, schools shifted from in-person instruction to blended, hybrid, and distance learning. The impact on learning remains to be seen. However, a survey of students in Hawai‘i’s public schools found that “Native Hawaiian and Pacific Islanders are far less likely to have sufficient devices for distance learning,” highlighting preexisting vulnerabilities (Hawai‘i Department of Education 2020c, 2).

Despite ongoing barriers and disruptions, foundations for real transformation are in place for subsequent improvements in learner outcomes over time. Key to achieving our desired future is recognition that culture- and ‘āina-based learning are ultimately about redefining rather than reforming education. To reach this desired state, new data, built on holistic measures and assessments, are needed. Also crucial will be the tracking of keiki participation in alternative, informal education settings. Increased transparency and data-sharing on the outcomes of ‘Ōiwi learners among institutions will also be essential.

In the following section, we summarize recent studies on Indigenous and Hawaiian culture-based education. Much of the data to follow in this chapter are limited to conventional measures (e.g., standardized test scores) that do not account for the use of Hawaiian culture-based education at the school or classroom levels. That said, a groundswell of research supports culturally revitalizing approaches and links their use to a variety of positive learner outcomes.

## Hawaiian Culture-Based Education

Recognizing that culture and language are central to the identity and well-being of a people, mounting research is tracking educational innovations in Hawai'i and in other Indigenous nations. For example, Kamehameha Schools asserts that by creating and promoting a Hawaiian culture-based education system, all learners, and especially Native Hawaiian learners, will thrive and be able to reach their fullest potential. A Hawaiian culture-based education system engages Native Hawaiian learners to achieve positive socioemotional and academic outcomes. This approach “places significance on Native language; place-based and experiential learning; cultural identity; holistic well-being; and personal connections and belonging to family, community, and ancestors” (Alcantara, Keahiolo, and Pierce 2016, 2).

Studies show a connection between Native Hawaiian culture-based education and positive learner outcomes. A large and growing evidence base demonstrates the impacts of grounding education in students' realities, background, and culture. Research also indicates a direct relationship between culture-based education practices and positive academic outcomes, although more quantitative studies are needed in this area to further understand this interaction. Studies have documented a connection to students' motivation, positive sense of identity and self, positive attitudes about school and others, cultural connections, and political involvement and community participation—characteristics linked to academic achievement and important to child development (McCarty and Snell 2011; McCarty and Lee 2014; Kana'iaupuni, Ledward, and Malone 2017).

Overall, prior research shows that culture and Indigenous educational approaches are related to positive academic and socioemotional outcomes. Results from Kamehameha Schools' Hawaiian Cultural Influences in Education study indicate a small positive effect of using culture-based education strategies on math and reading test scores for all students. This impact is most prominent for students with low socioemotional development and is most notable when the use of culture-based education is supported schoolwide (Kana'iaupuni, Ledward, and Jensen 2010). The connection between culture-based education and positive academic outcomes also can be seen through various case studies: Indigenous student gains in math, compared with matched control groups (Kisker et al. 2012; Lipka et al. 2005; Rickard 2005); improved math test scores with Native Yup'ik approaches (Adams, Adam, and Opbroek 2005); doubled achievement results among Pacific Islander university students taking upper-level mathematics courses (Furuto 2014); superior Native and non-Native

Alaskan student learning outcomes in urban and rural schools using culturally responsive curricula (Sternberg et al. 2006); and stronger performance outcomes (attendance, grades, and course credits for graduation) among students in several San Francisco high schools taking culturally relevant courses, compared with similar students (Dee and Penner 2017). Additionally, Hawaiian-focused charter schools, which are demonstrations of culture-based education, provide perspective into how students grow and achieve in these learning environments. Longitudinal analyses of Hawaiian-focused charter school data show gains in math and reading proficiency scores and the narrowing of achievement gaps between these students and other public school students between Grade 4 and Grade 8 (Kamehameha Schools 2014). These findings are consistent with a recent meta-analysis of research that reveals the value of culturally responsive mathematics teaching in fostering equitable and inclusive mathematics learning environments (Abdulrahim and Orosco 2020).

Equally important to academic outcomes, research shows that Indigenous approaches like Native Hawaiian culture-based education increase individual and collective identity, building students' positive self-concept, resilience, and confidence (Tibbetts, Kahakalau, and Johnson 2007; Tibbetts, Medeiros, and Ng-Osorio 2009; Kana'iaupuni, Ledward, and Malone 2017). The positive relationship between Hawaiian culture-based education and student socioemotional well-being, with greater socioemotional well-being then positively affecting math and reading test scores, was a key finding of the Hawaiian Cultural Influences in Education study (Kana'iaupuni, Ledward, and Jensen 2010). A review of related studies indicates a similar relationship between strong Native language and culture programs and enhanced student motivation, self-esteem, and ethnic pride. For example, among Filipino students, learning family genealogy is positively related to school performance and speaking a heritage language, and is manifested in lower chances of substance abuse and depression (Guerrero et al. 2006). A positive impact is also seen in improved attendance and college-going rates, lower attrition, and enhanced teacher-student and school-community relationships (McCarty and Snell 2011).

The literature is clear that enhanced socioemotional well-being is associated with a healthy, well-adjusted life, both academically and beyond. Studies document well-established positive relationships between higher ethnic identity and self-efficacy, and lower rates of loneliness and depression. According to a meta-analysis of 213 studies involving more than 270,000 students, those who participated in evidence-based socioemotional learning programs showed an 11 percentile-point gain in academic achievement, compared with students who did not participate in such programs. Participants also showed improved classroom behavior, an increased ability to manage stress and depression, and better attitudes about themselves, others, and school (Durlak et al. 2011).



Cultural connectedness promotes resilience, self-esteem, and positive educational outcomes and serves as a protective factor against trauma, depression, discrimination, substance abuse, and alcoholism.

Student engagement and belonging are improved when Native Hawaiian culture-based education practices are used (Dee and Penner 2017; Kana'iaupuni, Ledward, and Malone 2017). Compared with other learners, students of teachers who practice high-intensity culture-based education show a stronger sense of belonging at school (e.g., trusting people at school, feeling that teachers care about them, and viewing people at school as family) and are significantly more likely to expect to graduate from college (Kana'iaupuni, Ledward, and Malone 2017; Rosen and Abt-Perkins 2000).

Lastly, studies show empirical effects of strong, additive, and academically rigorous Native language and culture programs on Native cultural maintenance and revitalization (McCarty and Snell 2011). In Hawai'i, students with teachers who exhibit high-intensity Native Hawaiian culture-based education have comparatively greater knowledge of their culture, commitment to cultural values, and comfort with their heritage language. Community connections are also deeper among students of teachers who practice high-intensity Native Hawaiian culture-based education: One-third of these students attended community or school meetings, and three-quarters took actions to protect the environment in their communities and reported greater engagement with local issues such as land development. Culturally rich learning environments support students to become critical thinkers and leaders within their communities about issues that matter to them (Kana'iaupuni, Ledward, and Malone 2017). As one student at a Hawaiian-focused charter school reflected, "We are not only learning about math and English, we are now learning about what happens in the real world and what will affect our lives in the future" (Goodyear-Ka'opua et al. 2008, 184–85).

With this context in mind, we now turn to overall data on Native Hawaiian keiki ages five to seventeen. We begin by examining population characteristics of school-age Kānaka Maoli. We then review data about social, material/economic, spiritual/emotional, and physical well-being of school-age Native Hawaiians. We conclude with a detailed analysis of educational well-being.



Hawaiian culture-based education is expanding throughout Hawai'i's education system, forging innovative community-school partnerships and contributing leadership and support for social movements such as Mauna Kea and Mālama Honua.

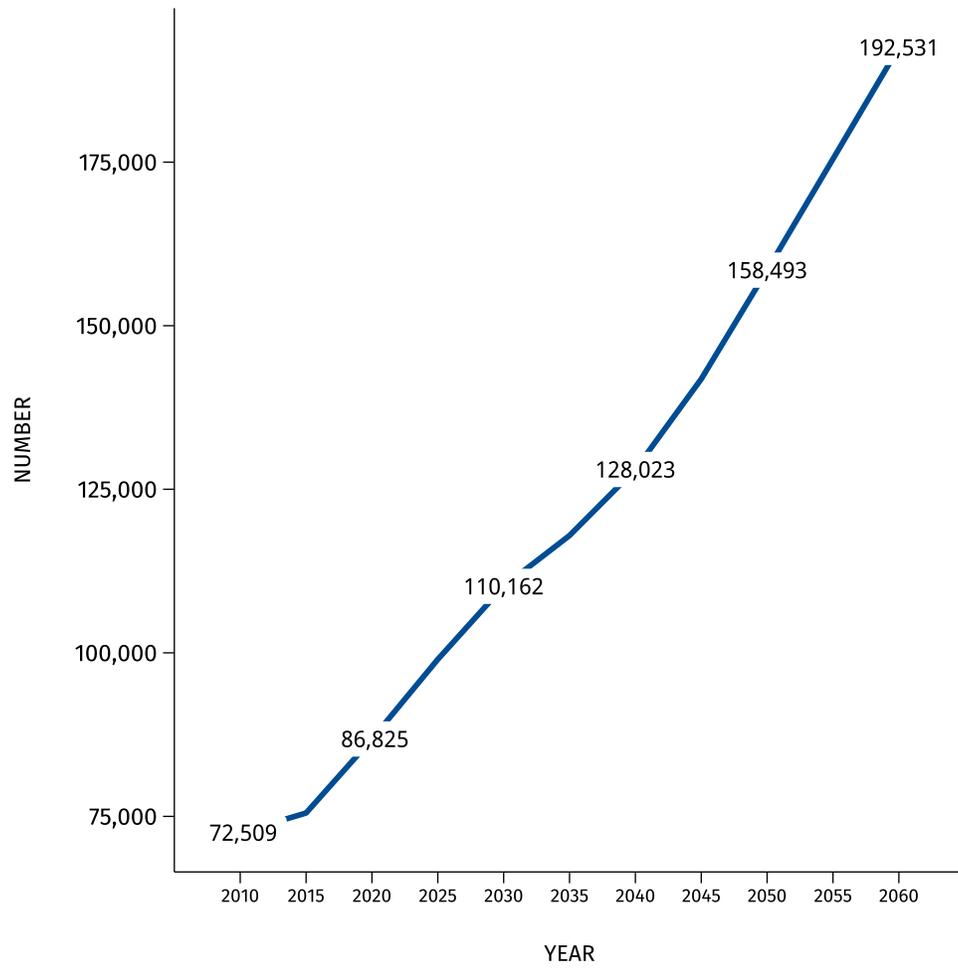
## POPULATION— SCHOOL-AGE CHILDREN

Demographic statistics provide a current snapshot of school-age children between five and seventeen years old. In 2019, there were roughly 214,600 school-age children in Hawai'i, most of whom (68 percent) reside in Honolulu county, followed by Hawai'i county (15 percent), Maui county (12 percent), and Kaua'i county (5 percent). From 2014 to 2018, Native Hawaiian children constituted approximately 35 percent of all school-age children (including public, private, and homeschooled students) in Hawai'i (Kamehameha Schools 2020).

In addition to yearly population estimates, population projections inform current and future demands on our education systems. Earlier projections using Census 2010 data suggest that the population of Native Hawaiian school-age children will continue to increase within the next few decades, more than doubling from an estimated 86,825 in 2020 to 192,531 in 2060 (fig. 3.1). These projections may vary from more recent estimates based on population samples; forthcoming Census 2020 data will provide actual population counts and be available to calculate updated population projections.

Most of our Native Hawaiian keiki attend public schools. Indeed, the Hawai'i DOE continues to be the largest education provider for Native Hawaiian learners, educating approximately 80 percent of all Native Hawaiian school-age children (Kamehameha Schools 2014). Native Hawaiian students are also the largest ethnicity within the Hawai'i DOE, comprising 24 percent of the student population (Hawai'i Department of Education 2020b). As such, large portions of this chapter, particularly the analysis on educational well-being, are focused on Native Hawaiian learners in public schools.

**FIGURE 3.1** Projected number of school-age Native Hawaiian children in Hawai'i  
[Native Hawaiian children ages 5-17, 2010 to 2060]



Data source: Hong 2012

## SOCIAL WELL-BEING

The social well-being of school-age keiki begins with ‘ohana. ‘Ohana refers to both physical blood- and non-blood-related kin (including kin by marriage and adoption), as well as spiritual ancestors, genealogy, and the relationships between its members and their physical and material surroundings. ‘Ohana serves as a key social institution for our keiki, our culture, and our traditions; within the ‘ohana grow the foundations for learning and socialization.

As keiki develop, the ‘ohana models “acceptable” behaviors and traditions in society, teaching them how to act, behave, and interact with the world and those around them. Keiki are entrusted with the kuleana (privilege, responsibility) to learn, practice, and perpetuate these behaviors and traditions, further embodying and emulating the values of one’s ‘ohana. For Native Hawaiians, ‘ohana is more than a physical familial structure—it is the very preservation of Hawaiian identity and culture (Kanaka’ole 2010; Kana’iaupuni 2004).

The changing dynamics of ‘ohana today, such as increasingly diverse family structures, impact the ways Native Hawaiian keiki view, interact, and learn from the world around them. Since the 1950s, all societies have seen increasingly diverse family types, including the United States (Horowitz, Graf, and Livingston 2019; Livingston 2018a). In addition to single-parent and cohabiting-parent families, other important shifts include more families delaying marriage or choosing not to marry, the legalizing of same-sex marriages (Thomas 2020), and increasing educational attainment (Bauman 2016) and employment of women (Weinstein 2018), both of which delay the age of first childbirth (Livingston 2018b). Specific to Hawai‘i, where the cost of living continues to escalate, more parents are working longer hours or multiple jobs. What implications do these trends pose for school-age children’s educational outcomes?

Much of the literature on family structure (which has traditionally compared single-parent families and traditional married-couple families) suggests that while single-parent families may provide the same amount of love and nurture as conventional married-couple families, their single structure raises pragmatic challenges for parents and children. Roughly one in every three Native Hawaiian school-age children lives in a single parent household. As both the primary caregiver and primary wage earner, single parents may struggle to find balance between responsibilities. This situation can introduce a host of stressors in the family environment such as limited economic resources, strained mental health, and reduced quality time spent with young ones (Waldfoegel, Craigie, and Brooks-Gunn 2010; Hastings and Schneider 2019).

These factors impact a child's academic achievement. Parents (married or single) who face additional stressors generally have less time to read with children at home, establish consistent daily routines, prepare healthy meals, enroll their child in extracurricular activities, or help with homework. In sum, they face barriers to creating space for quality family involvement, which has been shown to be positively connected to academic outcomes and social and emotional skills (Van Voorhis et al. 2013; Topor et al. 2010). Family and community stressors also negatively influence children's health outcomes (Garasky et al. 2009; McCurdy, Gorman, and Metallinos-Katsaras 2010; US National Library of Medicine 2020) and increase the likelihood of risky behavior that often leads to delinquency (Price and Kunz 2003).

Conversely, parental warmth and affection are conditions that mediate stressors in the environment and serve as protective factors for child development and well-being (Wright, Masten, and Narayan 2013; Center for the Study of Social Policy, n.d.). Many Native Hawaiians feel strong connections to 'ohana and culture, which are sources of resiliency and buffers against negative outcomes. Kūpuna, or elders, may have kuleana to pass down knowledge and traditions to mo'opuna (grandchildren), who then receive and perpetuate their learnings.

In the sections that follow, we present data on family structure, cultural connections, and juvenile arrests and offenses against family. The data show a drop in the number of family households with children ages five to seventeen since 2008. At the same time, we are witnessing an increase in the number of Native Hawaiian keiki who are not living with their biological parents. In addition, compared with other major ethnic groups in Hawai'i, Native Hawaiian families (and Filipino families) with school-age children are more likely to have a grandparent living with them.

However, among families with school-age keiki, Native Hawaiians are more likely than other major ethnicities to live in single-mother arrangements. Moreover, Native Hawaiians have the second-highest recorded juvenile arrests rates for index offenses, part II offenses, and offenses against family and children.

## Family structure

Conditions in the family home impact child well-being (Blackwell 2010). Information about children’s family structure may provide a rough indicator of the stability of the home environment (i.e., low-conflict, low-stress, quality time with adults, etc.). In this section, we examine the composition of households and families of school-age children in Hawai‘i, including a closer look at single-mother families, households in which a grandparent is present, and foster caregiving for Native Hawaiian keiki.

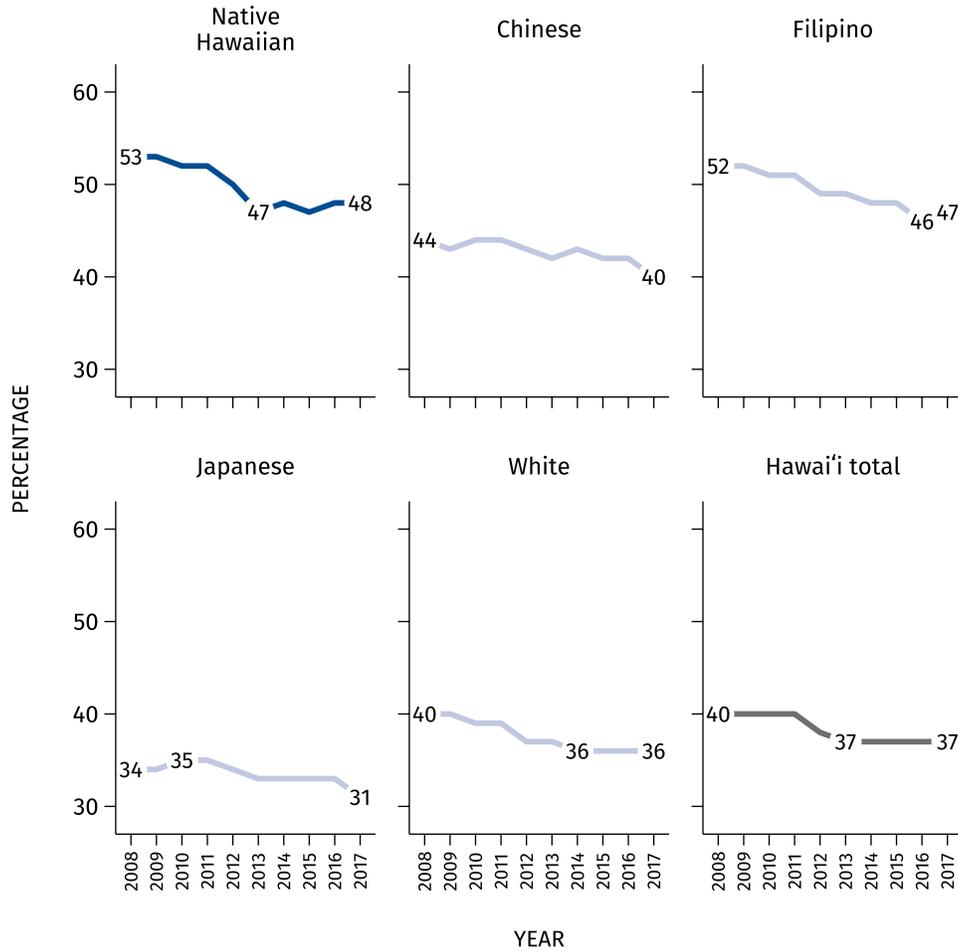
For the purposes of *Ka Huaka‘i*, a family refers to two or more individuals, one of whom is the householder,<sup>1</sup> living together and related by birth, marriage, or adoption. A family household consists of a householder who lives with family and may also live with others unrelated by birth, marriage, or adoption. Native Hawaiian households are those where at least one member (related or unrelated to the householder) identifies as Native Hawaiian. For more information on terms and definitions, see “[Methods, Data Sources, and Definitions](#)” at the end of this volume.

Between 2008 and 2017, the proportion of Native Hawaiian family households with school-age keiki decreased by 5 percentage points, declining from 53 to 48 percent. Although this downward trend is observed across all major ethnicities in Hawai‘i, the decrease was largest for households headed by a Native Hawaiian (fig. 3.2).

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<sup>1</sup>The householder refers to the person whose name is on the housing unit owned or rented (maintained). If there is no such person, any adult member is considered the householder (excluding roomers, boarders, or paid employees). If the house is owned or rented jointly by a married couple, the householder may be either spouse (US Census Bureau 2020).

**FIGURE 3.2** Trends in family households with children ages 5-17  
 [as a percentage of family households, by family household ethnicity, Hawai'i, 2008 to 2017]

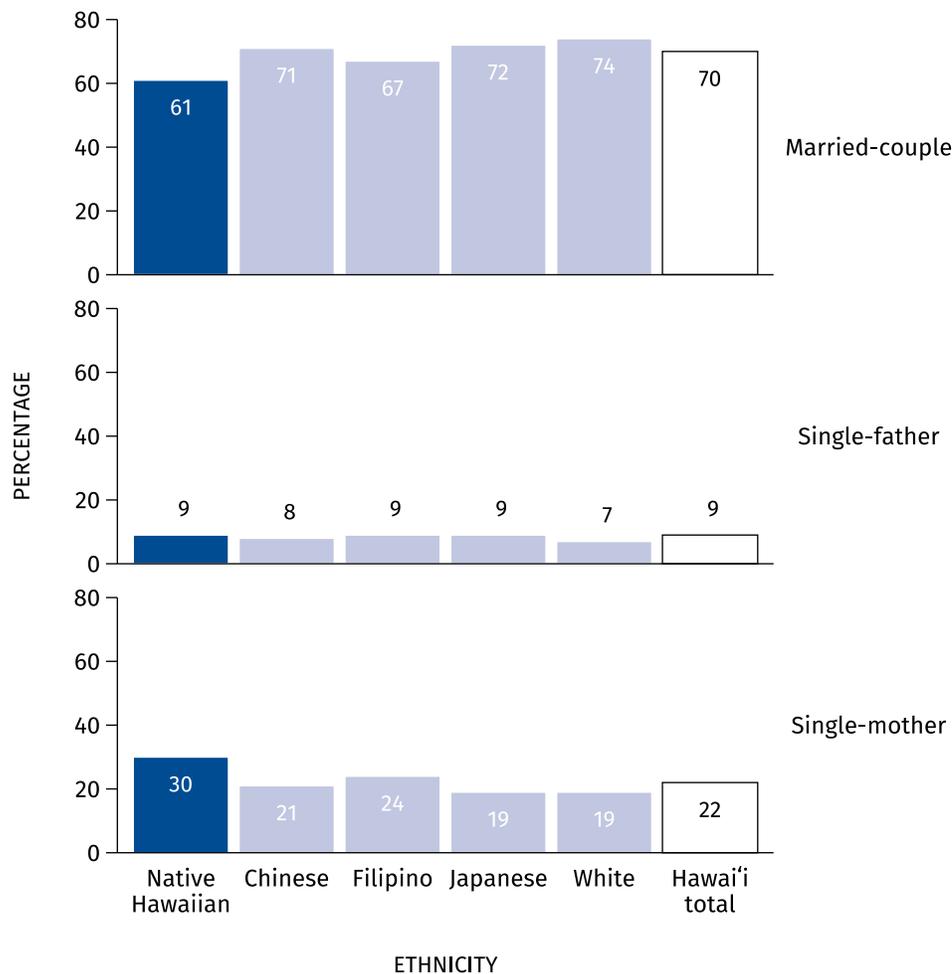


*Data source:* US Census Bureau, American Community Survey, Public Use Microdata Sample 1-year files  
 Note 1: A family household consists of a family and may also include people not related to the householder.  
 Note 2: The designation "White" in this chart refers to non-Hispanic Whites, alone or in combination with other ethnicities, as defined by the American Community Survey.  
 Note 3: Data labels are presented for the first and last points, the maximum and minimum points, and some inflection points where the trend changes.

- From 2008 to 2017, the percentage of family households with children ages five to seven-teen decreased among all major ethnicities in Hawai'i.
- Looking at Hawai'i's major ethnic groups from 2008 to 2017, the greatest decrease in the proportion of family households with school-age children was among Native Hawaiians and Filipinos (5 percentage points).

Available data on family types of school-age children show that compared with their peers, Native Hawaiian keiki ages of five to seventeen are more likely to live in a household headed by a single mother. As of 2017, for example, 30 percent of all school-age Native Hawaiian keiki live in a single-mother family—compared with 22 percent for the Hawai‘i total, whereas three in five Native Hawaiian keiki live in married-couple families, which is the lowest rate among major ethnicities in Hawai‘i and 9 percentage points less than the Hawai‘i total (fig. 3.3).

**FIGURE 3.3** Family types of school-age children  
[as a percentage of children ages 5–17, by ethnicity, Hawai‘i, 2017]



Data source: US Census Bureau, American Community Survey, Public Use Microdata Sample 5-year file

Note 1: The designation "White" in this chart refers to non-Hispanic Whites, alone or in combination with other ethnicities, as defined by the American Community Survey.

- Among Native Hawaiian school-age children, 30 percent live in a single-mother family—the highest rate among the major ethnicities in Hawai'i and higher than the Hawai'i total (22 percent).
- Conversely, 61 percent of Native Hawaiian school-age children live in married-couple families, compared with the Hawai'i total of 70 percent.
- Among Native Hawaiian school-age children who are not in married-couple families, more than three-quarters (77 percent) live in a single-mother family (not shown).

## KEIKI LIVING WITH ONE PARENT

Regardless of whether a child is raised by one parent or two parents, it is important that parenting be nurturing, warm, supportive, responsive, and flexible. The challenge for single-parent families, compared with conventional two-parent families, is they have the sole responsibility to serve as primary caregiver and primary wage earner. Managing both roles can lead to increased economic, mental, and emotional pressure, stress, and fatigue for single parents. Stressors, in turn, can impact parenting quality and overall child well-being (Waldfogel, Craigie, and Brooks-Gunn 2010; Hastings and Schneider 2019; Cairney et al. 2003; Baranowska-Rataj, Matysiak, and Mynarska 2014; Jackson et al. 2000).

Although the numbers of single-father families have increased in past decades (Livingston 2013)—comprising about one in every four single-parent households—in *Ka Huaka'i* we present data on single-mother families. Reasons for this include:

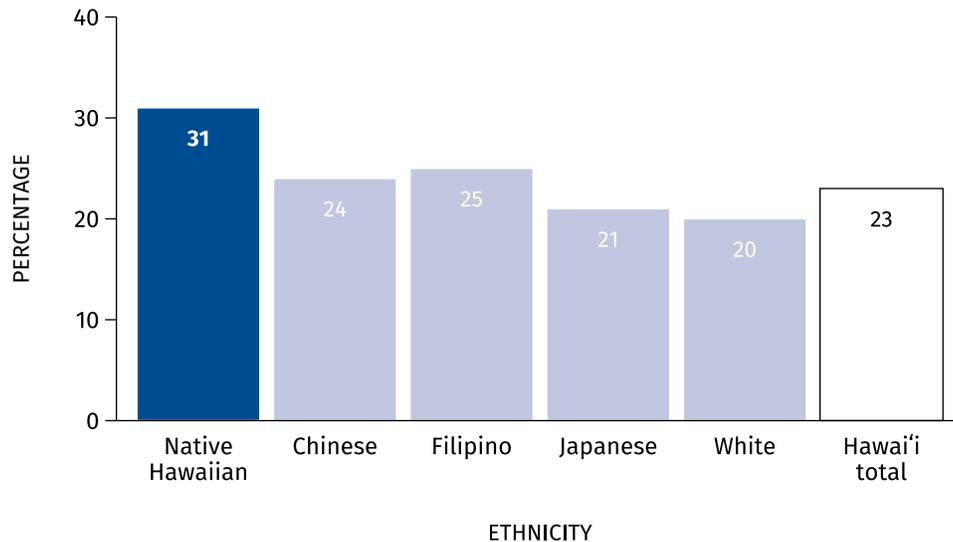
1. Most research and scholarship on single parenthood has focused on mothers (Lancet Public Health 2018).
2. Most custodial parents, or parents who share a home with a child and who generally have legal custody of a child, are mothers. In 2018, for example, 80 percent of 12.9 million custodial parents were mothers, compared with 20 percent who were fathers (Grall 2020).
3. Single mothers, compared with single fathers, are exposed to greater risk of economic hardship because of persistent gender gaps in pay and lack of child support from absent fathers (Graf, Brown, and Patten 2019; Mather 2010). Thus, children are more likely to experience poverty in single-mother households, compared with those living with single fathers, cohabiting couples, or married-couple families (Zhang 2019; Kramer et al. 2016; Mather 2010).

Research shows that the educational attainment of single mothers is important to child outcomes. Single mothers with higher levels of education are better off financially (which makes it easier to afford childcare support or rely on social networks for childcare) (Astone and McLanahan 1991); more often obtain child support payments (perhaps because they are able to better navigate the systems) (Case, Lin, and McLanahan 2003); may be better

equipped to handle the psychological, social, and cognitive stressors that are associated with being a single parent (Augustine 2014); and are more likely to keep in contact with their child's father over time, thereby increasing the father's involvement (Cheadle, Amato, and King 2010). Those with higher incomes are also more likely to enroll their children in preschool and extracurricular programs (Augustine and Crosnoe 2010). As in all families, the ability for single mothers to alleviate financial, psychological, and social stressors allows them time and energy for quality parenting practices and behaviors—all of which are significant in supporting child well-being.

Our data reveal that slightly more than one-third of all Native Hawaiian families are headed by single mothers—the highest rate among all major ethnicities (fig. 3.4, see also [fig. 1.13](#)). Consistent with national data, Native Hawaiian school-age children are relatively more likely to experience poverty in single-mother families, which calls for much-needed support systems and resources. For example, supporting mothers to secure employment is especially critical. Research shows that employed single-mother families are more likely to escape poverty (National Women's Law Center 2017).

**FIGURE 3.4** Single-mother families with school-age children  
[as a percentage of families with children ages 5–17, by family ethnicity, Hawai'i, 2017]



*Data source:* US Census Bureau, American Community Survey, Public Use Microdata Sample 5-year file

Note 1: The data include subfamilies, which are defined as families that do not maintain their own household but live in a household where the householder or householder's spouse is a relative.

Note 2: The designation "White" in this chart refers to non-Hispanic Whites, alone or in combination with other ethnicities, as defined by the American Community Survey.

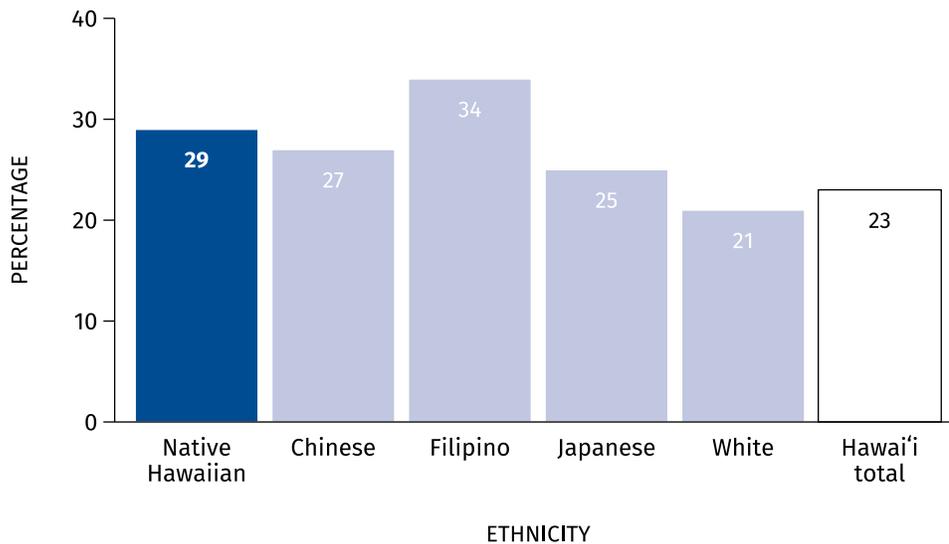
- Among Native Hawaiian families with school-age children, 31 percent are single-mother families, compared with the Hawai'i total of 23 percent—a difference of 8 percentage points.
- Among the major ethnicities in Hawai'i, White and Japanese families with school-age children have the lowest proportion of single-mother families.

## KEIKI LIVING WITH GRANDPARENTS

The presence of grandparents in a child's life allows for the development of positive adult relationships. Grandparents can serve as important social and cultural supports by helping to provide care for children, share family history and stories, and introduce children to new ideas and wonders. They may also afford support for their own children (i.e., the parents of their grandchildren) who might need assistance with caregiving. For Native Hawaiians, the relationship between kūpuna and mo'opuna is especially cherished. It is also one that is symbiotic in nature—whereas it is the kuleana of kūpuna to pass down generations of ancestral and cultural knowledge, it is the kuleana of the mo'opuna to listen and perpetuate cultural and 'ohana traditions (Handy and Pukui 1998; McGlone 2009).

Data show that nearly one-third (29 percent) of Native Hawaiian households with keiki ages five to seventeen live with a grandparent—6 percentage points higher than the Hawai'i total. White households with school-age children are the least likely to include a grandparent, relative to other groups (fig. 3.5).

**FIGURE 3.5** Households with school-age children where a grandparent is present  
[as a percentage of households with children ages 5–17, by household ethnicity, Hawai'i, 2017]



*Data source:* US Census Bureau, American Community Survey, Public Use Microdata Sample 5-year file

Note 1: Grandchildren are defined as the grandparents' own grandchildren who are younger than 18 years old.

Note 2: The designation "White" in this chart refers to non-Hispanic Whites, alone or in combination with other ethnicities, as defined by the American Community Survey.

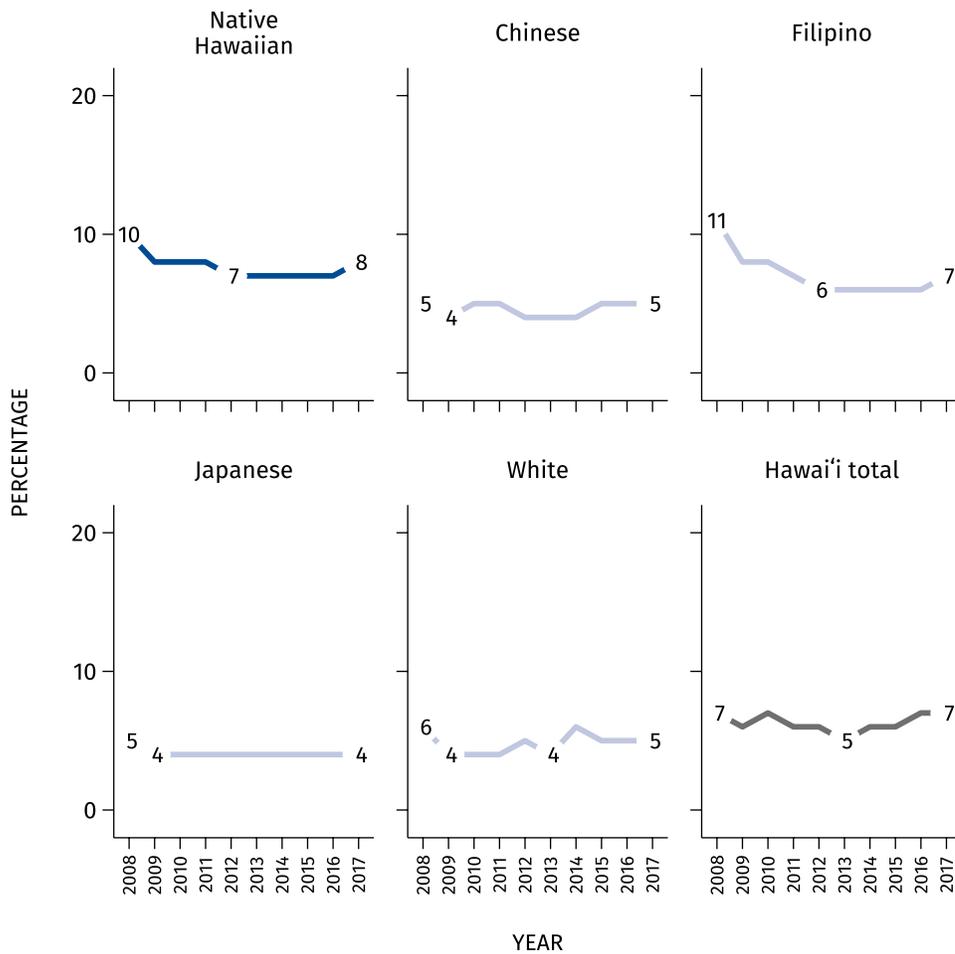
- For the Hawai'i total, nearly one-quarter (23 percent) of households with school-age children have a grandparent living in the household.
- Among Native Hawaiian households with school-age children, 29 percent have a grandparent living in the household—6 percentage points higher than the Hawai'i total.
- Comparing households across ethnicities, White households with school-age children have the lowest prevalence of a grandparent living in the household (21 percent).

## KEIKI LIVING WITH NONBIOLOGICAL CAREGIVERS

Traditionally, adults of the extended 'ohana shared the responsibility of raising children. In this practice, both siblings and cousins are considered brothers and sisters; parents, aunts, and uncles are mākuā; and grandparents, grandaunts, and granduncles all are considered kūpuna (Pukui, Haertig, and Lee 1979).

In recent times, the percentage of Native Hawaiian keiki ages seventeen and younger who are not living with their biological parents has not changed much, ranging from 10 to 8 percent between 2008 and 2017. Compared with their peers (except Filipinos), Native Hawaiian children are more likely to live with mākuā other than their biological parents (fig. 3.6).

**FIGURE 3.6** Trends in children not living with their biological parents  
[as a percentage of children ages 17 and younger, by ethnicity, Hawai'i, 2008 to 2017]



Data source: US Census Bureau, American Community Survey, Public Use Microdata Sample 1-year files

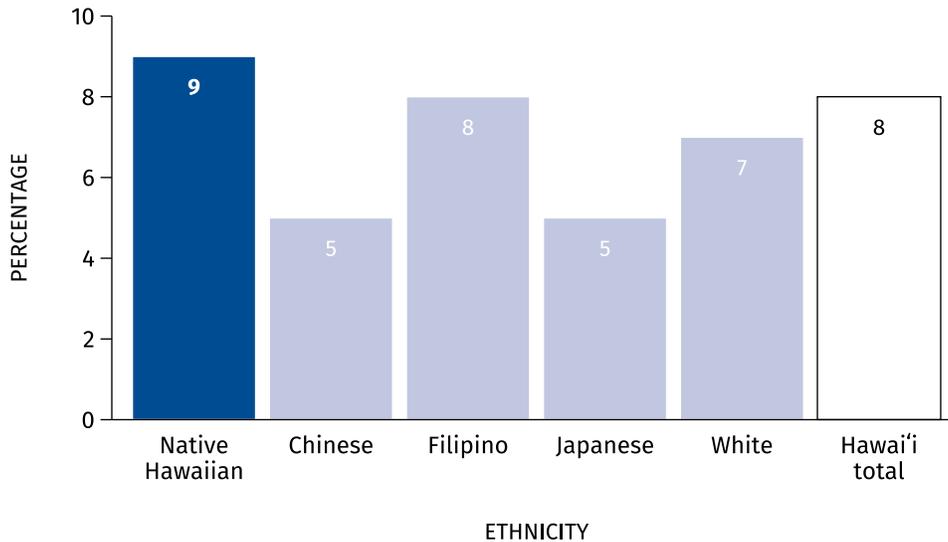
Note 1: The designation "White" in this chart refers to non-Hispanic Whites, alone or in combination with other ethnicities, as defined by the American Community Survey.

Note 2: Data labels are presented for the first and last points, the maximum and minimum points, and some inflection points where the trend changes.

- From 2008 to 2012, there was a significant decrease in the percentage of Native Hawaiian and Filipino children ages seventeen and younger not living with their biological parents.
- Native Hawaiian school-age children had higher rates than their peers (except Filipinos) of not living with their biological parents.

Looking specifically among children between the ages of five and seventeen, Native Hawaiian and Filipino children are most likely to live with a nonbiological parent, whereas Japanese and Chinese children are most likely to live with their biological parents (fig. 3.7).

**FIGURE 3.7** School-age children not living with a biological parent  
[as a percentage of children ages 5–17, by ethnicity, Hawai'i, 2017]



*Data source:* US Census Bureau, American Community Survey, Public Use Microdata Sample 5-year file

*Note 1:* The designation "White" in this chart refers to non-Hispanic Whites, alone or in combination with other ethnicities, as defined by the American Community Survey.

- Among Hawai'i's major ethnicities, Native Hawaiian and Filipino school-age children have the highest rates of not living with a biological parent (9 percent and 8 percent, respectively).
- For the Hawai'i total, more than one in thirteen school-age children (8 percent) do not live with a biological parent.
- Native Hawaiian school-age children have higher rates than their peers (except Filipinos) of not living with their biological parents.

Children not living with their biological parents may sometimes be placed in foster care. Studies show that placing foster children with kin improves behavioral outcomes, compared to non-kin placements (Rubin et al. 2008; Helton 2011). More research is needed to better understand historical barriers and systemic challenges related to the prevalence and success of Native Hawaiian children in foster care who are placed with kin and other out-of-home living arrangements.

## Cultural Connectedness

For Native Hawaiian keiki, a cultural worldview and learning environment infused with connectedness creates a “vibrant system of ingenuity, interdependence, and sustainability” (Kamehameha Schools 2009, 2). As a concept, cultural connectedness refers broadly to the attachment and sense of belonging an individual forms to their culture, as well as the knowledge of, and engagement with, aspects of culture (Barber and Schluterman 2008; Lucero 2013; Snowshoe et al. 2017). For Native Hawaiians, cultural connectedness encompasses—but is not limited to—connections to language, values, relationships to people and ‘āina, knowledge and practices, and engagement around cultural issues (Tibbetts, Medeiros, and Ng-Osorio 2009). Indeed, the sentiment of cultural connectedness is consistent with traditional Hawaiian culture in that it is grounded in strengths-based thinking. Consider, for example, the Hawaiian value *lōkahi*, or the “unity of all things,” which embraces “connection” rather than deficit or difference.

Research suggests that cultural connectedness is important to Indigenous youth and adults alike, promoting resiliency and self-esteem, and serving as a protective factor against a variety of negative mental and behavioral health such as trauma, depression, discrimination, substance abuse, and alcoholism (Woods, Zuniga, and David 2012; LaFromboise et al. 2006; Gray and Cote 2019; Snowshoe et al. 2017; Pearce et al. 2015; Antonio et al. 2016). Cultural connectedness has also been shown to positively influence educational outcomes such as increased engagement and motivation in learning, greater positive attitudes toward school, and higher academic performance (Stender 2010; Lino 2010; Snowshoe et al. 2015; Whitbeck et al. 2001).

Culture-based education and experiences help foster cultural connectedness in youth. Learning environments, contexts, content, and assessment grounded in and reflective of a student’s culture can strengthen, revitalize, and empower learners’ connections to their culture, identity, Native intelligence, leadership, and sense of belonging in their schools and communities (Kana’iaupuni, Ledward, and Jensen 2010; Kahumoku 2014; Borrero et al. 2012). As such, Kamehameha Schools is committed to implementing Hawaiian culture-based education and supporting learners’ cultural connectedness.

In response to early collaborative research calling for a way to measure cultural connectedness (Tibbetts, Kahakalau, and Johnson 2007), Kamehameha Schools developed a Hawaiian Cultural Connectedness (HCC) survey using best practices in survey design and incorporating community feedback. This survey has been used in a variety of educational settings to assess student cultural connectedness at Kamehameha Schools campuses and some Hawaiian-focused charter schools. Higher rates of cultural connectedness, as reported by students on the HCC survey, are positively associated with higher self-esteem, stronger prosocial values, and more active engagement in service to others and environmental stewardship (Tibbetts, Medeiros, and Ng-Osorio 2009). As cultural connectedness empowers

Native Hawaiian learners to reclaim and reaffirm their ways of knowing and being, it will remain a critical component to the ways in which we work to uplift our lāhui and transform educational systems.

## Youth and the Juvenile Justice System

Research has described schools as a pipeline to prison, affecting the lives of many young people of color, including Native Hawaiian youth (Office of Hawaiian Affairs, n.d.[a]; Redfield and Nance 2016; Dela Cruz 2020; Chesney-Lind and Bilsky 2011; Minarik 2011). Experiences with the criminal justice system at a young age are associated with psychiatric, social, and academic difficulties in day-to-day life (Abram et al. 2013). Without positive interventions, these experiences flatten children's educational and later adult opportunities and outcomes. For example, studies (Abram et al. 2013) find that affected youth often encounter difficulties in learning and pursuing academic goals, making positive decisions, and forming healthy relationships. They may face the social stigma of being labeled as "bad," which makes it challenging to access help and support for the positive pathways that most people take for granted. Time spent waiting at juvenile detention centers and in meetings with parole officers may also impact school attendance.

Research suggests youth involved with the juvenile justice system are generally less likely to complete high school and college (Sweeten 2006; Hirschfield 2009; Hjalmarsson 2008; Ward and Williams 2015), secure stable employment and income (Wilson 2012; Bullis, Yovanoff, and Havel 2004; Baert and Verhofstadt 2013; Jung 2015), and enter into marriage (Russell and Taylor 2017). It is important to note that the severity of outcomes may vary depending on the type of crime, number of arrests, and when a child was arrested (Hirschfield 2003). Evidence also suggests a strong link between deviance at younger ages and the chances of repeat offenses (Wilson and Hoge 2013; Liberman, Kirk, and Kim 2014; Bullis, Yovanoff, and Havel 2004; Makarios, Steiner, and Travis 2010).

For these reasons, from their first delinquent experience, children enter a wind tunnel along a pathway of subsequent negative experiences that are difficult to navigate and become successively worse over time. And sadly, schools are a prominent gateway into that wind tunnel—hence the term, "school-to-prison pipeline." School policies, such as zero tolerance and the lack of teacher training in recognizing trauma, mean children are suspended or expelled in lieu of more supportive or restorative interventions. In effect, children are removed from their learning environments and sent into the penal system, which isolates them from the very supports they actually need. In Hawai'i, this situation disproportionately affects Native Hawaiian youth and adults, who are overrepresented in the criminal justice system.

In the Hawai'i Department of Education, Native Hawaiian and other Pacific Islander students are more likely than other students to be referred to law enforcement and suspended. In school year 2017, although Native Hawaiian and other Pacific Islander students accounted for 29 percent of the enrolled student population, they accounted for 56 percent of law enforcement referrals, 47 percent of in-school suspensions, and 51 percent of out-of-school suspensions (National Center for Education Statistics 2017). Along with high rates of suspension, Native Hawaiian students also stand to lose a disproportionate number of days of instruction, compared with national averages (Hawai'i News Now 2019).

The data confirm these trends, showing juvenile arrests rates for index offenses and part II offenses, and trends in juvenile delinquency. Index offenses refer to serious crimes that determine the standard crime index used to assess the status of crime in the nation and to compare the prevalence of crime across different regions. In 2016, larceny-theft arrests were the most common index offense among youth under age eighteen in Hawai'i. Native Hawaiian youth had the second-highest arrest rates for larceny-theft (47 per 10,000) state-wide, following Whites, who had the highest rate of 73 per 10,000 (table 3.1).

**TABLE 3.1** Juvenile arrests for index offenses—county comparison  
 [arrests as a rate per 10,000 juveniles, by ethnicity, county, and type of offense, Hawai'i, 2016]

County	Ethnicity	Aggravated Assault	Arson	Burglary	Larceny/ Theft	Motor Vehicle Theft	Murder	Rape	Robbery
Hawai'i County	Native Hawaiian	1	1	4	32	6	0	0	0
	Chinese	0	0	0	0	0	0	0	0
	Filipino	1	1	2	10	2	0	0	0
	Japanese	0	0	2	14	1	0	0	0
	White	1	0	10	66	7	0	0	0
	County total	2	1	6	40	5	0	0	1
Maui County	Native Hawaiian	9	2	22	50	4	1	2	4
	Chinese	0	0	0	0	0	0	0	0
	Filipino	4	1	20	20	0	0	1	3
	Japanese	0	0	7	5	2	0	0	0
	White	17	0	37	61	14	0	2	5
	County total	11	1	29	49	7	0	1	4
Honolulu County	Native Hawaiian	5	0	4	51	3	0	1	6
	Chinese	1	0	0	3	1	0	0	0
	Filipino	1	0	0	25	0	0	1	3
	Japanese	0	0	1	11	1	0	0	0
	White	7	1	3	76	2	0	5	2
	County total	5	0	3	56	3	0	2	8
Kaua'i County	Native Hawaiian	14	0	2	45	6	0	0	4
	Chinese	5	0	0	0	0	0	0	0
	Filipino	8	2	0	35	8	0	2	0
	Japanese	3	0	0	0	0	0	3	0
	White	49	7	15	97	7	0	0	0
	County total	21	2	4	59	7	0	1	1
State	Native Hawaiian	5	1	6	47	4	0	1	5
	Chinese	1	0	0	3	1	0	0	0
	Filipino	2	0	3	23	1	0	1	2
	Japanese	0	0	2	10	1	0	0	0
	White	10	1	11	73	6	0	3	2
	State total	6	1	7	53	4	0	2	6

Data source: A Review of Uniform Crime Reports (years 2015 and 2016 combined), Hawai'i Department of the Attorney General, Crime Prevention and Justice Assistance Division, Research and Statistics Branch

- In Hawai'i, the most common index offense among juveniles is larceny-theft, with a Hawai'i total of 53 arrests per 10,000 juveniles.
- The most common types of index crime in Hawai'i involve theft (i.e., burglary, larceny-theft, motor vehicle theft, and robbery), which, together, account for a combined 70 arrests per 10,000 juveniles.
- At the state level, White juveniles have the highest prevalence of arrests that relate to theft, followed by Native Hawaiians.

Among Native Hawaiian youth arrested, most were for status offenses such as breaking curfew or running away (170 per 10,000), followed by other offenses such as suspicion, offenses against family or children (81 per 10,000) and violent crime (41 per 10,000). In looking across ethnicities, Whites have the highest rates in all part II index offenses with the exception of drug manufacturing/sale, which is the same as the rate among Native Hawaiians (table 3.2).

Regionally, Kaua'i county had the largest proportion of arrests rates for all part II offenses except drug possession and status offenses, which were higher in Maui county and Hawai'i county, respectively (table 3.2).

**TABLE 3.2** Juvenile arrests for part II offenses—county comparison  
 [arrests as a rate per 10,000 juveniles, by ethnicity, county, and type of offense, Hawai'i, 2016]

County	Ethnicity	Violent Crime	Property-related	Drug manufacturing/sale	Drug Possession	Alcohol-related	Other	Status
Hawai'i County	Native Hawaiian	17	4	1	25	18	59	200
	Chinese	1	0	0	0	0	1	3
	Filipino	2	2	0	10	6	22	55
	Japanese	6	0	0	7	4	5	58
	White	33	12	3	64	25	76	436
	County total	19	6	1	32	18	58	230
Maui County	Native Hawaiian	19	3	9	52	14	72	106
	Chinese	2	0	0	4	6	0	8
	Filipino	5	2	0	23	10	16	73
	Japanese	2	0	0	5	2	2	14
	White	23	3	11	79	31	75	123
	County total	19	4	7	53	25	58	116
Honolulu County	Native Hawaiian	51	14	1	29	8	80	183
	Chinese	1	1	0	1	0	3	10
	Filipino	14	4	0	12	3	33	73
	Japanese	6	2	0	6	1	13	24
	White	68	18	1	37	9	99	256
	County total	47	14	0	24	13	87	164
Kaua'i County	Native Hawaiian	72	23	27	51	39	194	76
	Chinese	0	0	0	5	0	10	25
	Filipino	80	8	8	28	27	177	138
	Japanese	17	3	3	7	14	70	21
	White	157	45	7	116	101	423	187
	County total	101	24	16	63	51	271	141
State	Native Hawaiian	41	11	3	33	12	81	170
	Chinese	1	1	0	2	1	3	9
	Filipino	15	4	1	15	6	39	75
	Japanese	6	1	0	6	2	14	27
	White	60	16	3	55	22	114	263
	State total	42	12	2	31	17	95	167

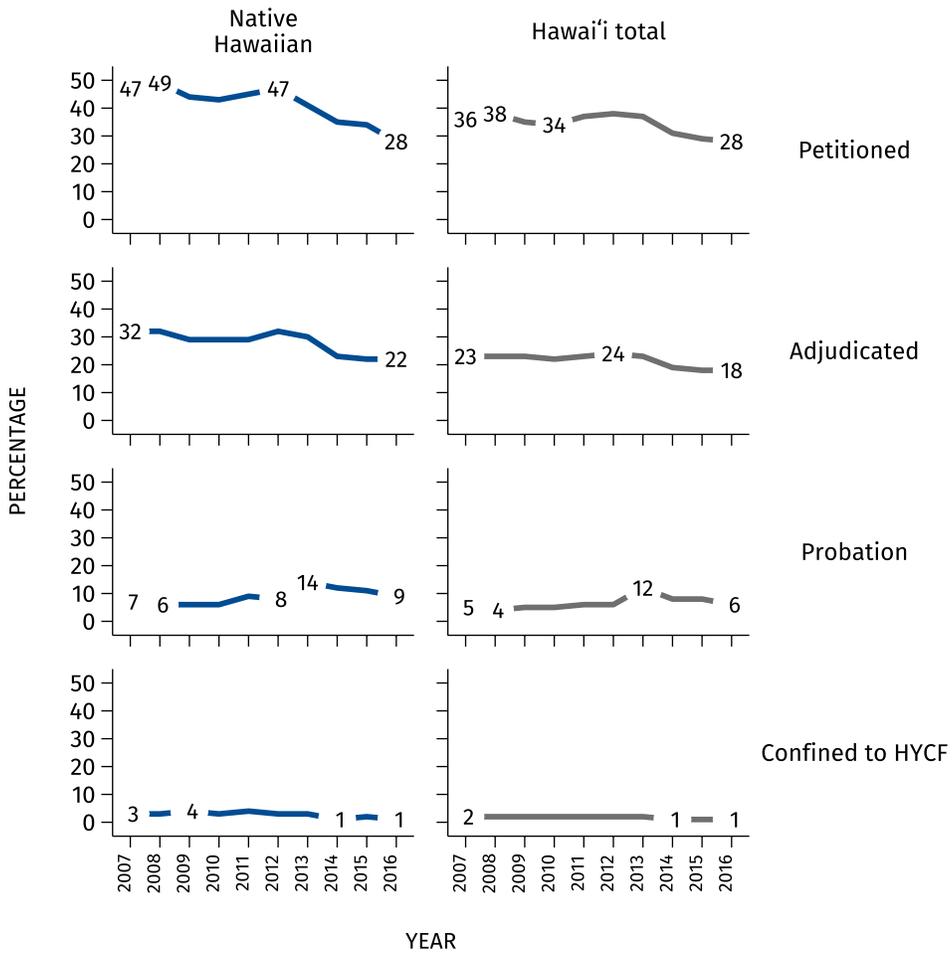
Data source: A Review of Uniform Crime Reports (years 2015 and 2016 combined), Hawai'i Department of the Attorney General, Crime Prevention and Justice Assistance Division, Research and Statistics Branch

- The most common part II offense among juveniles in Hawai'i is status offenses, with a Hawai'i total of 167 arrests per 10,000 juveniles.
- Comparing ethnicities, White juveniles have the highest arrest rates for part II crimes across all categories, followed by Native Hawaiians.

Arrest is the entry point into the juvenile justice system—followed by a long process with nine sequential decision points, each of which represents a deeper, more severe systemic level. In other words, as a young person “progresses” through the juvenile justice system, he or she moves to a more serious sector of the system. *Ka Huaka'i 2021* presents juvenile justice data for five of the nine decision points within the juvenile justice system: arrest, petition/charge filed, adjudication, probation, and confinement to the Hawai'i Youth Correctional Facility.

Compared with juveniles from other major ethnicities in Hawai'i, Native Hawaiians arrested between 2007 and 2016 were the most likely to be petitioned and adjudicated. Native Hawaiian children also held the highest rate of being committed to the Hawai'i Youth Correctional Facility (fig. 3.8).

**FIGURE 3.8** Trends in juvenile delinquency  
 [decision points as a percentage of total arrests made, by ethnicity and year, Hawai'i, 2007 to 2016]



Data source: Juvenile Justice Information System, Crime Prevention and Justice Assistance Division, Department of the Attorney General, State of Hawai'i, 2018. Juvenile Delinquency Trends in Hawai'i: Data Book for 2007–2016.  
 Note 1: Data labels are presented for the first and last points, the maximum and minimum points, and some inflection points where the trend changes.

- Compared with the Hawai'i total, Native Hawaiian juveniles who were arrested were the most likely to be petitioned and adjudicated.
- Over a ten-year period ending in 2016, an average of 43 percent of Native Hawaiian juveniles who were arrested were petitioned, compared with 23 percent among Whites, 17 percent among Filipinos, 17 percent among Japanese, and 9 percent among Chinese (not shown).
- Similarly, 29 percent of Native Hawaiian juveniles who were arrested were adjudicated, compared with 13 percent of Whites, 12 percent of Filipinos, 10 percent of Japanese, and 4 percent of Chinese (not shown).
- On average, 3 percent of Native Hawaiians who were arrested were confined to the Hawai'i Youth Correctional Facility—the highest percentage among the major ethnicities in Hawai'i (not shown).

Official juvenile justice system records document only arrests that are processed through the system and may reflect multiple counts for the same individuals. To improve child well-being, a more socially just approach to these issues calls for youth-based studies conducted in Hawai'i that more accurately portray and support children caught in the wind tunnel.

Much of what and how children learn is through the social relationships they build with family, friends, and the communities that surround them. Loving, healthy, and stable relationships help children to develop key cognitive and social skills necessary for learning and success. Nurturing relationships are also important for teaching communication skills, building self-confidence, and allowing children to express themselves as individuals. Relationships are also key for modeling “acceptable” and “appropriate” behaviors in society.

Data on the social well-being of Native Hawaiian school-age keiki affirm that our keiki do not live in homogeneous arrangements and are at risk for relatively high rates of arrests and family offenses. This reminds us that when keiki step into a classroom, they bring with them a history and reality of diverse family structures, relationships, and dynamics. It also means that keiki and their 'ohana may be confronted with diverse challenges in their daily lives that can ultimately affect child well-being and academic outcomes.

Therefore, it is imperative that our school systems and community resources recognize that supporting children means engaging and strengthening their families as a whole. Hawaiian education recognizes the central role of families in a child's development, honoring 'ohana a keiki's first kumu. And as noted in the research, the significance of 'ohana relationships and their cultural connections are valuable not only because they stabilize and deepen opportunities for child development and growth, but also because they serve as a source of resiliency in the face of adversity. As a keiki's first learning and social institution, 'ohana and community experiences set the path for learning in life. “Ike aku, 'ike mai, kōkua aku, kōkua mai; pela iho la ka nohona 'ohana—*Recognize and be recognized, help and be helped; such is family life*” (Pukui 1983, 130).

## MATERIAL AND ECONOMIC WELL-BEING

An expansive view of material well-being encompasses educational attainment, employment, income and other inputs such as access to safe neighborhoods, nutritious foods, quality healthcare and schools, and extracurricular and recreational activities. Kanaka Maoli perspectives on material and economic well-being are holistic, enveloping 'āina, 'ohana, and mo'okū'auhau (genealogy), which are intrinsically linked. Our kūpuna and cultural practices are rooted in the understanding that the health of the 'āina is a reflection of the health of its people.

With care of our lands, water, and resources, in return, the 'āina provides crops, shelter, tools, medicine, and clothing. This sentiment is captured in the famous Hawaiian proverb, "He ali'i ka 'āina; he kauwā ke kanaka—*The land is a chief; man is its servant*" (Pukui 1983, 62). 'Āina exists, breathes, provides, and nourishes so long as humans need it, care for it, and work it to live. This 'ōlelo no'ēau captures the essence of material wealth and well-being for Native Hawaiians as intricately tied to self-sufficiency and livelihood.

In this section, we examine several measures of economic health for school-age keiki and their families. Although available data do not capture a holistic picture of Native Hawaiian waiwai, or wealth, they do provide important insights into the material resources that 'ohana access to provide for their children, significantly affecting learning and other educational opportunities and outcomes.

We know, for example, that children who come from low-income households have fewer learning materials such as books, computers, toys, and time spent with parents—activities that stimulate foundational cognitive and learning skills (Bradley et al. 2001; Orr 2003). They are also less likely to have resources to navigate college (Brown, Wohn, and Ellison 2016). Research shows that children from low-income households display more behavior issues at school (Boroughs, Massey, and Armstrong 2005) and have lower academic achievement (Lee and Burkam 2002; Sirin 2005; Reardon et al. 2013). Low socioeconomic status also dampens career aspirations (Diemer and Ali 2009) and postsecondary attainment (National Center for Education Statistics 2015).

The communities of children from lower socioeconomic neighborhoods also impact educational achievement. For example, schools that serve low-income populations are more likely to have less-experienced and less-qualified teachers (Peske and Haycock 2006) and to be underresourced (Aikens and Barbarin 2008; Pribesh, Gavigan, and Dickinson 2011).

Children from low-income backgrounds are often judged to have lower innate ability and talent (Kana'iaupuni 2004). In addition to teacher bias, research shows that children raised in poverty face significant challenges that other children and many adults never have to confront. Brain research shows the critical need to intervene early to counteract stressors that impede children's learning engagement and focus (Jensen 2009; Blair and Raver 2016). We highlight in this section the experiences, challenges, and stressors that are inherently intertwined with family and community poverty, severely limiting social, economic, and political capital available to parents and communities.

Our analyses reveal that overall, Native Hawaiian children face considerable economic barriers. For example, compared with other major ethnic subpopulations, parents of Native Hawaiian school-age children are less likely to have a college degree and to have a job. Data show that four out of twenty-five Native Hawaiian school-age children live in poverty—a statistic that has hardly changed since 1999 (approximately 18 percent).

Yet, despite these challenges, two hopeful signs emerge regarding work and livable income. For example, from 2008 to 2017, the percentage of Native Hawaiian children with one working parent rebounded from a ten-year slump. Between 2000 and 2015, four of nine regions saw an increase in the percentage of school-age children with at least one working parent across the islands. Another positive sign is a gain in families earning a livable income among Native Hawaiians with school-age keiki, increasing by 5 percentage points between 2008 to 2018, overall.

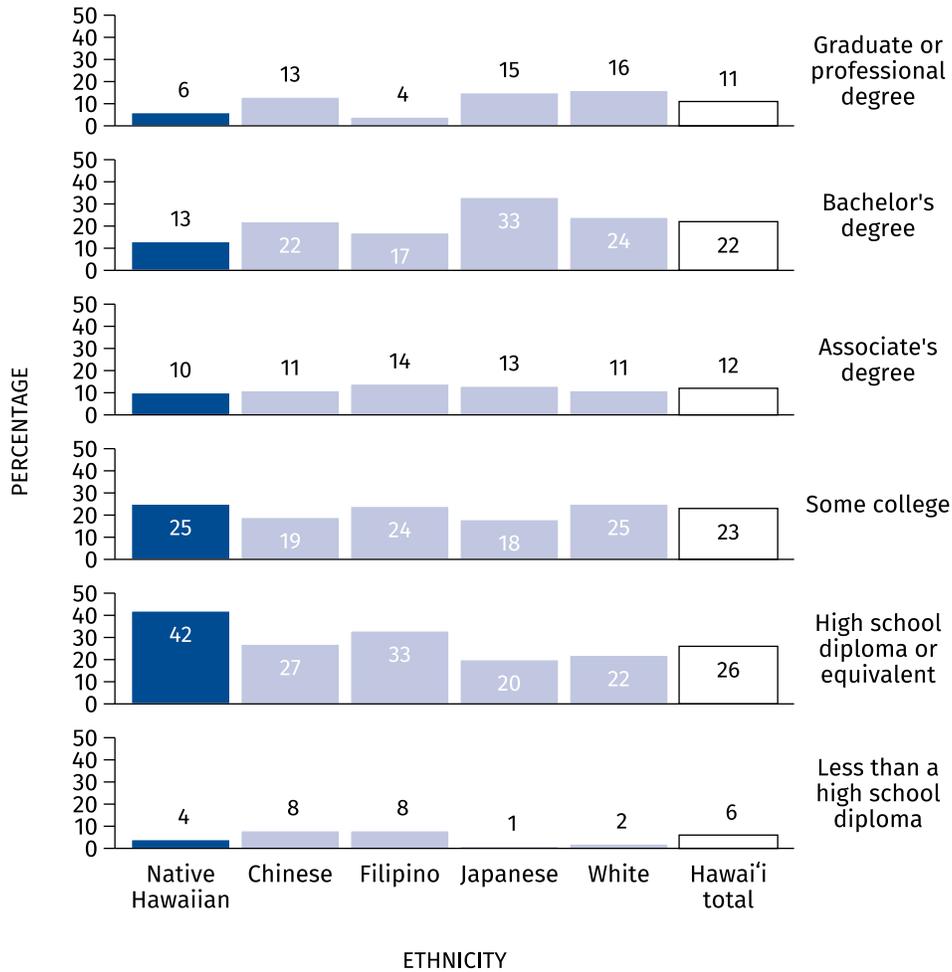
In the narrative that follows, we present the details on families with school-age children, focusing on parental education and employment (including having one parent working in the labor force), and family income and poverty.

## Parental Education and Employment

Among the many resources parents provide their children, parental educational attainment and employment often are some of the strongest predictors for child outcomes (Davis-Kean 2005; Dubow, Boxer, and Huesmann 2009). This is because both education and employment are connected to income, which is an indicator for poverty. Altogether, these metrics shed light on the advantages and disadvantages children bring into the classroom.

Data show that among all Native Hawaiian parents with school-age children, nearly three-quarters do not have a college degree. Native Hawaiian parents also represent the greatest share of all parents with school-age children to have a high school diploma as their highest degree—16 percentage points higher than the Hawai'i total (fig. 3.9).

**FIGURE 3.9** Educational attainment of parents with school-age children living at home  
 [as a percentage of parents with children ages 5–17 living at home, by ethnicity, Hawai'i, 2017]

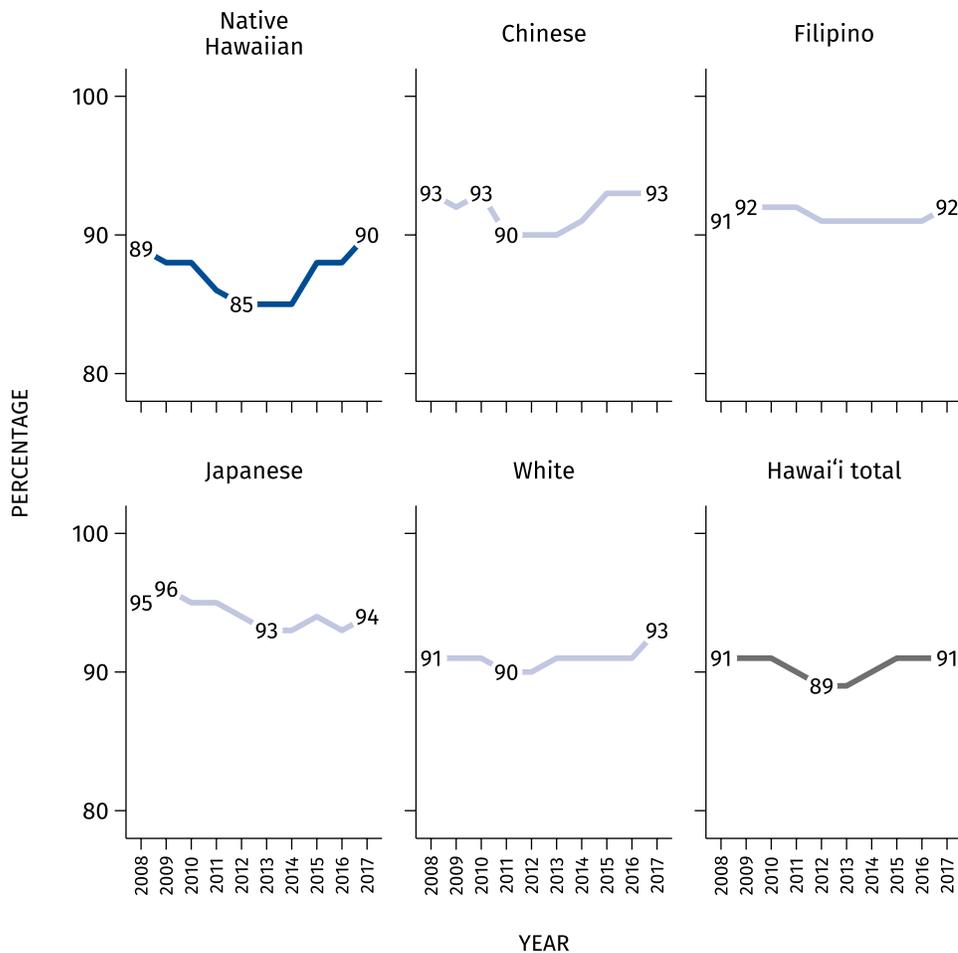


Data source: US Census Bureau, American Community Survey, Public Use Microdata Sample 5-year file  
 Note 1: The designation "White" in this chart refers to non-Hispanic Whites, alone or in combination with other ethnicities, as defined by the American Community Survey.

- Among Native Hawaiian parents with school-age children living at home, 29 percent have a college degree, compared with the Hawai'i total of 45 percent.
- One-fourth (25 percent) of Native Hawaiian parents with school-age children have attended but not completed college—a rate similar to that of Filipinos and Whites.
- Among Native Hawaiian parents with school-age children at home, 42 percent have a high school diploma as their highest level of educational attainment—the highest rate among the major ethnicities in Hawai'i.

Not surprisingly, families with reliable income are better positioned to provide for their keiki. By 2017, the proportion of Native Hawaiian children with at least one working parent (90 percent) was on par with the Hawai'i total (91 percent), despite being lower than that of other ethnicities from 2010 to 2016. This fluctuation among Native Hawaiian children with at least one working parent was the greatest among all ethnicities (fig. 3.10).

**FIGURE 3.10** Trends in children with at least one working parent  
[as a percentage of children ages 17 and younger, by ethnicity, Hawai'i, 2008 to 2017]



Data source: US Census Bureau, American Community Survey, Public Use Microdata Sample 1-year files

Note 1: Children, in this context, refers to "own children," which are defined as children ages 17 and younger who have never married and are sons or daughters by birth, marriage, or adoption; the data include subfamilies, which are defined as families that do not maintain their own household but live in a household where the householder or householder's spouse is a relative.

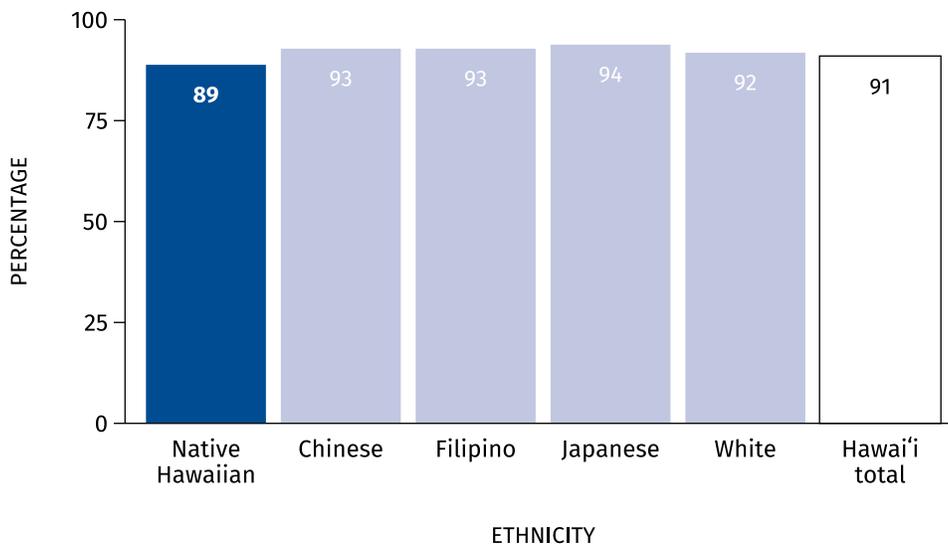
Note 2: The designation "White" in this chart refers to non-Hispanic Whites, alone or in combination with other ethnicities, as defined by the American Community Survey.

Note 3: Data labels are presented for the first and last points, the maximum and minimum points, and some inflection points where the trend changes.

- Comparing Hawai'i's major ethnic groups from 2008 to 2017, Native Hawaiians experienced the greatest fluctuation in the proportion of children who have at least one working parent.
- The percentage of Native Hawaiian children with at least one working parent decreased significantly, declining from 89 to 85 percent between 2008 and 2012—the greatest decrease among Hawai'i's major ethnicities.
- Starting in 2014, the percentage of Native Hawaiian children with at least one working parent began to increase, reaching 90 percent by 2017.
- By 2017, the proportion of Native Hawaiian children with at least one working parent (90 percent) was on par with the Hawai'i total (91 percent), despite being lower than that of other ethnicities from 2010 to 2016.

Looking specifically at Native Hawaiian school-age keiki, data show that 89 percent have at least one working parent—similar to the Hawai'i total of 91 percent (fig. 3.11)

**FIGURE 3.11** School-age children with at least one working parent  
[as a percentage of children ages 5–17, by ethnicity, Hawai'i, 2017]



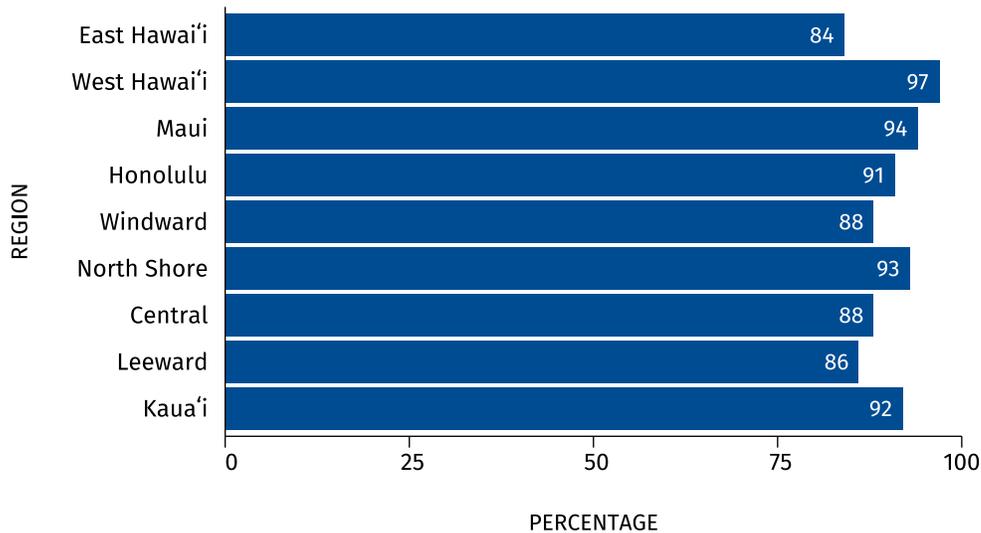
*Data source:* US Census Bureau, American Community Survey, Public Use Microdata Sample 5-year file  
 Note 1: The designation "White" in this chart refers to non-Hispanic Whites, alone or in combination with other ethnicities, as defined by the American Community Survey.

- Among Native Hawaiian children ages five to seventeen, 89 percent have at least one working parent—a percentage similar to the Hawai'i total (91 percent).
- Compared with other school-age children in Hawai'i, Native Hawaiian children are the least likely to have at least one parent who works.

## PARENTAL EDUCATION—REGIONAL HIGHLIGHTS

When it comes to Native Hawaiian children’s parents in the labor force, East Hawai‘i has the lowest proportion of Native Hawaiian children with at least one parent in the labor force (84 percent), while West Hawai‘i has the highest proportion (97 percent). However, these proportions do not differ significantly from percentages in other regions (fig. 3.12). This data point reflects only the nature of the employment and the overall state of family financial well-being (see “[Material and Economic Well-Being](#)” in Chapter 1 for additional information).

**FIGURE 3.12** Native Hawaiian children with at least one parent in the labor force—regional comparison  
[as a percentage of Native Hawaiian children ages 17 and younger, by region, Hawai‘i, 2015]



*Data source:* US Census Bureau, American Community Survey, Selected Population Tables

Note 1: Children, in this context, refers to "own children," which are defined as children ages 17 and younger who have never married and are sons or daughters by birth, marriage, or adoption.

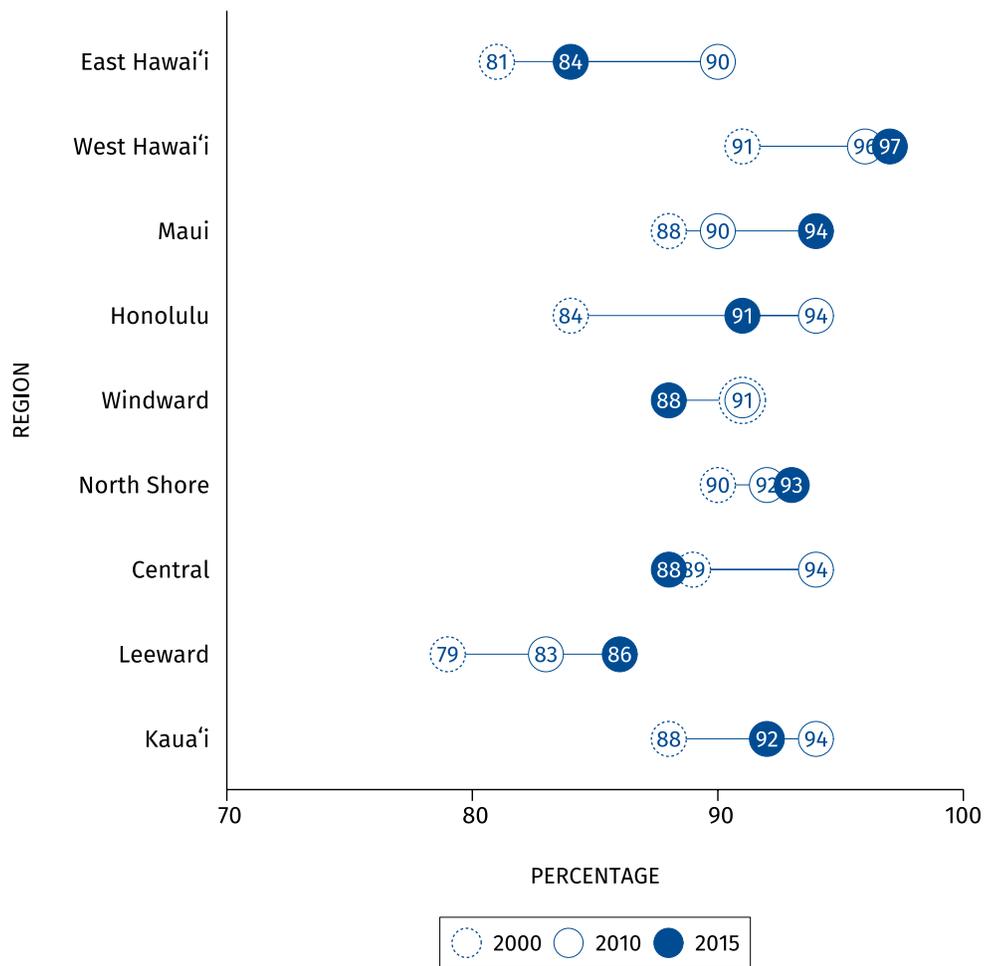
Note 2: The data include subfamilies, which are defined as families that do not maintain their own household but live in a household where the householder or householder’s spouse is a relative.

- Across regions, West Hawai‘i has the highest proportion (97 percent) of Native Hawaiian children with at least one parent in the labor force.
- Relative to other regions, East Hawai‘i has the lowest percentage of Native Hawaiian children with at least one parent working (84 percent).
- In East Hawai‘i and West Hawai‘i, the prevalence of Native Hawaiian children with at least one parent in the labor force is not significantly different from that of other regions.

The past fifteen years have generally seen an increase in the proportion of Native Hawaiian keiki with at least one parent in the labor force (fig. 3.13), with all regions (except Windward) experiencing an upward trend between 2000 and 2010. In more recent years, from 2010 to 2015, Leeward and Maui saw an upward trend in the percentage of Native Hawaiian children with a working parent. Conversely, Central experienced a significant decline (6 percentage points) during this five-year period, with East Hawai'i, Honolulu, and Kaua'i trending downward.

**FIGURE 3.13** Trends in Native Hawaiian children with at least one parent in the labor force—regional comparison

[as a percentage of Native Hawaiian children ages 17 and younger, by region, Hawai'i; 2000, 2010, 2015]



*Data source:* US Census Bureau, 2011–2015 American Community Survey, Selected Population Tables; US Census Bureau, 2006–2010 American Community Survey, Selected Population Tables; Census 2000, Summary File 4

*Note 1:* Children, in this context, refers to "own children," which are defined as children ages 17 and younger who have never married and are sons or daughters by birth, marriage, or adoption.

*Note 2:* The data include subfamilies, which are defined as families that do not maintain their own household but live in a household where the householder or householder's spouse is a relative.

- From 2000 to 2010, all regions (except Windward) experienced an upward trend in the percentage of Native Hawaiian children with at least one parent in the labor force.
- From 2010 to 2015, Maui and Leeward saw an upward trend in the proportion of Native Hawaiian keiki who have at least one working parent, while Central experienced a significant decline (6 percentage points).

## Family Income and Poverty

Decades of research affirm causal associations between the amount of income a family generates and a child's cognitive, behavioral, and health development (Chaudry and Wimer 2016). In general, it is well recognized that children from low-income environments are at greater risk for poorer educational outcomes. Likewise, children who display lower educational outcomes tend to come from families that are less well off (i.e., low income, in poverty).

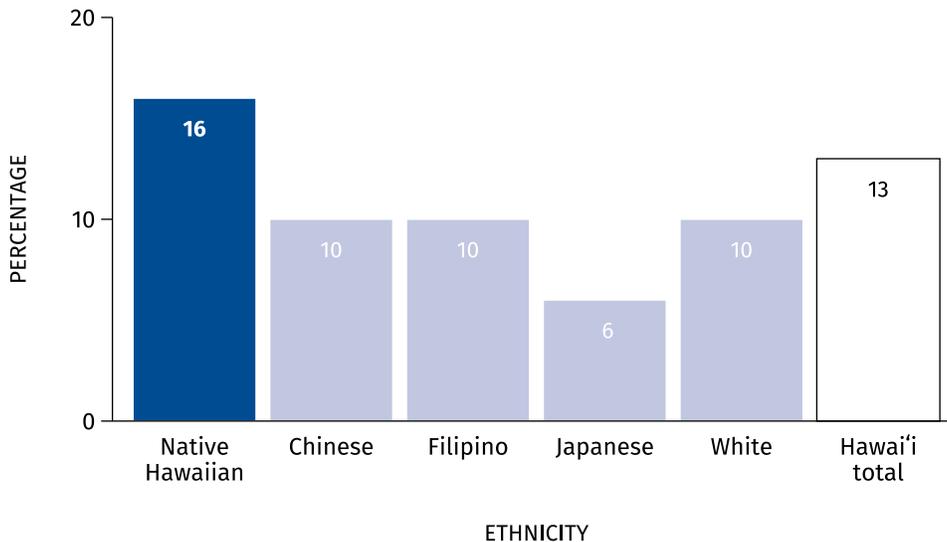
State efforts assist low-income families with children ages eighteen and younger by subsidizing costs for childcare, before- and after-school programs, and preschools and by providing families with guidance, information, and referrals to community resources. Among families that utilize these services, 42 percent are Native Hawaiian. This rate is highest in Hawai'i county, with 52 percent being Native Hawaiian families (see [fig. 2.18](#)).

The mechanisms and processes that facilitate these relations include material hardships or fewer resources needed for day-to-day living (e.g., housing, healthy food, and healthcare); less time for caregivers to provide quality care and education (e.g., time spent with child and educational materials); parental stressors and depression; and unstable living conditions. All these mechanisms shape children's biological, neurological, and psychological development, thereby affecting educational outcomes.

The following statistics highlight the systematic disadvantages that many Native Hawaiian children carry from their homes into the classroom, the implications of which stack the educational odds against Native Hawaiian learners.

Roughly one in six, or 16 percent of Native Hawaiian school-age children, is in poverty—higher than poverty rates among all other major ethnicities in Hawai'i. Japanese have the lowest proportion of children in poverty (6 percent), followed by Chinese, Filipinos, and Whites, each at 10 percent ([fig. 3.14](#)).

**FIGURE 3.14** School-age children in poverty  
[as a percentage of individuals ages 5–17, by ethnicity, Hawai'i, 2017]



*Data source:* US Census Bureau, American Community Survey, Public Use Microdata Sample 5-year file

Note 1: The designation "White" in this chart refers to non-Hispanic Whites, alone or in combination with other ethnicities, as defined by the American Community Survey.

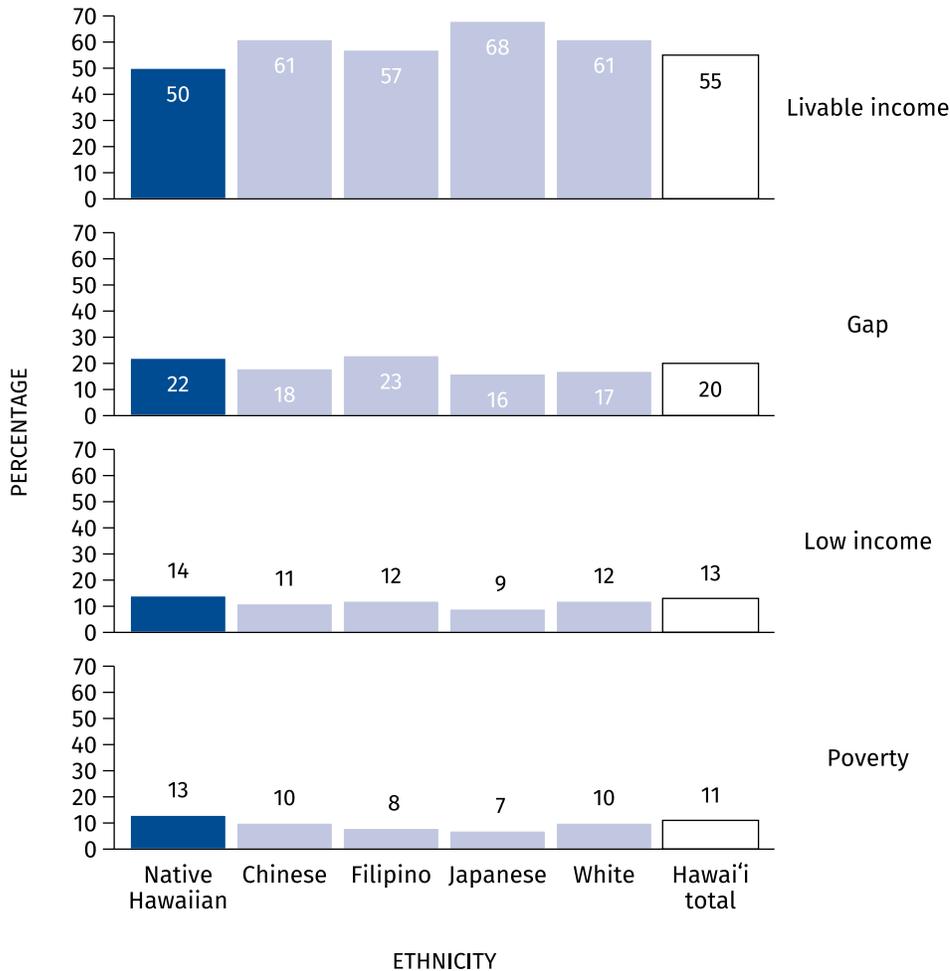
Note 2: These calculations exclude people who are institutionalized, in military group quarters, in college dormitories, and unrelated individuals younger than age fifteen.

- Approximately one in six Native Hawaiian school-age children (16 percent) is in poverty—the highest rate in Hawai'i.
- School-age Japanese children have the lowest poverty rate (6 percent) among the major ethnicities in Hawai'i.
- One in ten school-age Chinese, Filipino, and White children (10 percent) is in poverty.

When averaging the most recent five years of Census data ending in 2017, one-half (50 percent) of all Native Hawaiian families with school-age keiki have a livable income. Slightly more than one-fifth (22 percent) are in the gap group, where earnings exceed 185 percent of the poverty guideline but are below the threshold for a livable income. Low income and poverty characterize more than one-quarter (27 percent, combined) of Native Hawaiian families with school-age children (fig. 3.15).

Looking at similar data over a ten-year period, findings from 2008 to 2017 give indications of positive changes in the financial state of our Native Hawaiian 'ohana. For example, livable income among Native Hawaiian families with school-age children increased from 46 to 51 percent, perhaps due to families moving out of the gap group, which decreased from 27 to 23 percent over the same time period. Rates of poverty and low income did not change significantly from 2008 to 2017 (fig. 3.16). Poverty rates are often closely tied to regional economic factors such as the availability of jobs, local industries, wages, housing costs, and access to social services. Thus, Native Hawaiian poverty rates vary across the islands (see [fig. 1.37](#)).

**FIGURE 3.15** Income categories of families with school-age children  
[among families with children ages 5–17, by ethnicity, Hawai'i, 2017]



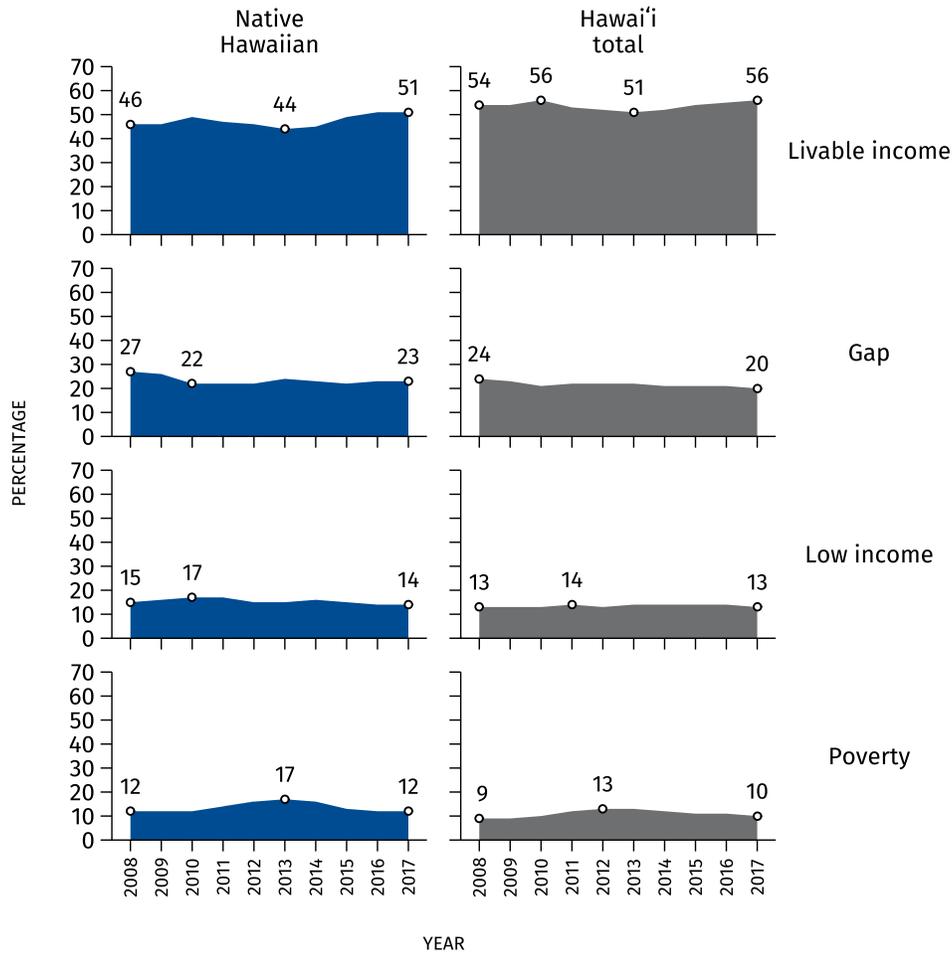
Data source: US Census Bureau, American Community Survey, Public Use Microdata Sample 5-year file

Note 1: The data include subfamilies, which are defined as families that do not maintain their own household but live in a household where the householder or householder's spouse is a relative.

Note 2: The designation "White" in this chart refers to non-Hispanic Whites, alone or in combination with other ethnicities, as defined by the American Community Survey.

- Among Native Hawaiian families with school-age children, 50 percent have a livable income—the lowest rate among the major ethnicities in Hawai'i.
- More than one-quarter of Native Hawaiian families with school-age children have low income or are in poverty (27 percent, combined).
- Relative to other ethnicities in Hawai'i, Japanese families with school-age children have the highest rates of livable income and the lowest rates of low income and poverty.

**FIGURE 3.16** Trends in income categories of families with school-age children  
 [among families with children ages 5–17, by Native Hawaiian and Hawai'i total, Hawai'i, 2008 to 2017]



Data source: US Census Bureau, American Community Survey, Public Use Microdata Sample 1-year files

Note 1: The data include subfamilies, which are defined as families that do not maintain their own household but live in a household where the householder or householder's spouse is a relative.

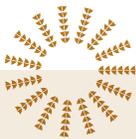
Note 2: Data labels are presented for the first and last points, the maximum and minimum points, and some inflection points where the trend changes.

- Over a ten-year period, Native Hawaiian families with school-age children saw gains in livable income, increasing from 46 to 51 percent between 2008 and 2017.
- Conversely, from 2008 to 2017, the percentage of Native Hawaiian families with school-age children in the gap group decreased by 4 percentage points.
- During the same ten years, poverty rates among Native Hawaiian families with school-age children reached a high point (17 percent) in 2013 but by 2017 had reverted to 2008 levels (12 percent).

- Despite a decade of gains in livable income and overall stable poverty rates, Native Hawaiian families with school-age children still had livable income rates that were 5 percentage points lower than the Hawai‘i total in 2017.
- From 2013 to 2017, livable income rates among families with school-age children increased for all major ethnicities in Hawai‘i except Japanese (not shown).

Our data reaffirm a clear and inverse connection between the economic strength of families and academic achievement. It is therefore not surprising that the continued and unacceptable financial situation of many of our Native Hawaiian families occurs alongside continued and unacceptable educational outcomes. The interconnected cycles of both financial and educational outcomes need to be worked on for long-term transformation and success. It is hard to know where to begin to break the cycle; however, despite depressed economic conditions, communities throughout Hawai‘i continue to show and gain strength and resilience through relying on ‘āina and ‘ohana supports.

Working to improve the economic well-being and reality of Native Hawaiian keiki and their ‘ohana must begin by addressing self-sufficiency. Material wealth, or lack of it, is centered around deprivation—deprivation of resources, of wants, of needs, and (especially) of agency and of choice. And while we continue to refer to important metrics such as income, education level, and federal poverty measures, we must expand the types of data we collect that are relevant, meaningful, and actionable for Native Hawaiians—for example, indicators of healthy ‘āina, access to nutritious food sources and systems, and safe communities that allow for ‘ohana engagement and support. These are markers of a thriving lāhui, rich in wealth and abundance across the spectrum of well-being.



Earning a livable income among Native Hawaiian families with school-age children increased from 46 to 51 percent between 2008 and 2017.



## SPIRITUAL AND EMOTIONAL WELL-BEING

School-age years are pivotal in the development of a person's spiritual and emotional well-being. It is during this time that personality and habits often take shape within children. As they grow older, adolescence can be a confusing period for many youths as they adjust to a myriad of biological and social changes. I ka wā kahiko, in historical times, separate rituals for boys and girls signified important transitions in their evolving roles as community members.

Out of recognition for their distinct mana (spiritual power), pubescent boys were raised in the Hale Mua (Men's House) and menstruating girls retired to the Hale Pe'a (Menstruation House). It was within these circles that they were taught how to behave as kāne (men) and wāhine (women). These rituals and structures continue to provide Native Hawaiians with a strong sense of kuleana and community (Tengan 2008).

Spirituality continues to play an important role in Native Hawaiian 'ohana. Keiki who grow up in religious families learn to pule (pray) and participate in ceremonies, which shape their values and worldview as they grow older. In ancient times, boys and girls might compose their own pule at the age of seven. As Pukui explains, "With the learning of prayers, the youngster gradually assumed a new and grave responsibility: he was now accountable for his own relationships with the gods" (Pukui, Haertig, and Lee 1979, 56). The incorporation of pule and oli (chants) within k-12 Hawaiian-focused charter schools, immersion schools, and some private schools extends this tradition of empowerment by encouraging youth to develop rich, spiritual lives.

'O ka ikaika o ka mana'o me ke kino—*Be strong in mind and body*. This 'ōlelo no'ēau reminds us of the importance of being balanced and focused when leading our lives. As an ideal, it may be applied to children and to adults. There are multiple factors that influence how school-age keiki develop emotionally during adolescence. If a child is agitated, distressed, or despondent it can help to ho'olaka (calm, or tame) their emotions so that they can resume their learning. Native Hawaiian perspectives on teaching and learning, such as tēnā, emphasize unique contexts and may recognize a keiki's readiness in nonlinear ways (Beniamina 2010).

In this section we examine data that provide insights into the spiritual and emotional well-being of school-age keiki. We begin with anecdotal evidence regarding cultural identity among Native Hawaiian youth, followed by data on depression, suicide, and abuse. In contrast to the depth and significance of spirituality and emotions in Native Hawaiian culture, relevant data for this age group are severely limited and are based mostly on deficits.

## Identity

Studies point to the importance of racial and ethnic identity for adolescents, especially among young people of color (Byrd 2012; Umaña-Taylor et al. 2014). As such, it is impossible to discuss spiritual and emotional well-being among Native Hawaiian youth without attending to the significance of culture and identity. Over recent generations, we have seen a resurgence of cultural pride among Native Hawaiians, echoed by the growth of kula kaia-puni, Hawaiian-focused charter schools, and culture-based after-school programs. Language, history, and culture are key components of well-being for Indigenous youth (Wexler 2009). Increased access and authentic use of ‘ōlelo Hawai‘i and ‘Ōiwi cultural practices encourage school-age learners to explore and strengthen their sense of belonging to Hawai‘i and to other Native Hawaiians.

Like culture itself, spirituality and the ability to positively manage one’s emotions must be learned. While the ‘ohana is the primary locus for this type of development, schools also play a critical role in shaping youth expectations and behaviors. Research highlights the advantages of Hawaiian culture-based educational approaches on Native Hawaiian learner outcomes (Kana‘iaupuni, Ledward, and Malone 2017). For Indigenous peoples, seeing our culture permeate the learning environment is often empowering; it mitigates potential discontinuities between home and school and reduces emotional or psychological strain (Warzon and Ginsburg-Block 2008).

However, cultural and historical trauma can severely impact the spiritual and emotional well-being of Native people. When combined with the effects of structural racism, the internalization of negative stereotypes and persistent despair can be overwhelming. As a result, depression and suicide are common risk factors for Indigenous youth in many countries (Kirmayer, Sheiner, and Geoffroy 2016). Prior research on mental health disorders among Hawai‘i youth found a greater prevalence among Native Hawaiians, particularly females (Makini et al. 1996; Makini et al. 2006). However, more studies of the interactions among cultural identity, individual psychology, and emotional well-being for Native Hawaiian youth are needed (Choi-Misailidis and Kaulukukui 2004).

## Depression

Statistics reveal the United States is experiencing a mental health crisis. Depressive disorders and suicide are on the rise, especially among youth ages sixteen to twenty-four. The Cigna US Loneliness Index indicates that nearly half of all Americans sometimes or always feel lonely or left out. Adults within Generation Z (ages eighteen to twenty-two) are by far the loneliest population, with an average index score ten times higher than the least-lonely generation—those ages seventy-two and older (Cigna 2018). According to the US Centers for Disease Control and Prevention Vital Signs, forty-five thousand people died by suicide in 2016, and more than half had no known mental health condition. The suicide rate has gone up more than 30 percent in half of the United States since 1999 (Centers for Disease Control and Prevention 2018).

Depression is a debilitating condition that affects millions of learners across the United States. In Hawai'i, many Native Hawaiian students struggle with depressive disorders. In 2017, nearly one-third (30 percent) of Native Hawaiian high schoolers reported being depressed during the past year (fig. 3.17). Rates of depression are the same for Native Hawaiian middle schoolers (not shown).

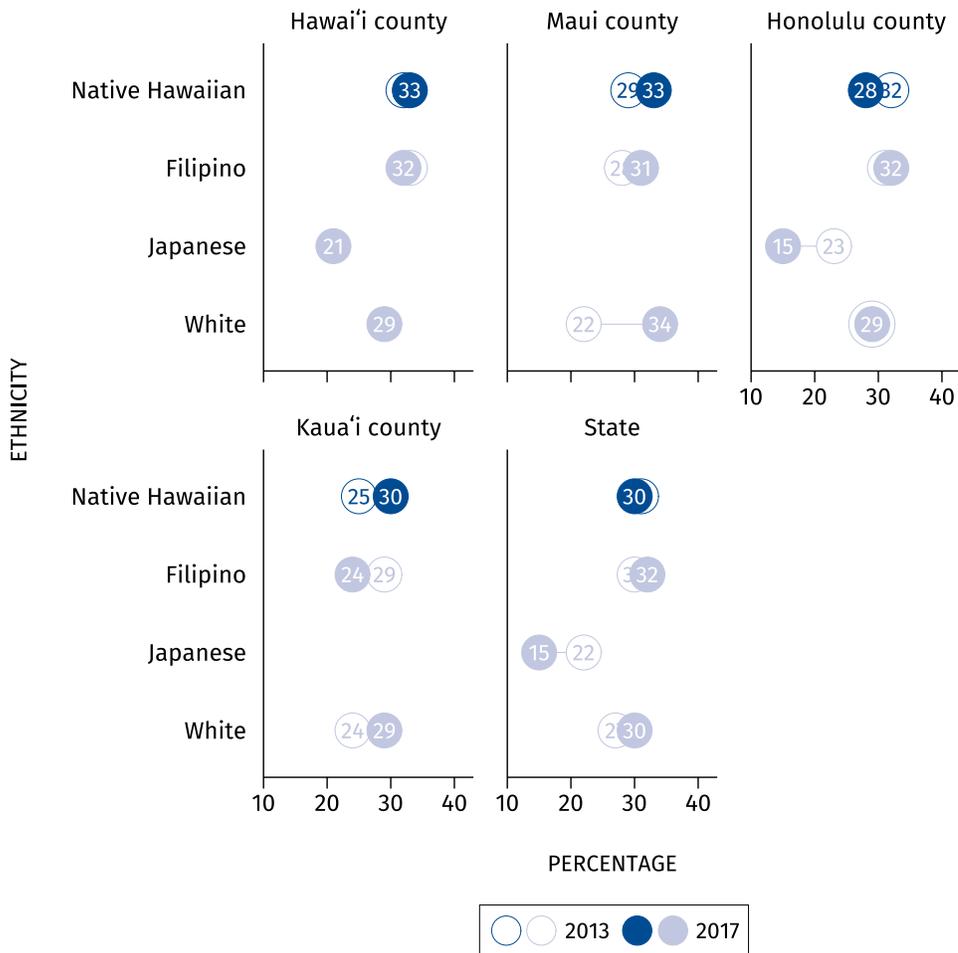
Among high schoolers across Hawai'i, Japanese students are the least likely to be depressed (22 percent). At the county level, from 2013 to 2017, Maui and Kaua'i saw an increase in the proportion of Native Hawaiian high schoolers who are depressed. However, during the same period, there was a downward trend for depression among Native Hawaiian middle schoolers in Honolulu county and statewide (not shown).



Across Hawai'i, depression rates among Native Hawaiian middle schoolers trended downward from 2013 to 2017.



**FIGURE 3.17** High schoolers who were depressed in the past year—county comparison  
 [as a percentage of high school students, by ethnicity, county, and year, Hawai'i, 2013 and 2017]



Data source: Hawai'i Youth Risk Behavior Survey, 2013 (years 2011, 2013 combined) and 2017 (years 2015, 2017 combined), Hawai'i Department of Health and Hawai'i Department of Education

Note 1: This chart includes overlapping and sometimes obscured data points. The most recent data points are all visible; older data points that are not discernible suggest little or no change over time.

Note 2: Missing circles indicate data that are unavailable, not applicable, or suppressed due to small sample size.

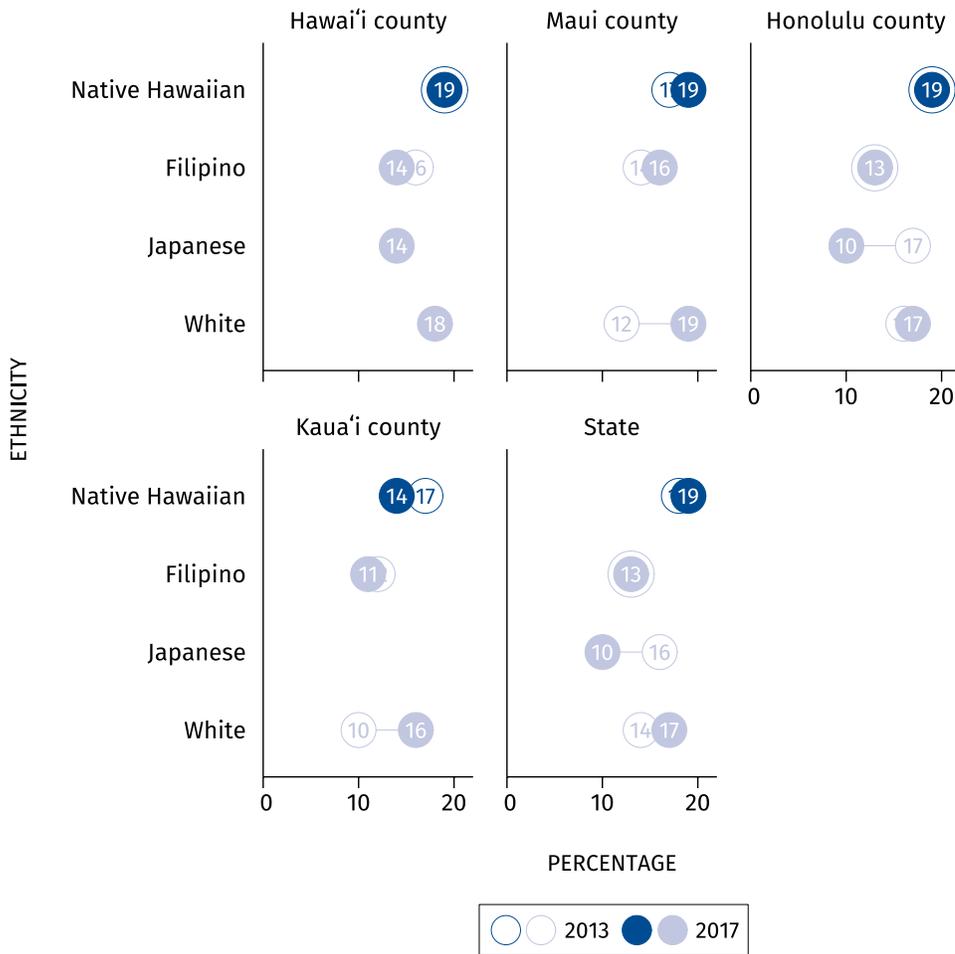
- Native Hawaiian high schoolers in Maui and Kua'i counties were more likely to be depressed in 2017 than they were in 2013.
- Native Hawaiian middle schoolers in Honolulu county—and at the state level—were more likely to be depressed in 2017 than they were in 2013 (not shown).
- Compared with other ethnicities, Japanese high schoolers are the least likely to be depressed; the same is true among middle schoolers (not shown).

## Suicidal Ideation and Attempted Suicide

Like many other communities, Hawai'i has experienced a rash of youth suicide in recent years. Native Hawaiians between the ages of sixteen and twenty-four who live in rural areas are especially at risk (Chung-Do et al. 2015). A review of existing literature on Indigenous youth suicide suggests the topic is complex and underinvestigated (Harder et al. 2012). At the same time, there is growing evidence supporting the effectiveness of culture-based interventions for Native Hawaiians at risk of suicide (Goebert et al. 2018, Chung-Do et al. 2014). Trends suggest that depression and suicide, which are disturbingly prevalent among Native Hawaiian youths, require greater research and policy attention. Below, we present data on students who considered suicide, attempted suicide, and made a suicide attempt that required medical attention.

Data collected through the Hawai'i Youth Risk Behavior Survey provide a window into the experiences of school-age children. Suicidal ideation can range from fleeting notions to serious contemplation and planning. Data for 2013 and 2017 indicate that Native Hawaiian high school students at the state level are generally more likely than their peers to have seriously thought about suicide in the past year. A similar trend is evident for Native Hawaiian middle schoolers (not shown). Despite these higher rates, there was no significant change among Native Hawaiian middle and high schoolers during this same time period (fig. 3.18)

**FIGURE 3.18** High schoolers who had seriously considered suicide in the past year—county comparison [as a percentage of high school students, by ethnicity, county, and year, Hawai‘i, 2013 and 2017]



Data source: Hawai‘i Youth Risk Behavior Survey, 2013 (years 2011, 2013 combined) and 2017 (years 2015, 2017 combined), Hawai‘i Department of Health and Hawai‘i Department of Education

Note 1: This chart includes overlapping and sometimes obscured data points. The most recent data points are all visible; older data points that are not discernible suggest little or no change over time.

Note 2: Missing circles indicate data that are unavailable, not applicable, or suppressed due to small sample size.

- At the state level in 2017, Native Hawaiian high schoolers were more likely than Filipino and Japanese students to seriously consider suicide; among middle schoolers (not shown), Native Hawaiians were the most likely to contemplate suicide.
- Among Native Hawaiian high schoolers at the state level, the proportion of students who seriously considered suicide did not change significantly from 2013 to 2017; the same is true for middle schoolers (not shown).

In 2013 and 2017, Native Hawaiian high school students at the state level reported higher rates of attempted suicide compared with other major ethnic groups in Hawai'i. Additionally, at the state level in 2017, nearly one in eight Native Hawaiian high schoolers (13 percent) attempted suicide—an alarming statistic but not significantly higher than the rate in 2013 (fig. 3.19).

Among middle schoolers attempting suicide in 2013, there was no significant difference between Native Hawaiian students and their peers. However, in 2017, attempted suicide rates were significantly higher among Native Hawaiian middle schoolers than among their Japanese and White counterparts. Native Hawaiian middle schoolers experienced a significant increase (2 percentage points) in attempted suicide from 2013 to 2017 in Honolulu and Maui counties and at the state level (not shown).

**FIGURE 3.19** High schoolers who attempted suicide in the past year—county comparison  
 [as a percentage of high school students, by ethnicity, county, and year, Hawai‘i, 2013 and 2017]



Data source: Hawai‘i Youth Risk Behavior Survey, 2013 (years 2011, 2013 combined) and 2017 (years 2015, 2017 combined), Hawai‘i Department of Health and Hawai‘i Department of Education

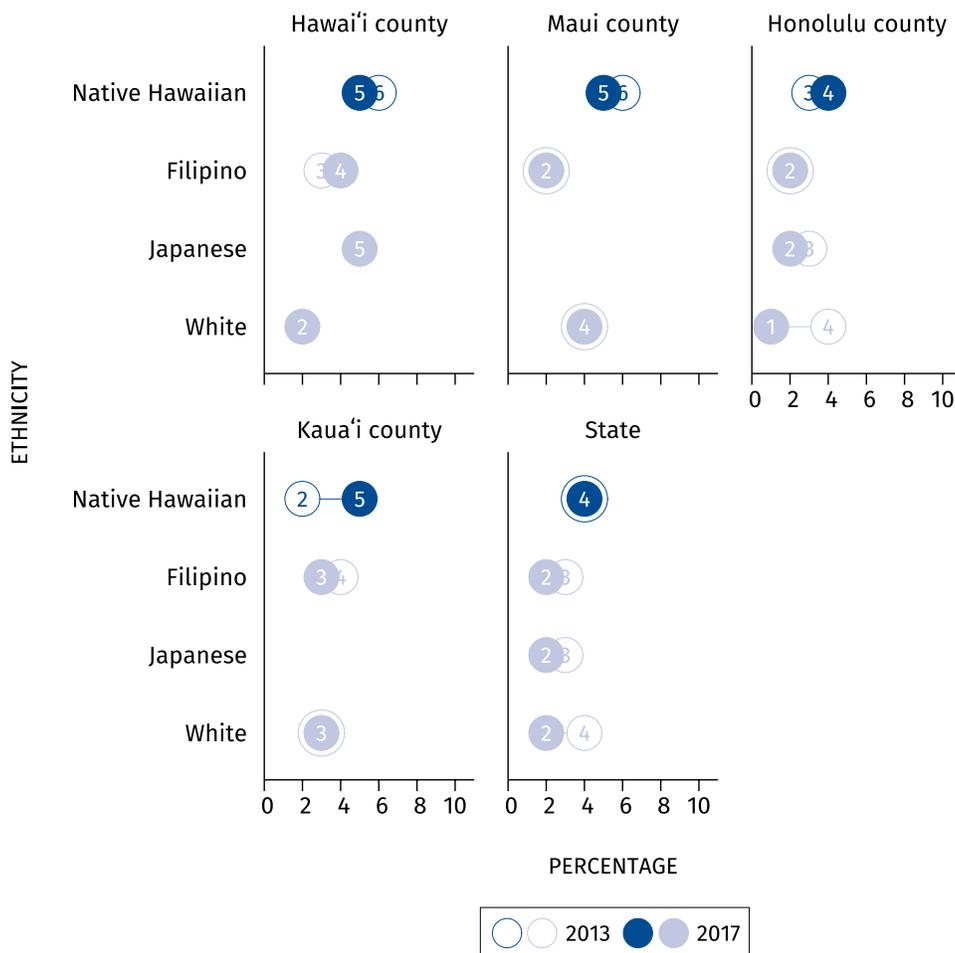
Note 1: This chart includes overlapping and sometimes obscured data points. The most recent data points are all visible; older data points that are not discernible suggest little or no change over time.

Note 2: Missing circles indicate data that are unavailable, not applicable, or suppressed due to small sample size.

- Among high school students across the state, Native Hawaiians are the most likely to attempt suicide (13 percent).
- In Maui and Honolulu counties—and at the state level—the proportion of Native Hawaiian middle schoolers who attempted suicide increased from 2013 to 2017 (not shown).
- Rates of attempted suicide do not differ significantly between Native Hawaiian students in high school and middle school (not shown).

A similar trend can be seen regarding Hawai'i youths who attempted suicide and required medical attention as a result. In 2017 at the state level, 4 percent of Native Hawaiian high schoolers attempted suicide that resulted in medical attention—double the rate of other ethnicities. Across most counties, suicide attempts that resulted in medical attention fluctuated slightly among Native Hawaiians from 2013 to 2017. Kaua'i is the exception, with Native Hawaiian high schoolers in the county experiencing a significant increase (3 percentage points) in serious suicide attempts from 2013 to 2017 (fig. 3.20).

**FIGURE 3.20** High schoolers who made a suicide attempt requiring medical attention—county comparison  
[as a percentage of high school students, by ethnicity, county, and year, Hawai'i, 2013 and 2017]



Data source: Hawai'i Youth Risk Behavior Survey, 2013 (years 2011, 2013 combined) and 2017 (years 2015, 2017 combined), Hawai'i Department of Health and Hawai'i Department of Education

Note 1: This chart includes overlapping and sometimes obscured data points. The most recent data points are all visible; older data points that are not discernible suggest little or no change over time.

Note 2: Missing circles indicate data that are unavailable, not applicable, or suppressed due to small sample size.

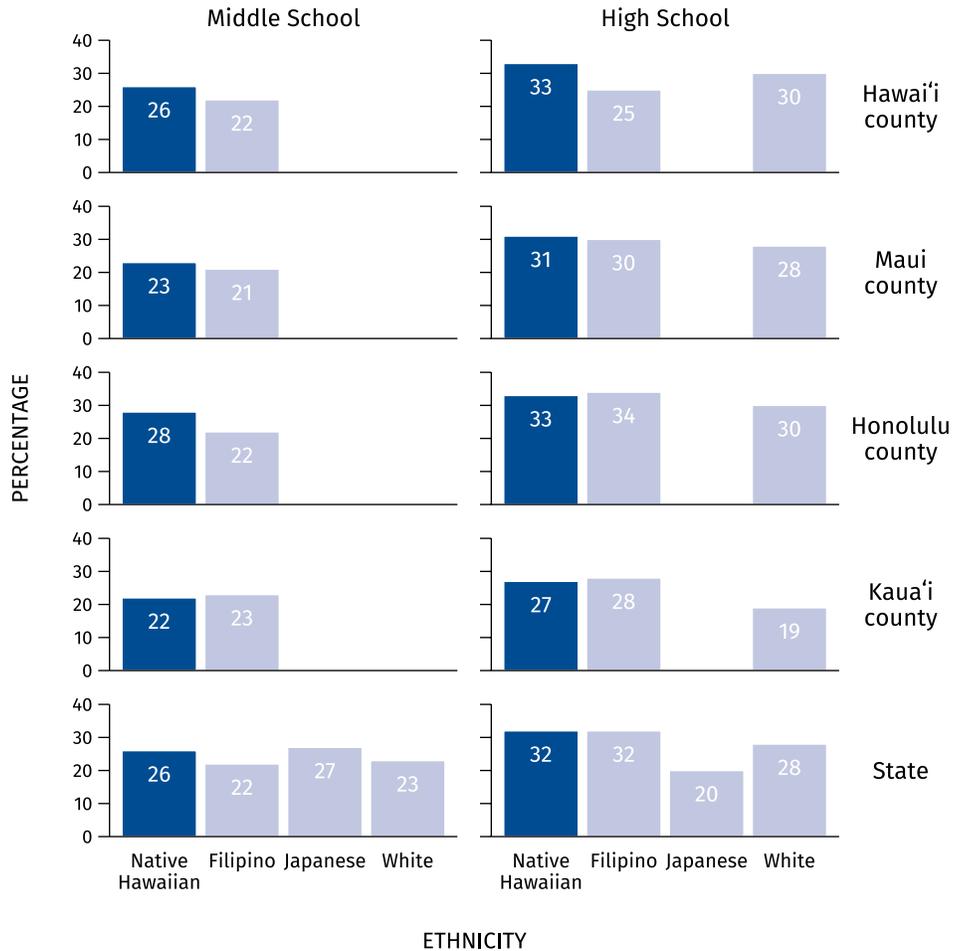
- At the state level in 2017, Native Hawaiian high schoolers were more likely than their peers from other ethnic groups to make a suicide attempt that required medical attention.
- Kaua'i county experienced a significant increase in the proportion of Native Hawaiian high schoolers who made a serious suicide attempt, rising from 2 to 5 percent between 2013 and 2017.

## Emotional, Physical, and Sexual Abuse

Controlling and abusive relationships take a toll on lives, at any age. When a person is harmed by someone they love, it can be difficult to correct or escape the situation. Research shows that patterns of intimate partner violence often start in the home, where unhealthy behaviors tend to be framed as family matters rather than community ones (Oneha et al. 2010). Studies indicate that Native Hawaiians are among the ethnic groups at greater risk for physical dating violence (Ramisetty-Mikler et al. 2006) and domestic abuse (Asian Pacific Institute on Gender-Based Violence 2020). However, Native Hawaiians are relatively less likely to experience a fatality from domestic violence (Pobutsky et al. 2014). Increasingly scholars are acknowledging the need for culture-based interventions for Indigenous communities (Klingspohn 2018) and Native Hawaiians (Hishinuma et al. 2009) to deal with physical, emotional, and sexual abuse.

Unfortunately, Native Hawaiian 'ōpio (youth) are not immune to mistreatment by a loved one or romantic partner. In 2017, about one-third of Native Hawaiian and Filipino high school students (32 percent, each) said they were purposely controlled or emotionally hurt by someone they were dating. The same was true for 26 percent of Native Hawaiian middle school students and 27 percent of Japanese middle school students that year (fig. 3.21).

**FIGURE 3.21** Students who were purposely controlled or emotionally hurt by someone they were dating—county comparison  
 [as a percentage of middle and high school students who were dating or going out with someone in the past twelve months, by ethnicity and county, Hawai'i, 2017]



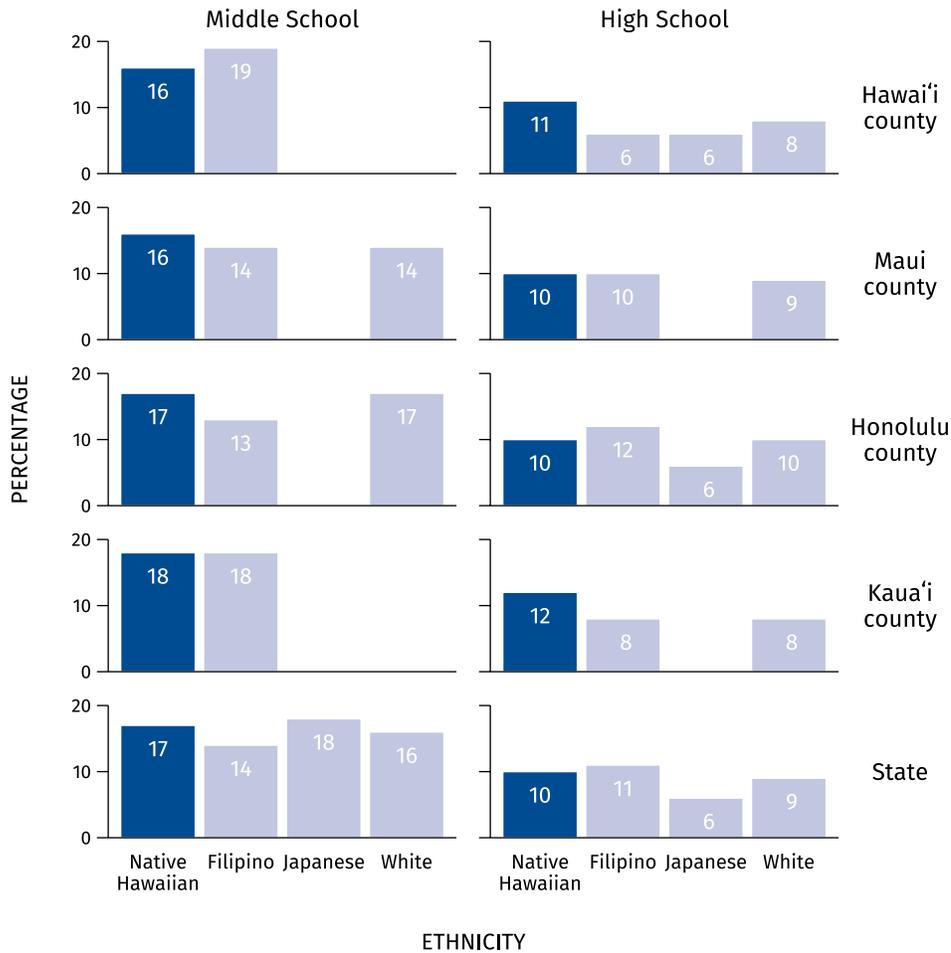
Data source: Hawai'i Youth Risk Behavior Survey, 2017 (years 2015, 2017 combined), Hawai'i Department of Health and Hawai'i Department of Education

Note 1: Missing lines or bars indicate data that are unavailable, not applicable, or suppressed due to small sample size.

- Among Native Hawaiian students at the state level, high schoolers are more likely than middle schoolers to have been purposely controlled or emotionally hurt by someone they were dating.

Combined data from the Hawai'i Youth Risk Behavior Survey for 2013, 2015, and 2017 show that physical abuse by a romantic partner is unnervingly common among middle- and high-school-age children. In 2015, nearly one in five Native Hawaiian middle school students (17 percent) and one in ten Native Hawaiian high school students (10 percent) reported physical abuse by someone they were dating in the last twelve months. Rates among Native Hawaiian middle and high school students did not differ significantly across counties and statewide during the same time (fig. 3.22).

**FIGURE 3.22** Students who were physically abused by someone they were dating—county comparison  
 [as a percentage of middle and high school students who were dating or going out with someone in the past twelve months, by ethnicity and county, Hawai'i, 2015]



Data source: Hawai'i Youth Risk Behavior Survey, 2015 (years 2013, 2015 combined), Hawai'i Department of Health and Hawai'i Department of Education

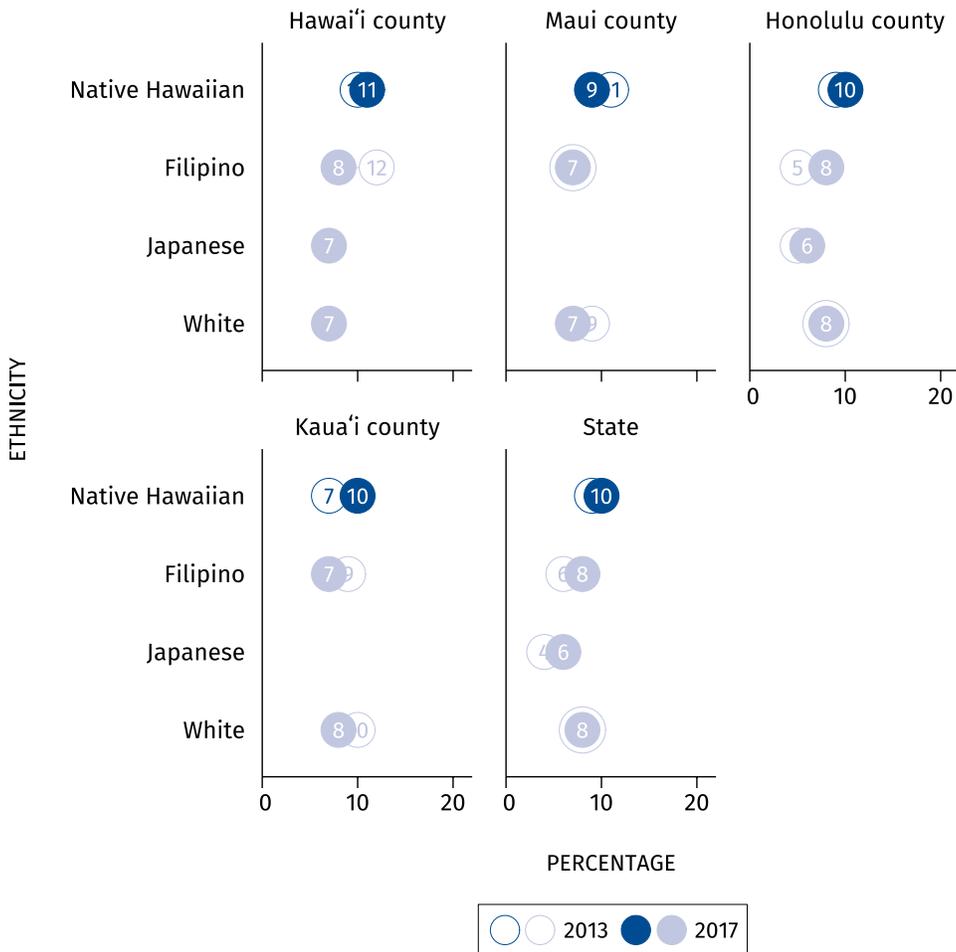
Note 1: Missing lines or bars indicate data that are unavailable, not applicable, or suppressed due to small sample size.

- Among Native Hawaiian students, middle schoolers are more likely than high schoolers to be physically abused by someone they are dating.
- For Native Hawaiian middle schoolers, rates of physical abuse by someone they are dating do not differ significantly across counties or when compared with the state average; the same is true among high schoolers.

Sexual abuse and coercion are serious concerns for youth. In 2017, 10 percent of Native Hawaiian high schoolers were forced to have sexual intercourse when they did not want to do so, compared with 4 percent of Native Hawaiian middle schoolers (not shown). The percentage among Native Hawaiian high schoolers who were forced to have sexual intercourse when they did not want to did not differ significantly from 2013 to 2017 (fig. 3.23). Among Native Hawaiians, Filipinos, and Whites in 2017, students feeling pressured into having sex was significantly more common in high school than in middle school (not shown).

**FIGURE 3.23** High schoolers who were forced to have sexual intercourse when they did not want to—county comparison

[as a percentage of high school students, by ethnicity, county, and year, Hawai'i, 2013 and 2017]



Data source: Hawai'i Youth Risk Behavior Survey, 2013 (years 2011, 2013 combined) and 2017 (years 2015, 2017 combined), Hawai'i Department of Health and Hawai'i Department of Education

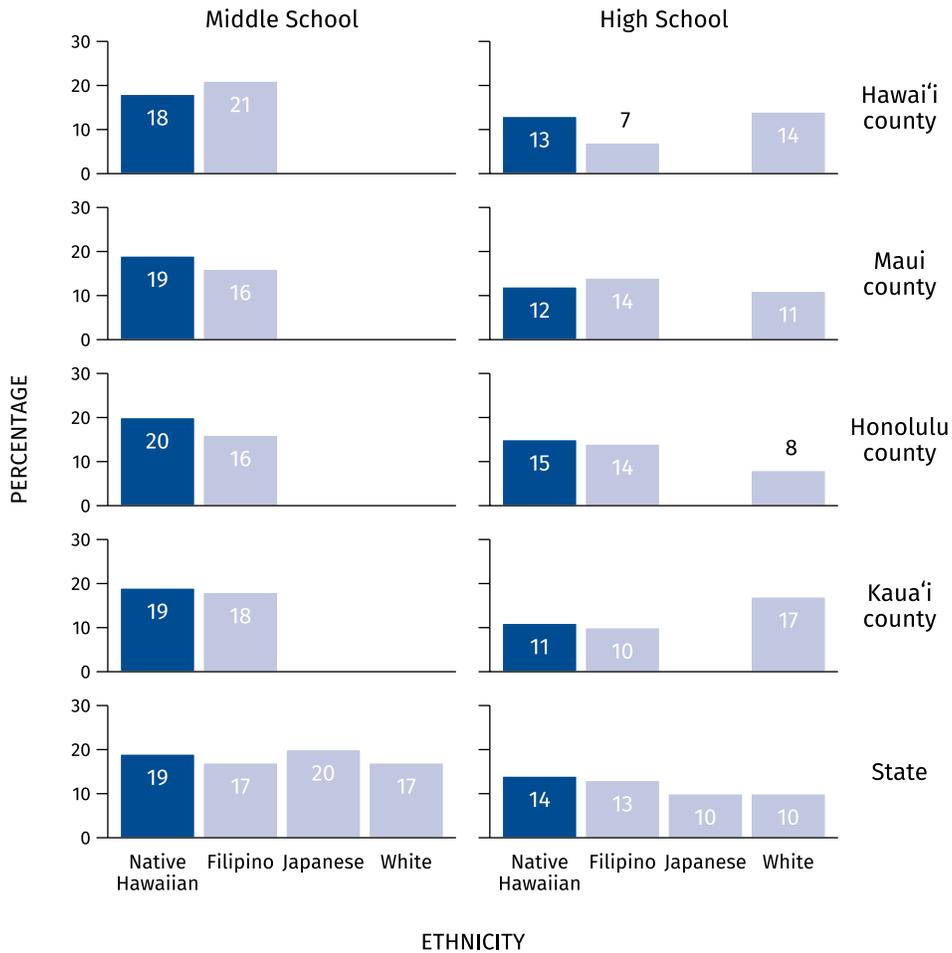
Note 1: This chart includes overlapping and sometimes obscured data points. The most recent data points are all visible; older data points that are not discernible suggest little or no change over time.

Note 2: Missing circles indicate data that are unavailable, not applicable, or suppressed due to small sample size.

- At the state level, there was not a significant difference between 2013 and 2017 in the percentage of Native Hawaiian high schoolers who were forced to have sexual intercourse when they did not want to.
- In Kaua'i county, the proportion of Native Hawaiian high schoolers who were forced to have sex when they did not want to increased from 7 to 10 percent between 2013 and 2017.
- Among Native Hawaiians, Filipinos, and Whites in 2017, the likelihood of students being forced to have sexual intercourse when they do not want to was significantly greater among high schoolers than middle schoolers (not shown).
- In Maui county, the percentage of Native Hawaiian middle schoolers who were forced to have sex when they did not want to decreased from 6 to 4 percent between 2013 and 2017 (not shown).

Combined data from 2013 and 2015 indicate the prevalence of youth who were forced to do sexual things with their partner against their will during the last twelve months. Among Native Hawaiians, middle school students were more likely than their high school counterparts to be coerced into sexual acts (19 percent compared with 14 percent). Rates among Native Hawaiian middle and high school students did not differ significantly across counties and statewide in 2015 (fig. 3.24).

**FIGURE 3.24** Students who were forced to do sexual things with their date—county comparison  
 [as a percentage of middle and high school students who were dating or going out with someone in the past twelve months, by ethnicity and county, Hawai'i, 2015]



Data source: Hawai'i Youth Risk Behavior Survey, 2015 (years 2013, 2015 combined), Hawai'i Department of Health and Hawai'i Department of Education

Note 1: Missing lines or bars indicate data that are unavailable, not applicable, or suppressed due to small sample size.

- Among Native Hawaiian students, middle schoolers are more likely than high schoolers to be forced to do sexual things with their date.

School-age years are a time when keiki are simultaneously discovering the larger world and their place within it. It is also a period when considerable physical and emotional maturation occurs. As such, spiritual and emotional well-being increasingly come into play as keiki encounter new experiences and develop patterns of behavior that often shape their lives.

Much of the data we have to assess the emotional lives of keiki are limited and based on deficits. On average, Native Hawaiian middle and high schoolers are more likely than their peers to report depressive disorders as well as to think about, plan, and attempt suicide. They are also among the higher-risk ethnic groups in Hawai'i when it comes to being physically or emotionally hurt by someone they love.

On the other hand, there is strong anecdotal evidence to suggest that Native Hawaiian culture and identity offer keiki a buffer from life's many stressors. The Hawaiian culture-based education movement is rooted in cultural values that attend to the whole child. Growing appreciation for youth developmental assets (Scales 2011), social-emotional learning (Zins et al. 2004), and trauma-informed schools (Walkley and Cox 2013) suggest mainstream educators also recognize the benefits of promoting spiritual and emotional well-being among youth.

## PHYSICAL WELL-BEING

Good physical health is connected to optimal learning for students and provides a foundation for future life experiences. Research demonstrates that good physical health is related to higher rates of school attendance; better cognitive, attitudinal, and behavioral skills; and stronger and more positive social relationships. Research also shows that lower educational attainment is associated with poor health (Centers for Disease Control and Prevention 2019c). Over time, people with less education may also have a comparatively higher prevalence of health disadvantages such as shorter lifespans, as well as increased likelihood of disabilities, major diseases, and risk factors that predict disease (Virginia Commonwealth University 2015).

Schools influence the health of students by promoting physical activity and access to healthy foods. Schools are also sources of information on the benefits of avoiding risky behaviors. It is estimated that children consume up to one-half of their daily calories and spend half of their waking hours at school (Institute of Medicine 2012). Additionally, many home and community factors contribute to the health of our keiki, such as the prevalence and affordability of healthy foods, access to safe spaces for physical activity, exposure to secondhand smoke, and access to healthcare.

However, school and community settings are not the same for all children. Children of color from low-income families often attend schools that “maintain less healthy settings for learning, with poorer air quality, less access to physical activity, higher exposure to environmental toxins, fewer health services, inadequate facilities, and less access to healthy foods and safe drinking water during the school day” (Davis and Weisz 2019). Furthermore, low-income communities often have fewer natural outdoor spaces available for activities and play (Bates, Bohnert, and Gerstein 2018). These conditions, often referred to as social determinants of health, are particularly impactful for school-age children and represent the conditions in which many of our Native Hawaiian children learn and grow.

Native Hawaiian middle and high school students report relatively high rates of concerning health conditions. Compared with their peers from other ethnic groups, Native Hawaiian middle and high school students generally report higher rates of alcohol and marijuana use, drinking before age thirteen, cigarette smoking, exposure to secondhand smoke at work, and living with someone who uses tobacco products. Along with White students, Native Hawaiian high schoolers report higher rates of using hallucinogenics, ecstasy, cocaine, or prescription drugs without a prescription. Compared with their peers, Native Hawaiian youths also have the highest rates of asthma, obesity, and sexual activity.

Despite these challenges, Native Hawaiian school-age children are showing signs of promise for greater physical well-being. At the state level, Native Hawaiian middle and high school students report high rates of being active for sixty or more minutes daily and doing muscle-strengthening exercises at least three times weekly. Additionally, between 2013 and 2017, marijuana use decreased significantly among Native Hawaiian high schoolers, rates of Native Hawaiian middle schoolers having their first alcoholic drink before age thirteen declined, and rates of cigarette smoking and sexual activity decreased among Native Hawaiian middle and high school students.

Native Hawaiian children and adolescents have access to a number of sources that build resilience. For example, Hawaiian cultural affinity, and being a part of a family with high cohesion, organization, parental bonding, and support can serve as protective factors for Native Hawaiian youth (Liu and Alameda 2011). Having an adult to turn to is one such protective factor. From a regional perspective, Hawai'i and Kaua'i counties saw an increase in the proportion of Native Hawaiian high school students who reported talking to an adult about the dangers of alcohol, tobacco, or drug use. Statewide—and in Hawai'i and Honolulu counties—Native Hawaiian and White high school students are also more likely to report having their parents or other adult talk to them about expectations around sex, in comparison to other major ethnic groups.

In the following analysis, we present data on nutrition and physical activity, health conditions such as asthma and obesity, and risk factors such as substance use and sexual behavior among Native Hawaiian children and adolescents. We also present a county perspective and a comparison between Native Hawaiian school-age children and children of other major ethnicities on these health conditions and activities when data are available. These findings are presented with the awareness that gaps remain among data on the health of Native Hawaiian school-age children, particularly in the area of understanding social determinants of health and their linkages to individual health outcomes (Liu and Alameda 2011).

## Nutrition and Physical Activity

Physical activity is shown to promote cognitive and brain health, with studies linking the time spent in physical activity with a healthier body and mind. Behavior and nutrition in childhood are the result of personal, environmental, and macrosystem factors (Das et al. 2017). A lack of physical activity, fruit and vegetable consumption, and sedentary behaviors place children at increased risk for overweight/obesity and chronic conditions (Nigg and Amato 2015). Similarly, studies have shown that nutrition behaviors developed during childhood stay relatively stable into adolescence (Birch, Savage, and Ventura 2007). Research demonstrates that physical activity in childhood predicts physical activity in adolescence and adulthood, suggesting that unhealthy habits formed in childhood are often difficult to correct (Baranowski et al. 2000).

## FOOD SECURITY AND HEALTHY FOODS

Access to and consumption of healthy food plays a large role in a child's overall health and brain development. Food-secure children tend to have higher rates of positive cognitive, emotional, and physical development, compared with their food-insecure peers (Zaslow et al. 2009). Food-secure children are more likely than food-insecure children to be in good health and avoid hospitalization (Cook and Frank 2008) and have fewer mental health problems, increased quality of life, more positive social interactions, and less likelihood of seeing a psychologist or being suspended. Compared with their food-insecure peers in school settings, food-secure children have higher grades, larger gains in math and reading, better attendance, and higher rates of grade promotion and high school graduation (Hickson et al. 2013).

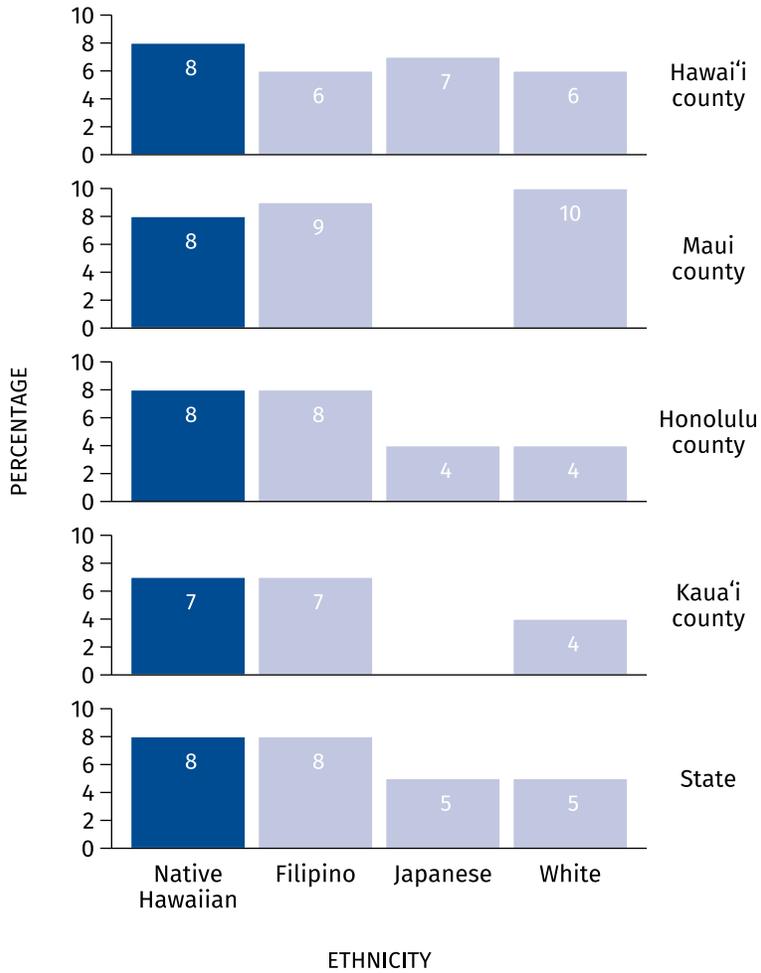
Meeting the nutritional needs of vulnerable children mitigates health and educational disparities that can have long-term impacts (Dunn et al. 2020). Furthermore, the negative impact of food insecurity on children and adult health is likely underestimated rather than overestimated (Gundersena and Kreider 2009).

Widespread hunger contrasts sharply with conditions in ancient Hawaiian society. It is estimated that human-transformed areas for agriculture and residential spaces accounted for 15 percent of the precontact Hawai'i landscape, yet this same footprint was able to provide for 100 percent of the population's needs (Gon III, Tom, and Woodside 2018; Kent 2016). Shared abundance would not be possible unless 'Ōiwi values and practices that reinforce sustainability and reverence for nature were internalized by children. Looking to the future, scholars see increasing value in Indigenous and youth-led food sovereignty movements (Trinidad 2012).

Food insecurity in Hawai'i may be increasing as a result of the developing COVID-19 pandemic and additional burdens on children's nutritional intake. In 2019, 21.8 million children in the United States received free or reduced-price lunches at school. This number grew to 55.1 million in the wake of COVID-19-related school closures (O'Quin 2020). Similarly, stay-at-home orders and cancelations of youth sports have decreased opportunities for regular exercise for many keiki.

Across Hawai'i, nearly one in ten Native Hawaiian high school students (8 percent) report being hungry because of lack of food at home. This percentage is significantly higher than that of Japanese and White high schoolers (fig. 3.25). Our findings show similar statistics for Native Hawaiian middle schoolers (not shown).

**FIGURE 3.25** High schoolers who were hungry because of a lack of food at home—county comparison  
 [as a percentage of high school students, by ethnicity and county, Hawai'i, 2017]



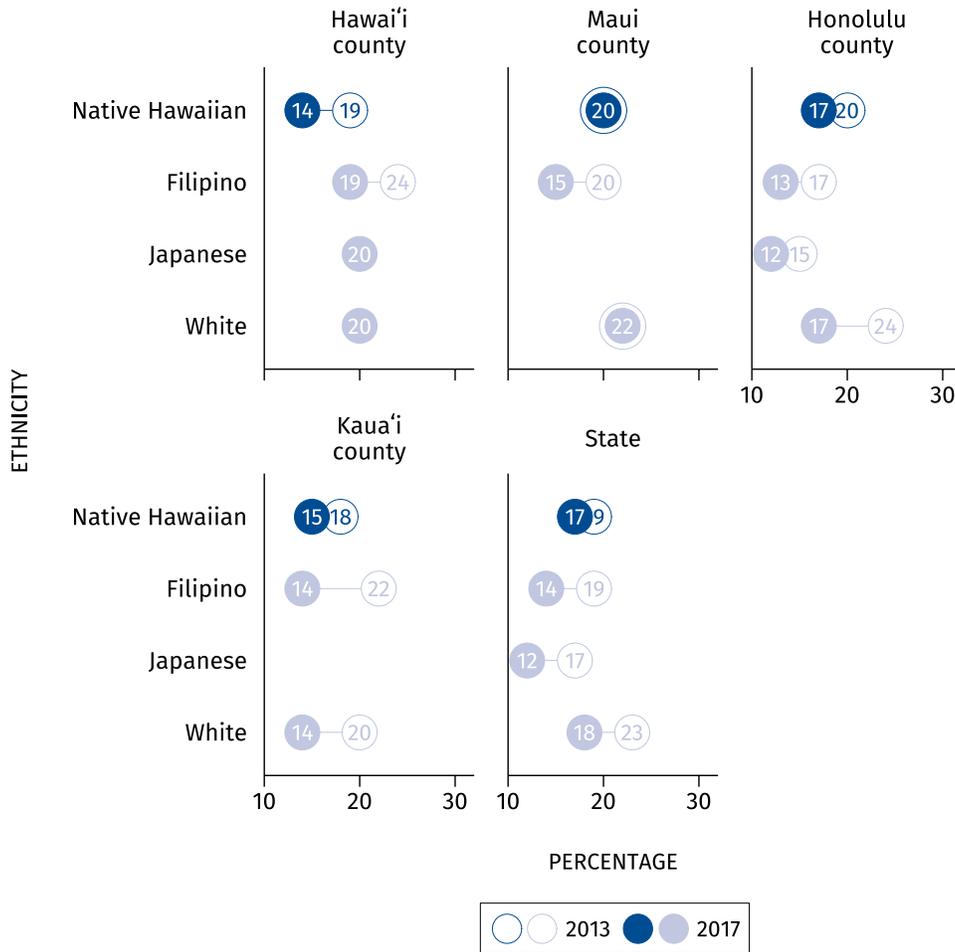
Data source: Hawai'i Youth Risk Behavior Survey, 2017 (years 2015, 2017 combined), Hawai'i Department of Health and Hawai'i Department of Education

Note 1: Missing lines or bars indicate data that are unavailable, not applicable, or suppressed due to small sample size.

- Among Native Hawaiians, there is no significant difference between middle schoolers and high schoolers in the proportion of students who report being hungry because of a lack of food at home (not shown).
- At the state level, Native Hawaiian students are more likely than their Japanese and White peers to report being hungry because of a lack of food at home.

Fruits and vegetables are a part of healthy eating. A lack of certain foods such as fruits and vegetables is associated with lower grades among students (Centers for Disease Control and Prevention 2014). In 2017, 17 percent of Native Hawaiian high school students statewide reported eating five or more fruits and vegetables per day, a percentage that is higher than that of their Filipino and Japanese peers (14 percent and 12 percent, respectively). There was also a significant decrease among Native Hawaiian high schoolers who reported eating five or more fruits and vegetables per day from 2013 to 2017 in Hawai'i county. Additionally, 2017 rates in Hawai'i county were significantly lower than rates in Maui county, Honolulu county, and the state total (fig. 3.26).

**FIGURE 3.26** High schoolers who eat five or more fruits and vegetables per day—county comparison  
 [as a percentage of high school students, by ethnicity, county, and year, Hawai'i, 2013 and 2017]



Data source: Hawai'i Youth Risk Behavior Survey, 2013 (years 2011, 2013 combined) and 2017 (years 2015, 2017 combined), Hawai'i Department of Health and Hawai'i Department of Education

Note 1: This chart includes overlapping and sometimes obscured data points. The most recent data points are all visible; older data points that are not discernible suggest little or no change over time.

Note 2: Missing circles indicate data that are unavailable, not applicable, or suppressed due to small sample size.

- At the state level in 2017, Native Hawaiian high schoolers were more likely than their Filipino and Japanese peers to eat at least five fruits and vegetables per day.
- The percentage of Native Hawaiian high schoolers who eat five or more fruits and vegetables per day decreased from 2013 to 2017 in all counties except Maui; however, only the decrease in Hawai'i county was significant.

## PHYSICAL ACTIVITY

Regular physical activity benefits all aspects of students' lives. Students who are physically active tend to perform better academically in school through enhanced brain function, cognition, and classroom behavior (Singh et al. 2012); however, more research is needed to understand the relationship between different types of physical activity (e.g., sports versus fitness), duration of physical activity, and improved academic performance among different types of students (e.g., boys versus girls) (Howie and Pate 2012). Physical activity can be promoted through recess, physical education, and brief classroom physical activity breaks. Additionally, physical exercise promotes healthy bones and muscles, cardiorespiratory fitness, healthy weight, increased energy, and reduced risk of a multitude of health conditions, including obesity. Emotionally, anxiety and depression may be reduced, and social interactions may be promoted through group exercise (Janssen and LeBlanc 2010).

Physical activity can be measured by the number of minutes per day of moderate or vigorous aerobic activity, muscle-strengthening activities at least three days a week, and bone-strengthening activities at least three days a week.

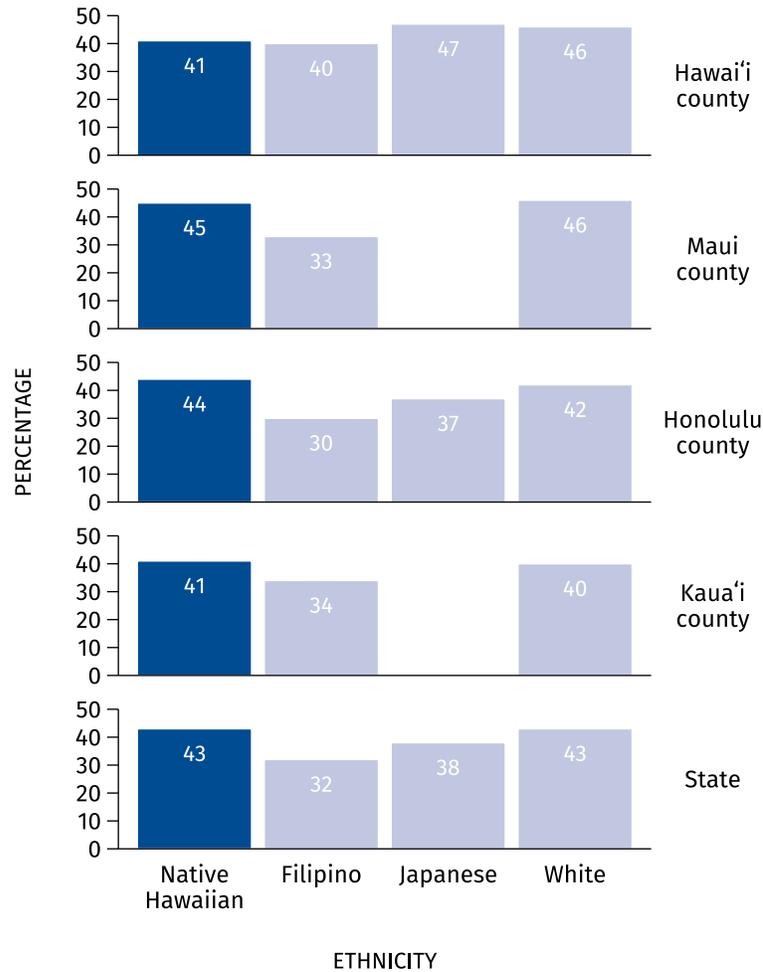
At the state level, 43 percent of Native Hawaiian high school students are physically active for sixty or more minutes at least five days a week—a rate that is equal to that of White high schoolers and higher than rates among Filipino and Japanese students (fig. 3.27). At the middle school level, physical activity among Native Hawaiian students across Hawai'i is significantly higher, with 53 percent being active for sixty or more minutes at least five days per week (not shown). The notable decline in activity from middle to high school is also evident among students who are physically active on a daily basis: One in three Native Hawaiian middle schoolers is physically active every day, compared with one in four Native Hawaiian high schoolers (not shown).



Among high schoolers in Hawai'i, Native Hawaiians are among the most physically active, with 43 percent engaging in physical exercise for an hour or more at least five days per week.

**FIGURE 3.27** High schoolers who are active for sixty or more minutes at least five days per week—county comparison

[as a percentage of high school students, by ethnicity and county, Hawai'i, 2015]



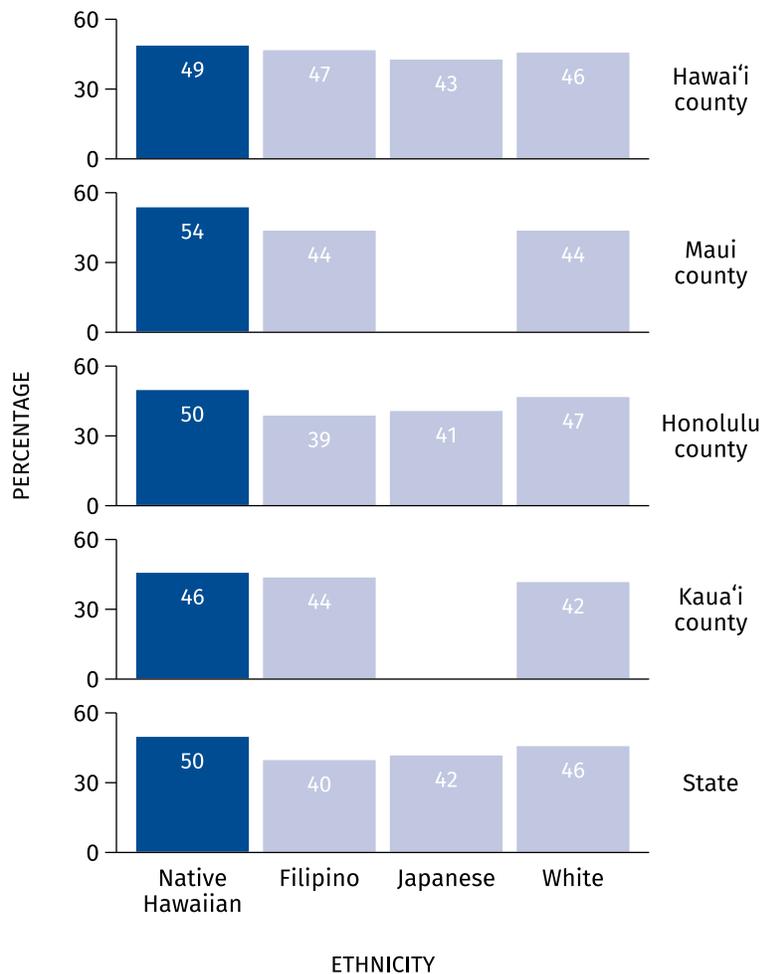
Data source: Hawai'i Youth Risk Behavior Survey, 2015 (years 2013, 2015 combined), Hawai'i Department of Health and Hawai'i Department of Education

Note 1: Missing lines or bars indicate data that are unavailable, not applicable, or suppressed due to small sample size.

- At the state level, Native Hawaiian high schoolers are more likely than Filipino and Japanese students to be physically active for sixty or more minutes at least five days per week.
- The percentage of Native Hawaiian high schoolers who are physically active is similar across counties, with the proportion in Maui (45 percent) being slightly higher than in Hawai'i and Kaua'i (41 percent).
- At the state level, 43 percent of Native Hawaiian high schoolers are physically active for sixty or more minutes at least five days per week, compared with 53 percent of middle schoolers (not shown).
- Native Hawaiian middle schoolers at the state level are more likely than their Filipino and White peers to be physically active (not shown).

Similar to rates of physical activity, rates of muscle strengthening are higher among Native Hawaiian middle schoolers (56 percent, not shown) than they are among Native Hawaiian high schoolers (50 percent). Compared with their peers from other ethnic groups, Native Hawaiians have the highest rates of engaging in muscle-strengthening exercises at least three times weekly in both middle school (not shown) and high school (fig. 3.28).

**FIGURE 3.28** High schoolers who do muscle strengthening exercises at least three times weekly—county comparison  
 [as a percentage of high school students, by ethnicity and county, Hawai'i, 2015]



Data source: Hawai'i Youth Risk Behavior Survey, 2015 (years 2013, 2015 combined), Hawai'i Department of Health and Hawai'i Department of Education

Note 1: Missing lines or bars indicate data that are unavailable, not applicable, or suppressed due to small sample size.

- Across ethnicities at the state level, Native Hawaiian high school students are the most likely to do muscle strengthening exercises at least three times weekly.
- Among Native Hawaiian students, middle schoolers are more likely than high schoolers to do muscle strengthening exercises at least three times weekly (not shown).

## Health Conditions

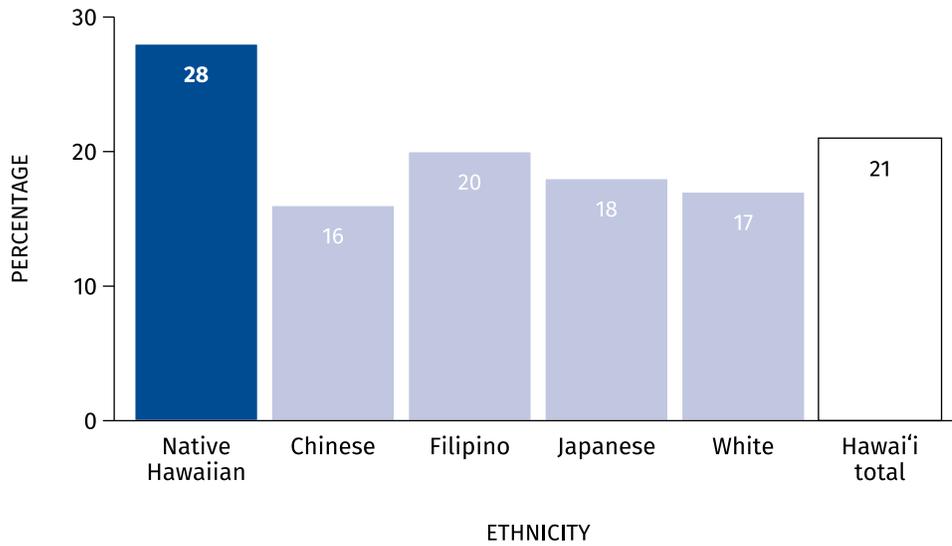
For school-age keiki, health conditions can play a large role in their ability to learn and develop successfully. Poor nutrition, lack of immunizations, and underlying medical issues can make it difficult for students to keep pace with their peers. Chronic health conditions such as asthma and obesity negatively impact learning, as they are associated with more school absences and poor overall health. Studies show chronic health conditions among youth are linked with lower academic achievement, increased disability, reduced job opportunities, and limited community interactions later in life (Centers for Disease Control and Prevention 2017a).

### ASTHMA

Health conditions can impact a student's educational progression and life pathway. Asthma is the number one cause of chronic disease-related school absenteeism, which interrupts the learning process, reduces physical activity participation, strains peer relationships, and impacts one's overall quality of life (Coelho et al. 2016). Asthma-related school absences are seen among racial/ethnic minority children at disproportionately higher rates than their Caucasian peers with asthma (Kealoha, Sinclair, and Richardson 2019). In turn, parents or caregivers may miss work to care for their children when they are out of school and impacted by asthma.

Asthma is the most widespread chronic childhood condition in the United States and disproportionately affects racial/ethnic minority children. In Hawai'i, Native Hawaiian children have the highest rates of asthma (28 percent)—8 percentage points higher than rates of the next-highest ethnicity (fig. 3.29).

**FIGURE 3.29** Asthma prevalence among children ages 0 to 17  
[by ethnicity, Hawai'i, 2014]



*Data source:* Hawai'i Department of Health, Hawai'i Behavioral Risk Factor Surveillance System, Hawai'i Health Data Warehouse (years 2012 to 2014 combined)

- Compared with children of Hawai'i's major ethnic groups, Native Hawaiian children are the most likely to have asthma.
- More than one-quarter (28 percent) of Native Hawaiian children have asthma—8 percentage points higher than the rate among Filipinos (20 percent).

## CHILDHOOD OBESITY

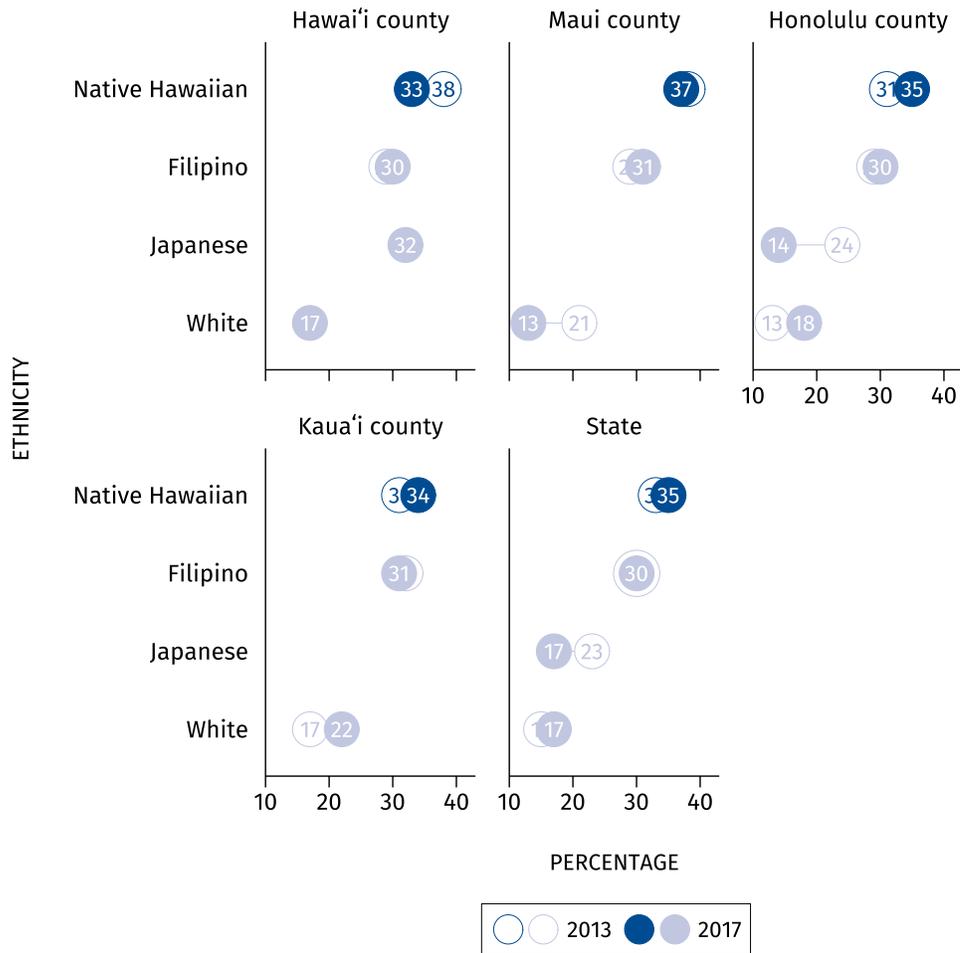
Childhood obesity, or being above the normal weight based on age and height, is one of the most serious public health problems worldwide (Wang and Lim 2012). Its impacts are extensive, ranging from a reduced quality of life; poor body image; and an increased likelihood of adult obesity and other problems such as asthma, diabetes, high blood pressure, and high cholesterol (Hill and Trowbridge 1998). Diet; lack of exercise; family factors such as the availability of high-calorie foods, low physical activity, exposure to stress; and environmental factors such as living in a community with limited resources, access to healthy foods, and safe spaces to exercise can all contribute to the prevalence of obesity (Daniels et al. 2009, Sahoo et al. 2015).

Body mass index (BMI) calculations provide an indication of being overweight or obese. In 2017, a greater proportion of Native Hawaiian high schoolers across Hawai'i were considered overweight or obese (at or above the 85th percentile for BMI), relative to their peers. In Honolulu county in particular, Native Hawaiian high schoolers in 2017 had the highest rate of being overweight, compared with their peers from other ethnicities. Over time, there were no significant differences in the proportion of Native Hawaiian students with a BMI at or above the 85th percentile from 2013 to 2017 (fig. 3.30).

In 2013 and 2017, Native Hawaiian high school students also had higher rates of obesity (at or above the 95th percentile for BMI), compared with other major ethnicities statewide and in Honolulu county (not shown).

**FIGURE 3.30** High schoolers at or above the 85th percentile for body mass index (BMI)—county comparison

[as a percentage of high school students, by ethnicity, county, and year, Hawai'i, 2013 and 2017]



Data source: Hawai'i Youth Risk Behavior Survey, 2013 (years 2011, 2013 combined) and 2017 (years 2015, 2017 combined), Hawai'i Department of Health and Hawai'i Department of Education

Note 1: This chart includes overlapping and sometimes obscured data points. The most recent data points are all visible; older data points that are not discernible suggest little or no change over time.

Note 2: Missing circles indicate data that are unavailable, not applicable, or suppressed due to small sample size.

- In 2017, Native Hawaiian high schoolers at the state level and in Honolulu county were more likely than their peers from other ethnicities to be overweight or obese (at or above the 85th percentile for BMI).
- The proportion of Native Hawaiian high schoolers who are overweight or obese did not change significantly from 2013 to 2017.

## Risk and Protective Factors

Research indicates that outcomes for keiki are often linked to preexisting risk or protective factors. A risk factor is something that increases a person's susceptibility to a negative outcome. In contrast, a protective factor is something that decreases their risk or susceptibility. Risk and protective factors include biological and individual traits, family and community characteristics, as well as environmental or societal conditions (Substance Abuse and Mental Health Services Administration 2019). In light of available data, the discussion below focuses on common risk factors for keiki that include marijuana and alcohol use, tobacco and smoking, drug use, and sexual behavior.

### MARIJUANA AND ALCOHOL USE

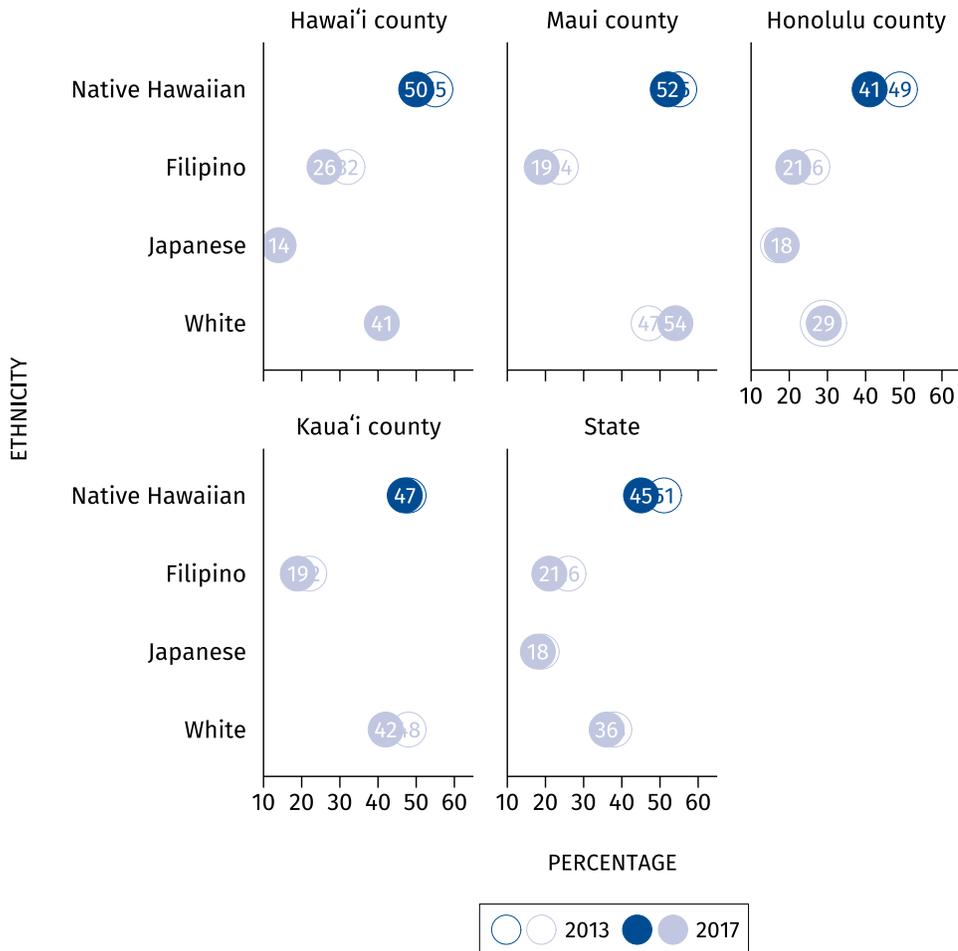
As youth progress from childhood to early adulthood, they must navigate peer pressure and related social challenges. Chief among these is the use of marijuana, alcohol, and other potentially harmful substances. According to the National Institute on Drug Abuse (2020), studies found heart trouble, mental health issues and respiratory problems associated with marijuana use among children and teens. Studies show adverse effects of alcohol use in childhood and adolescence include memory impairment, cognitive deficits, truancy, poor family relationships, and behavioral problems. In addition, children who are heavy alcohol users often struggle with alcohol abuse and dependency later in life (Masten et al. 2009; Lewis and Hession 2012).

Statewide, there was a significant decrease in marijuana use among Native Hawaiian high school students, from 51 to 45 percent between 2013 and 2017. Despite this decline, rates among Native Hawaiian middle and high school students (45 percent and 18 percent, respectively) remain higher than what is seen among their Filipino, Japanese, and White counterparts. From a county perspective, rates among Native Hawaiian high schoolers in Honolulu county declined significantly from 2013 to 2017 (fig. 3.31).



Marijuana use among Native Hawaiian high school students has decreased, declining from 51 to 45 percent between 2013 and 2017.

**FIGURE 3.31** High schoolers who have used marijuana—county comparison  
 [as a percentage of high school students, by ethnicity, county, and year, Hawai'i, 2013 and 2017]



Data source: Hawai'i Youth Risk Behavior Survey, 2013 (years 2011, 2013 combined) and 2017 (years 2015, 2017 combined), Hawai'i Department of Health and Hawai'i Department of Education

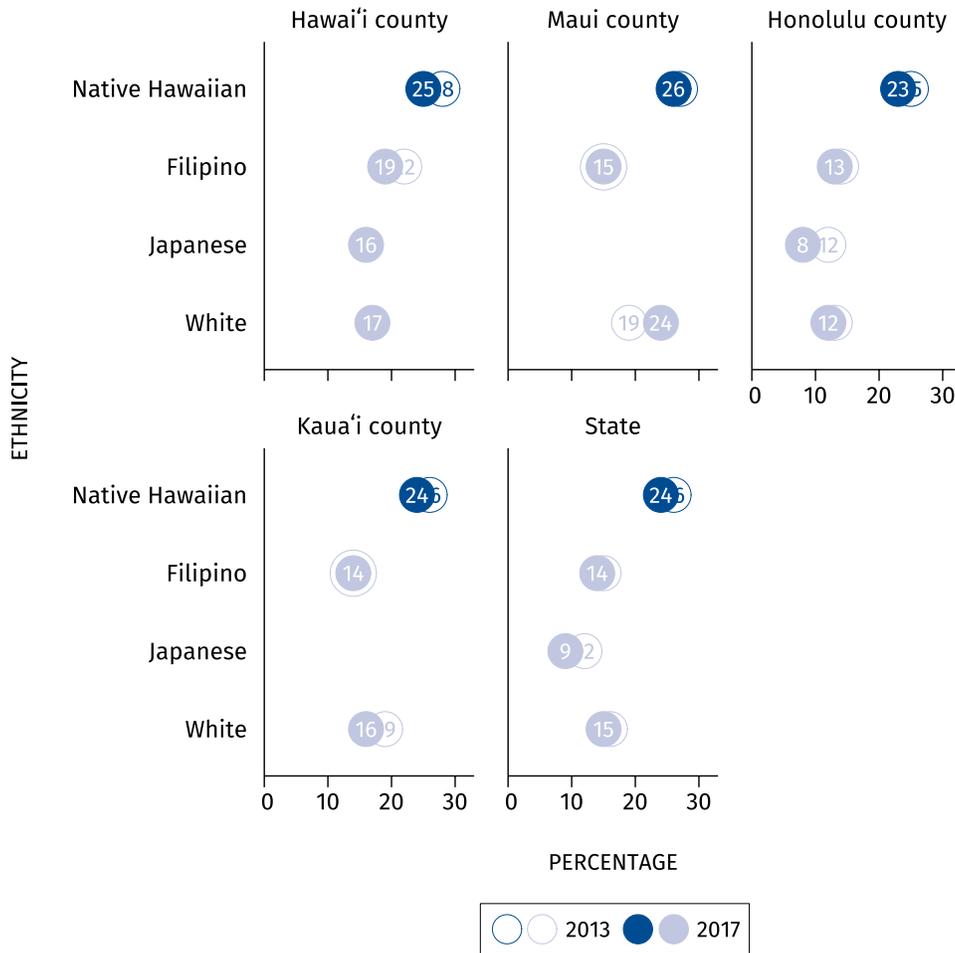
Note 1: This chart includes overlapping and sometimes obscured data points. The most recent data points are all visible; older data points that are not discernible suggest little or no change over time.

Note 2: Missing circles indicate data that are unavailable, not applicable, or suppressed due to small sample size.

- From 2013 to 2017, there was a significant decrease in marijuana use among Native Hawaiian high schoolers in Honolulu county and across the state.
- At the state level, Native Hawaiian high school students were more likely than their peers of other ethnicities to have used marijuana in both 2013 and 2017; the same was true among middle schoolers (not shown).
- Overall, marijuana use was more prevalent in high school than in middle school in these two years.

Compared with other major ethnicities, in 2017 Native Hawaiian middle and high school students reported higher rates of having their first alcoholic drink before age thirteen (fig. 3.32). Rates among Native Hawaiian high school students did not differ significantly from 2013 to 2017 or across counties. However, there was a significant decline among Native Hawaiian middle school students statewide and in Hawai'i and Maui counties during the same time period (not shown).

**FIGURE 3.32** High schoolers who had their first alcoholic drink before age 13—county comparison [as a percentage of high school students, by ethnicity, county, and year, Hawai'i, 2013 and 2017]



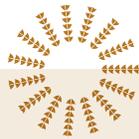
Data source: Hawai'i Youth Risk Behavior Survey, 2013 (years 2011, 2013 combined) and 2017 (years 2015, 2017 combined), Hawai'i Department of Health and Hawai'i Department of Education

Note 1: This chart includes overlapping and sometimes obscured data points. The most recent data points are all visible; older data points that are not discernible suggest little or no change over time.

Note 2: Missing circles indicate data that are unavailable, not applicable, or suppressed due to small sample size.

- Compared with high schoolers of other major ethnicities, Native Hawaiians are more likely to have had their first alcoholic drink before age thirteen.
- At the state level and across counties, the proportion of Native Hawaiian high schoolers who had their first drink before age thirteen did not change significantly between 2013 and 2017.
- From 2013 to 2017, the percentage of Native Hawaiian middle schoolers who had their first drink before age thirteen decreased at the state level and in Hawai'i and Maui counties (not shown).

In 2017, Native Hawaiian high school students (23 percent) were also more likely than their peers to report attending school under the influence of alcohol, marijuana, or other drugs in the past twelve months. Native Hawaiian high schoolers in Hawai'i county (27 percent) report rates that are significantly higher than rates of their peers statewide and in Honolulu and Kaua'i counties (fig. 3.33).

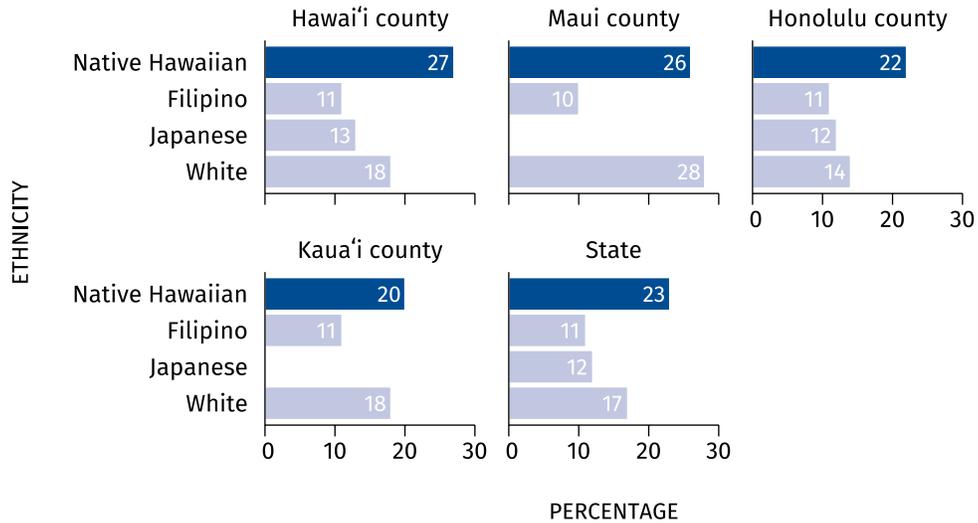


From 2013 to 2017, Native Hawaiian middle school students across Hawai'i saw a significant decline in rates of having their first alcoholic drink before age thirteen.



**FIGURE 3.33** High schoolers who attended school under the influence of alcohol, marijuana, or other drugs—county comparison

[as a percentage of high school students, by ethnicity and county, Hawai'i, 2017]



Data source: Hawai'i Youth Risk Behavior Survey, 2017 (years 2015, 2017 combined), Hawai'i Department of Health and Hawai'i Department of Education

Note 1: Missing lines or bars indicate data that are unavailable, not applicable, or suppressed due to small sample size.

- At the state level, Native Hawaiian high schoolers are more likely than their peers of other ethnicities to attend school under the influence of alcohol, marijuana, or other drugs.
- In Hawai'i county, 27 percent of Native Hawaiian high schoolers attended school under the influence of alcohol, marijuana, or other drugs—the highest proportion among Native Hawaiian students across counties, though not significantly higher than Maui.

Talking with an adult about the dangers of alcohol, tobacco, or other drugs can help students be more informed about the related dangers and short- and long-term effects. Statewide, 41 percent of Native Hawaiian high schoolers and 37 percent of Native Hawaiian middle schoolers (not shown) talked with an adult about this in 2017. In Hawai'i and Kaua'i counties, there was an increase from 2013 to 2017 in the proportion of Native Hawaiian high schoolers who reported talking to an adult about the dangers of alcohol, tobacco, or drug use (fig. 3.34).

**FIGURE 3.34** High schoolers who talked to a parent or adult about the dangers of alcohol, tobacco, or drug use—county comparison

[as a percentage of high school students, by ethnicity, county, and year, Hawai'i, 2013 and 2017]



Data source: Hawai'i Youth Risk Behavior Survey, 2013 (years 2011, 2013 combined) and 2017 (years 2015, 2017 combined), Hawai'i Department of Health and Hawai'i Department of Education

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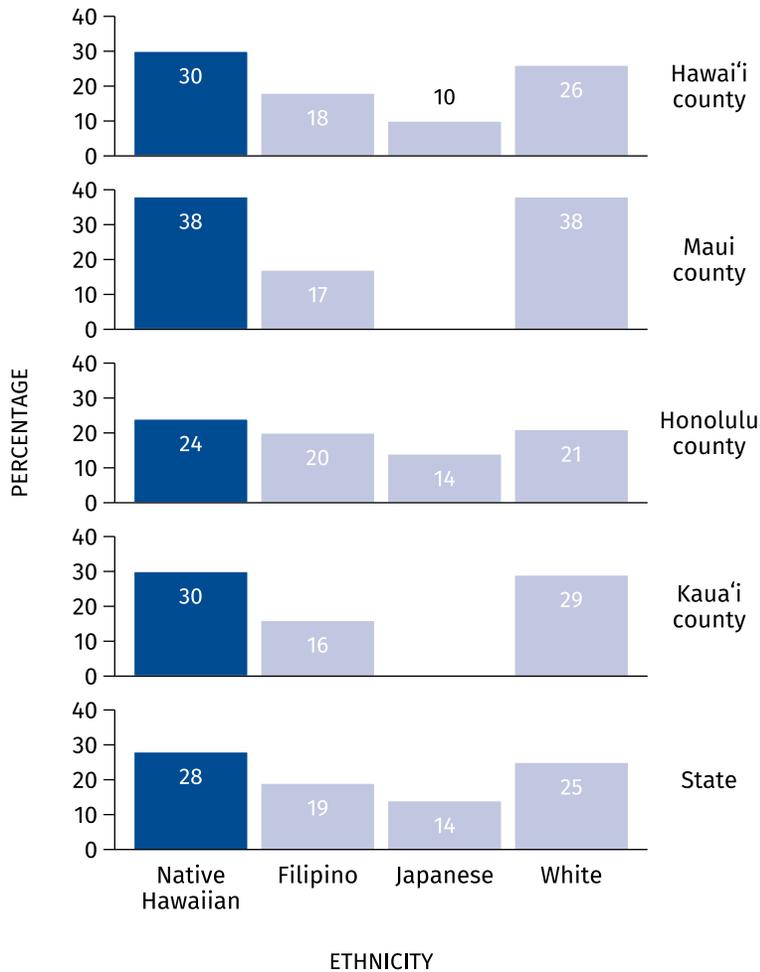
- In Honolulu county and at the state level, Native Hawaiian high schoolers are significantly more likely than middle schoolers (not shown) to talk to a parent or other adult about the dangers of alcohol, tobacco, or drugs.
- In Hawai'i and Kaula'i counties, the proportion of high school students who talked to a parent or other adult about the dangers of alcohol, tobacco, or drug use increased by 6 percentage points from 2013 to 2017.

## **TOBACCO, SMOKING, SECONDHAND SMOKE**

Another significant risk factor for keiki is their use of or exposure to tobacco products. Smoking increases the chance of cancer, heart disease, stroke, lung disease, and chronic obstructive pulmonary disease in children and adults (Treyster and Gitterman 2011). More research is needed to understand the harmful effects of e-cigarettes and vaping on children and teens. According to the Centers For Disease Control and Prevention (2017b), children exposed to secondhand smoke get sick more often, experience coughing or wheezing, and develop asthma and ear infections.

In 2017, nearly one in five Native Hawaiian middle schoolers (18 percent) reported having tried smoking cigarettes, a rate significantly higher than that of their peers of other major ethnicities (not shown). Among Native Hawaiian high schoolers, 28 percent had tried smoking, a rate that was significantly higher than that of their Filipino and Japanese counterparts (fig. 3.35). From a county perspective, Native Hawaiian high schoolers in Maui county reported higher rates of having tried smoking cigarettes than did their peers in other counties.

**FIGURE 3.35** High schoolers who tried smoking cigarettes—county comparison  
[as a percentage of high school students, by ethnicity, county, Hawai'i, 2017]



Data source: Hawai'i Youth Risk Behavior Survey, 2017 (years 2015, 2017 combined), Hawai'i Department of Health and Hawai'i Department of Education

Note 1: Missing lines or bars indicate data that are unavailable, not applicable, or suppressed due to small sample size.

- Among high schoolers at the state level, Native Hawaiians are more likely than their Filipino and Japanese peers to have tried cigarettes.
- Overall, high schoolers are more likely than middle schoolers (not shown) to have tried smoking cigarettes.
- Among middle schoolers, Native Hawaiians are more likely than their peers of other ethnicities to have tried smoking cigarettes (not shown).

In terms of smoking within the past month, 2017 rates were higher among Native Hawaiian high schoolers than middle schoolers (11 percent and 6 percent, respectively). Rates of smoking in 2017 among Native Hawaiian high schoolers were significantly higher than rates of Filipino and Japanese peers statewide. From a county perspective, rates of smoking a cigarette within the past month in Maui county among Native Hawaiian high schoolers were significantly higher than rates of their peers in other counties. Maui county also reported a significant increase in smoking among Native Hawaiian high schoolers between 2013 and 2017 (fig. 3.36).

Between 2013 and 2017, Native Hawaiian middle and high school students across Hawai'i saw a decrease in smoking rates among those who had smoked a cigarette at least twenty of the past thirty days (not shown).

In 2017, nearly one-third (31 percent) of Native Hawaiian minors who smoke had someone else buy cigarettes for them, a rate that is similar to the Hawai'i total (30 percent). Additionally, among Native Hawaiian minors who smoke, 86 percent acquired cigarettes without buying them, a rate that is lower but not significantly different from the Hawai'i total of 89 percent (not shown).

**FIGURE 3.36** High schoolers who smoked a cigarette in the past month—county comparison  
 [as a percentage of high school students, by ethnicity, county, and year, Hawai'i, 2013 and 2017]



Data source: Hawai'i Youth Risk Behavior Survey, 2013 (years 2011, 2013 combined) and 2017 (years 2015, 2017 combined), Hawai'i Department of Health and Hawai'i Department of Education

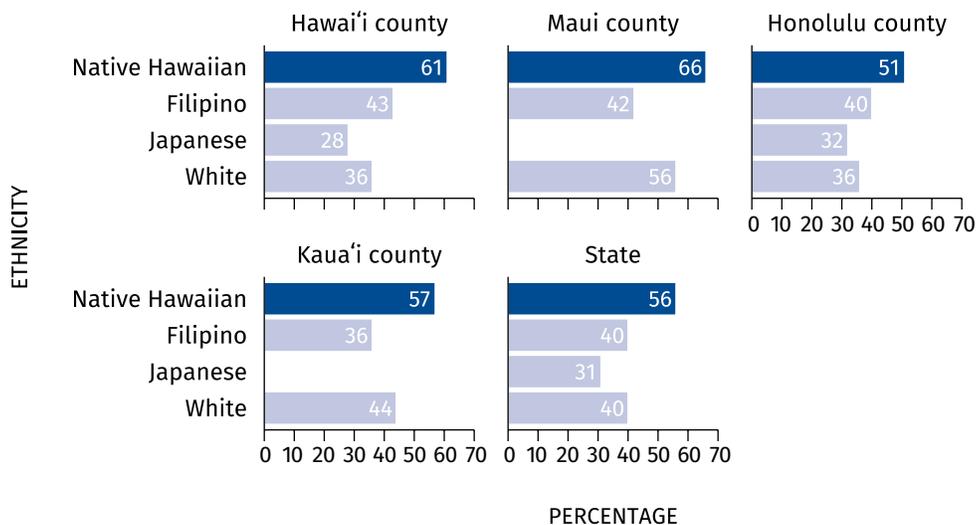
Note 1: This chart includes overlapping and sometimes obscured data points. The most recent data points are all visible; older data points that are not discernible suggest little or no change over time.

Note 2: Missing circles indicate data that are unavailable, not applicable, or suppressed due to small sample size.

- In Maui county in 2017, the proportion of Native Hawaiian high schoolers who smoked a cigarette in the past month (16 percent) was higher than that of other ethnicities and was 4 percentage points higher than it was in 2013.
- At the state level in 2017, Native Hawaiian high schoolers were more likely than their Filipino and Japanese peers to have smoked a cigarette in the past month.
- Among Native Hawaiian and White students, high schoolers were more likely than middle schoolers (not shown) to have smoked a cigarette in the past month in both 2013 and 2017.

Studies suggest that teens, especially those who have never smoked before, are increasingly vaping (Bunnell et al. 2015). In 2017, more than half of Native Hawaiian high schoolers statewide (56 percent) reported having tried an electronic vapor product—a rate that is higher than that of their peers of other ethnicities (fig. 3.37). During the same time period, Native Hawaiian middle schoolers (24 percent) and high schoolers (35 percent) were more likely than their peers to have used an electronic vapor product within the past month (not shown).

**FIGURE 3.37** High schoolers who tried vaping—county comparison  
[as a percentage of high school students, by ethnicity and county, Hawai'i, 2017]



Data source: Hawai'i Youth Risk Behavior Survey, 2017 (years 2015, 2017 combined), Hawai'i Department of Health and Hawai'i Department of Education

Note 1: Missing lines or bars indicate data that are unavailable, not applicable, or suppressed due to small sample size.

- Native Hawaiian high schoolers are more likely than their peers from other ethnicities to have tried an electronic vapor product.
- At the county level, Maui has the highest prevalence of Native Hawaiian high schoolers who tried an electronic vapor product (66 percent), while Honolulu has the lowest (51 percent).

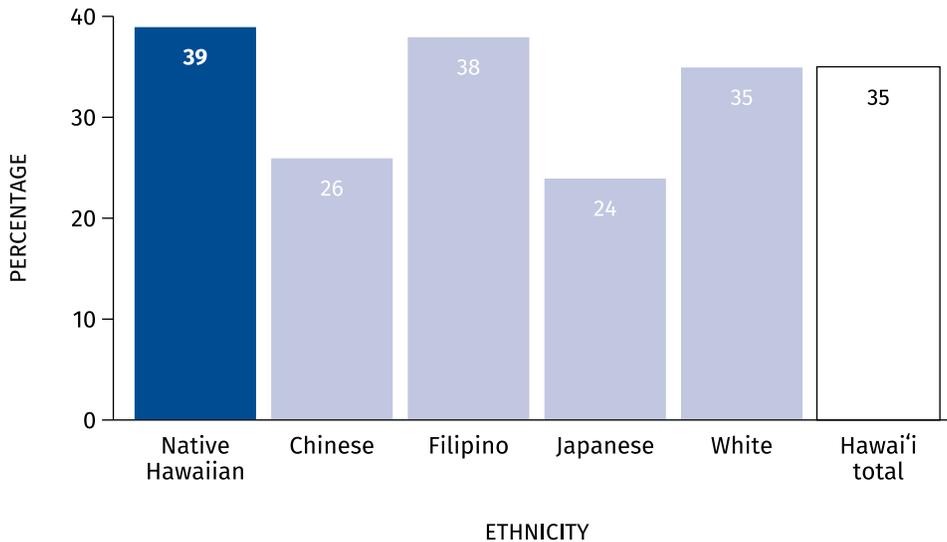
The majority of Native Hawaiian middle and high school students think that secondhand smoke is harmful. Among those who have smoked in the past thirty days, 82 percent think secondhand smoke is harmful, a rate similar to the Hawai'i total of 80 percent. This rate increases among those who have never smoked, with 93 percent of Native Hawaiian middle and high school students reporting that secondhand smoke is harmful, a rate similar to the Hawai'i total of 94 percent (not shown).

However, Native Hawaiian students are exposed to secondhand smoke in various settings. In 2015, among Native Hawaiian middle and high school students who work, 60 percent breathed secondhand smoke at work, which is 11 percentage points higher than the state average of 49 percent. Additionally, 54 percent of Native Hawaiian middle and high school students live with someone who uses tobacco products, a rate significantly higher than that of other ethnicities and the state total (43 percent) (not shown).

In other settings, however, the proportion of Native Hawaiian middle and high school students exposed to secondhand smoke is on par with, or lower than, the Hawai'i total: In 2015, 42 percent breathed secondhand smoke in a public place, a rate that is significantly lower than the Hawai'i total (47 total). In 2017, 33 percent of Native Hawaiian middle and high school students were exposed at school, a rate similar to that of other major ethnicities and statewide rates (not shown).

In 2015, nearly two out of five Native Hawaiian students (39 percent) had a parent talk with them about not using tobacco products; this is on par with the state total and rates of Filipino and White peers and significantly higher than rates among Chinese and Japanese students (fig. 3.38).

**FIGURE 3.38** Students whose parents talked to them about not using tobacco products  
[as a percentage of survey respondents, by ethnicity, Hawai'i, 2015]



*Data source:* Hawai'i Department of Health, Hawai'i School Health Survey: Youth Tobacco Survey Module, Hawai'i Health Data Warehouse, 2015

- Native Hawaiian minors are more likely than their Chinese and Japanese peers to have a parent talk to them about not using tobacco products.
- Among Hawai'i's minors, Native Hawaiians, Filipinos, and Whites are the most likely to have a parent talk to them about not using tobacco products.

## DRUG USE

Experimentation with drugs and substance abuse are realities for many children and young adults. Drug use, especially when chronic and prolonged in teens, has been shown to alter brain function and development (Winters and Arria 2011). Studies show that Native Hawaiian youth are more likely than their peers from other ethnicities to use alcohol, tobacco, and other drugs; however, much of the research has not addressed social determinants of health and cultural/historical trauma (Okamoto et al. 2009; Edwards, Giroux, and Okamoto 2010; Helm and Okamoto 2013).

Among Native Hawaiian students, the use of cocaine, ecstasy, hallucinogens, heroin, methamphetamines, and prescription drugs without a prescription varies across years and counties (table 3.3). Drug use among Native Hawaiian students is generally lower in middle school than in high school. In 2017, among Native Hawaiian middle schoolers, 4 percent reported using methamphetamines, and 3 percent reported using cocaine—similar to

rates of their peers from other ethnic groups. However, rates of ecstasy use among Native Hawaiian middle schoolers (2 percent) were higher than rates reported among Japanese and White students. Looking at trend data, there was little change in the use of methamphetamines, ecstasy, cocaine, and marijuana among Native Hawaiian middle schoolers from 2013 to 2017. However, the percentage of Native Hawaiian middle school students who took drugs without a prescription increased significantly at the state level and in Hawai'i, Honolulu, and Kaua'i counties during the same time period.

An examination of drug use among Native Hawaiian middle and high schoolers shows some differences between 2013 and 2017, both statewide and within counties (table 3.3). Looking more specifically at drug use among high schoolers across ethnicities (not shown), trend data from the Hawai'i Youth Risk Behavior Survey, administered by the Hawai'i Department of Health and Hawai'i Department of Education from 2011 to 2017, show the following:

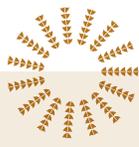
- Native Hawaiian and White high schoolers (8 percent and 8 percent, respectively) statewide report higher rates of having used cocaine than their Filipino and Japanese peers. At the state level, cocaine use significantly increased among Native Hawaiian high schoolers, rising from 7 to 8 percent between 2013 and 2017.
- Native Hawaiian and White high schoolers (8 percent and 9 percent, respectively) statewide report higher rates of having used ecstasy than their Filipino peers (4 percent). Statewide rates among Native Hawaiian high schoolers did not change significantly from 2013 to 2017.
- Native Hawaiian and White high school students statewide (14 and 15 percent, respectively) were significantly more likely than their peers to take prescription drugs without a prescription. Among Native Hawaiian high schoolers in Kaua'i, rates decreased from 18 to 13 percent between 2013 and 2017.
- Methamphetamine use among Native Hawaiian high school students statewide in 2017 was the highest among all ethnicities and significantly increased from 4 to 6 percent between 2013 and 2017.
- Native Hawaiian and White high school students reported the highest rates of hallucinogens use (8 and 11 percent, respectively) in comparison with peers of other major ethnicities. From a county perspective, rates among Native Hawaiian high school students in Hawai'i and Maui county (10 and 9 percent, respectively) were significantly higher than the state total for Native Hawaiians.
- One in twenty Native Hawaiian high schoolers (5 percent) reported using heroin—a rate that is similar to that of their Japanese and White peers. From a county perspective, there is a significant difference among Native Hawaiian high schoolers in Hawai'i county, where Native Hawaiians (6 percent) are more likely than their peers from other ethnicities (2 percent) to have used heroin (not shown).

**TABLE 3.3** Native Hawaiian middle and high school students who have used drugs  
[as a percentage of Native Hawaiian middle and high school students, Hawai'i, 2017]

	Hawai'i county		Maui county		Honolulu county		Kaua'i county		Hawai'i total	
	2017	Change from 2013	2017	Change from 2013	2017	Change from 2013	2017	Change from 2013	2017	Change from 2013
<b>NATIVE HAWAIIAN HIGH SCHOOL STUDENTS</b>										
Cocaine	8%	—	10%	↑	8%	—	9%	—	8%	↑
Ecstasy	9%	—	9%	—	8%	—	6%	—	8%	—
Prescription drugs w/o a prescription	17%	—	15%	—	14%	—	13%	↓	14%	—
Methamphetamine	7%	—	7%	—	5%	—	5%	—	6%	↑
Hallucinogens	10%	n/a	9%	n/a	6%	n/a	8%	n/a	8%	n/a
Heroin	6%	n/a	6%	n/a	4%	n/a	4%	n/a	5%	n/a
<b>NATIVE HAWAIIAN MIDDLE SCHOOL STUDENTS</b>										
Cocaine	4%	—	3%	—	3%	—	4%	—	3%	—
Ecstasy	2%	—	2%	—	1%	—	3%	—	2%	—
Prescription drugs w/o a prescription	8%	↑	7%	—	8%	↑	6%	↑	8%	↑
Methamphetamine	3%	—	2%	—	2%	—	3%	—	2%	—

Data source: Hawai'i Youth Risk Behavior Survey, 2013 (years 2011, 2013 combined) and 2017 (years 2013 [for Hallucinogens and Heroin only], 2015, 2017 combined), Hawai'i Department of Health and Hawai'i Department of Education

—: no significant change



From 2013 to 2017, Native Hawaiian high schoolers in Kaua'i saw a decrease in rates of taking prescription drugs without a prescription.



## SEXUAL BEHAVIOR

Attitudes and behaviors about sex evolve over the course of a lifetime, however, they first take shape in childhood and adolescence. In addition to substance abuse and self-harm, sexual activity at a young age is a risk factor for keiki. Race, income, and family structure provide insight into youth experiences with early sex but may only provide a partial understanding (Blum et al. 2000). One study found that parents and peers influence adolescents' attitudes and intentions about risky sexual behavior and drug use, and thereby affect their engagement in such activities (Nepl, Dhalewadikar, and Lohman 2015). Among other strategies, improving parental awareness and recognition of risky behaviors has been shown to be an effective mitigation strategy (Ahern, Kemppainen, and Thacker 2016).

Statewide, rates of Native Hawaiian high school students who are sexually active declined from 32 to 28 percent from 2013 to 2017. Hawai'i county saw a significant decrease in Native Hawaiian high schoolers who are sexually active, declining from 34 to 25 percent between 2013 and 2017. Despite these declines, 2013 and 2017 statewide rates of Native Hawaiian high school students who reported being sexually active were higher than the rates of other major ethnicities (fig. 3.39).

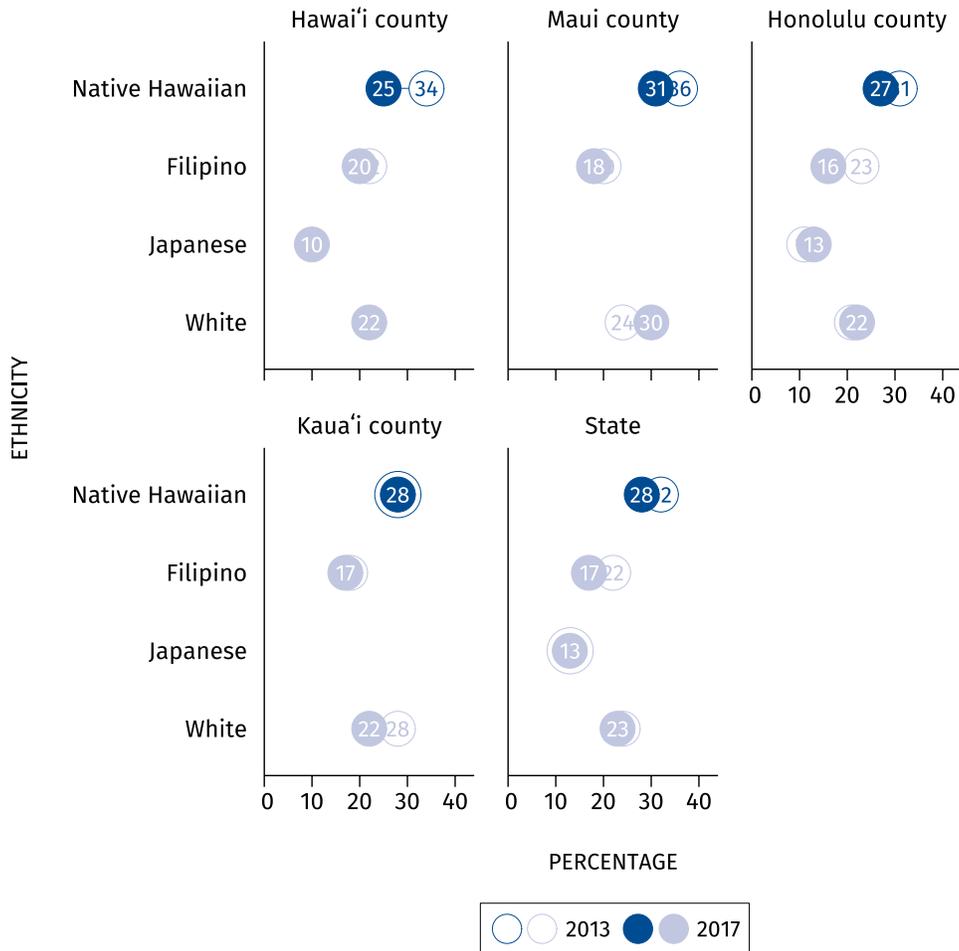
Based on 2017 data, rates of having sexual intercourse were highest among Native Hawaiian middle schoolers (10 percent) and high schoolers (37 percent), compared with students of other major ethnicities. At the county level, sexual intercourse among Native Hawaiian high schoolers in Hawai'i county declined from 2013 to 2017. Sexual intercourse before age thirteen is more common among Native Hawaiian high schoolers (5 percent) than among their peers from other ethnic groups, based on 2017 statewide findings (not shown).

Compared with their peers from other ethnicities, Native Hawaiian high school students are more likely to have had four or more sexual partners, both statewide (9 percent) and in Honolulu county (9 percent); in Hawai'i county, the rate declined from 14 to 9 percent between 2013 and 2017 (not shown).

In 2017, slightly more than half (54 percent) of Native Hawaiian high schoolers across the state reported that their parents or other adult talked to them about expectations around sex. This percentage is lower than that of White high school students (61 percent) and higher than rates of Filipino and Japanese high schoolers. Similarly, in Hawai'i and Honolulu counties, Native Hawaiian high schoolers are more likely than their Filipino and Japanese peers to have their parents or other adult talk to them about expectations around sex (fig 3.40).



**FIGURE 3.39** High schoolers who are sexually active—county comparison  
 [as a percentage of high school students, by ethnicity, county, and year, Hawai'i, 2013 and 2017]



Data source: Hawai'i Youth Risk Behavior Survey, 2013 (years 2011, 2013 combined) and 2017 (years 2015, 2017 combined), Hawai'i Department of Health and Hawai'i Department of Education

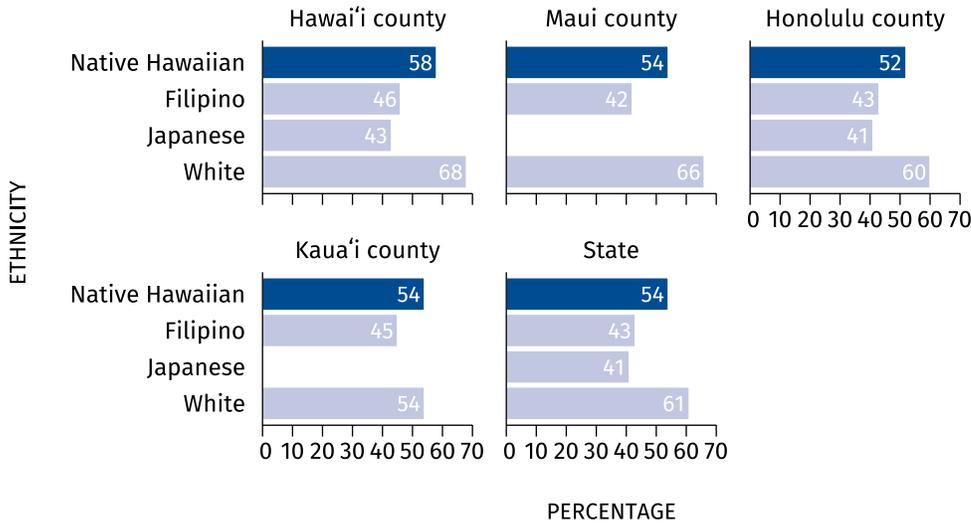
Note 1: This chart includes overlapping and sometimes obscured data points. The most recent data points are all visible; older data points that are not discernible suggest little or no change over time.

Note 2: Missing circles indicate data that are unavailable, not applicable, or suppressed due to small sample size.

- Across the state, the proportion of Native Hawaiian high schoolers who were sexually active decreased from 32 to 28 percent between 2013 and 2017.
- At the state level, Native Hawaiian high schoolers were more likely than their peers from other ethnicities to be sexually active in both 2013 and 2017.

**FIGURE 3.40** High schoolers whose parents or other adult talked to them about expectations around sex—county comparison

[as a percentage of high school students, by ethnicity and county, Hawai'i, 2017]



Data source: Hawai'i Youth Risk Behavior Survey, 2017 (years 2015, 2017 combined), Hawai'i Department of Health and Hawai'i Department of Education

Note 1: Missing lines or bars indicate data that are unavailable, not applicable, or suppressed due to small sample size.

- At the state level—and in Hawai'i and Honolulu counties—Native Hawaiian high schoolers are more likely than their Filipino and Japanese peers to have their parents or other adult talk to them about expectations around sex.
- Compared with their peers from other ethnicities, White high schoolers are the most likely to have their parents or other adult talk to them about expectations around sex.

Schools play an important role in promoting the health and safety of Native Hawaiian youth. Health-related behaviors are often established during childhood and persist throughout adolescence and adult life. Social determinants, such as increased access to health services, safe and stable housing, affordable healthy foods, and safe places where keiki can be physically active are crucial factors that must be addressed to improve the health of Native Hawaiian communities.

The data provide both a promising picture and troubling news about the physical well-being of school-age Native Hawaiians. On one hand, Native Hawaiian youth are more likely than most of their peers to be physically active. Trend data also show signs of progress in substance use among youth in certain grade levels, including decreased levels of cigarette smoking and marijuana use. In addition, many Native Hawaiian students have a parent or adult to talk to about alcohol, tobacco, drug use, and sex. Strong parent-child relationships, religious involvement, and social support networks in the Native Hawaiian community can have a protective effect on health risk behaviors.

However, our analysis reveals that in other areas, challenges remain. The data suggest that Native Hawaiian youth continue to struggle with comparatively higher rates of asthma and obesity. Obesity is a risk factor for future chronic diseases. Low intake of fruits and vegetables is inversely related with risk of chronic diseases. We also see continued engagement in risky behaviors, as Native Hawaiian high schoolers report high usage rates of hallucinogens, ecstasy, cocaine, and prescription drugs. These important data can be used for targeting effective interventions for Native Hawaiian youth in schools and communities, which may help reduce health risk behaviors.

## EDUCATIONAL WELL-BEING

Kanaka Maoli philosophies of teaching and learning emphasize the importance of acquiring and demonstrating knowledge. However, the ultimate goal is the achievement of practical results through the application of knowledge. We say, “E lawe i ke a’o a mālama, a e ‘oi mau ka na’auao” (Pukui 1983, 40), meaning that a person who applies their learning increases their knowledge. Learning and knowledge are revered by Native Hawaiians because they have a social purpose in addressing personal and collective needs.

The saying, “‘A’ohe pau ka ‘ike i ka hālau ho’okahi” (Pukui 1983, 24) recognizes that one can learn from many sources. Children are therefore encouraged to explore their world and continually find ways to grow and challenge themselves. The word “kumu,” often translated as “teacher,” has a deeper meaning as “source” or, in the context of learning, “source of knowledge.” From an ‘Ōiwi perspective, sources of knowledge are not limited to formal teachers or people. Kumu can also include spiritual forces, ‘āina, hō‘ailona (natural signs), and personal experience and insights.

Following the Hawaiian Renaissance of the 1970s and 1980s, there has been an increasing awareness of the value of Kanaka Maoli educational philosophies and practices. The resurgence of ‘ōlelo Hawai‘i, accelerated by Hawaiian studies programs in the University of Hawai‘i system, provided not only more encouragement for culturally grounded educational approaches, but also cohorts of fluent ‘ōlelo Hawai‘i educators. The advent of ‘Aha Pūnana Leo preschools, Hawaiian-focused and Hawaiian-medium charter schools, and nā kula kaiapuni provided further opportunities to conceptualize and contextualize education so that Native Hawaiian and non-Hawaiian learners could benefit from relevant, accessible, and rigorous learning grounded in traditional Hawaiian understandings and pedagogy.



Recent generations have seen a resurgence of cultural pride among Native Hawaiians, evidenced through the growth of kula kaiapuni, Hawaiian-focused charter schools, and culture-based after-school programs.



Moreover, public–private partnerships have resulted in more resources with which educators—whether employed teachers and administrators or a child’s friends and family members—can support the educational journeys of school-age children. An updated *Nā Honua Maoli Ola* (Kawai‘ae‘a mā 2018) and the Hawai‘i Department of Education’s HĀ (Hawai‘i Department of Education, n.d.[d]) continue to resonate with and inform audiences of all types across Hawai‘i. Further, research examining the cognitive and socioemotional influences of culture-based educational strategies has received renewed national attention, through publication in a flagship education journal (Kana‘iaupuni, Ledward, and Malone 2017), while a longitudinal study examined factors influencing reading scores among Native Hawaiian and other students in Hawai‘i schools over time (Singh 2013).

Based on the holistic model of *Ka Huaka‘i*, educational well-being is intimately tied to all other domains of well-being. Health, economic, socioemotional, and cultural outcomes play a role in shaping the educational experiences and trajectories of school-age learners. For example, studies on social and emotional learning (Zins et al. 2004) and neuroscience (Immordino-Yang 2015) indicate that emotional centers of the brain are linked with neocortical areas responsible for cognition. As a result, when children are distressed or preoccupied, their emotional state inhibits their ability to absorb and retain information.

Research further suggests that parents, siblings, and other family members have the ability to influence a child’s development and stimulate their minds (Loughlin-Presnal and Bierman 2017; McHale, Updegraff, and Whiteman 2012). This is consistent with the Native Hawaiian belief that a child’s home is their first classroom (Kawai‘ae‘a mā 2018). Considerable literature has shown a statistical link between higher levels of maternal educational attainment and positive educational outcomes of children (Harding, Morris, and Huges 2015; Magnuson 2007). Family socioeconomic status shows similar correlations with educational success, such that children in families with greater economic wealth tend to fare better on educational measures, compared with children in poorer families (Sirin 2005). This effect may be partially explained by cultural capital generated within wealthy families (Orr 2003) and their ability to exercise greater school choice (Jones 2017).

Many Native Hawaiian ‘ohana face challenging realities that affect keiki. For example, compared with parents of school-age children among other ethnicities, Native Hawaiian parents are less likely to complete college or obtain graduate degrees. Native Hawaiian learners are also slightly less likely than their peers to have a parent who works. In addition, Native Hawaiian school-age children face disproportionate rates of poverty. Factors such as family wealth and parental educational attainment play a role in supporting educational well-being but are not the only factors, nor do they work in isolation.

The data examined in this section focus on educational outcomes among children from kindergarten to high school in Hawai'i public schools. Private schools account for a relatively small share of Hawai'i's total school-age enrollment, and the selective nature of their admissions processes makes any attempt to generalize about their student populations difficult.<sup>2</sup> In contrast, public school data are more reflective of Hawai'i's range of socioeconomic and geographic diversity. The public school system for Hawai'i includes 287 schools across fifteen complex areas. Beyond regular public schools, data provided by the Hawai'i DOE include charter schools (Hawaiian-focused and otherwise) and nā kula kaiapuni.

To provide multiple views of the experiences and milestones of school-age children, data are presented several different ways:

1. All public school students
2. Native Hawaiian public school students, by region
3. School-level data, based on concentration of Native Hawaiian students

Regional data are based on definitions and naming conventions of Kamehameha Schools and refer to where the student is enrolled or graduated from, rather than where they live.<sup>3</sup> Table 3.4 shows the alignment of Kamehameha Schools regions, Hawai'i DOE regions, and Hawai'i DOE complex areas.

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<sup>2</sup> The efforts and outcomes of private schools, extracurricular groups, and culture-based enrichment programs cannot be dismissed. Although data for these groups are presently limited, we anticipate that increased adoption of Hawaiian culture- and place-based approaches will shape future educational outcomes and data for school-age keiki. These developments will also challenge researchers to look beyond conventional settings to see where informal, blended, and expanded learning can happen.

<sup>3</sup> For more information on data sources, terms, definitions, and school regions, see "[Methods, Data Sources, and Definitions](#)" at the end of this volume.

**TABLE 3.4** Alignment of Kamehameha Schools regions, Hawai'i DOE regions, and Hawai'i DOE complex areas

Kamehameha Schools region	Hawai'i DOE region	Hawai'i DOE complex area
East Hawai'i	East Hawai'i	Hilo-Waiākea Ka'ū-Kea'au-Pāhoa
West Hawai'i	West Hawai'i	Honoka'a-Kealakehe- Kohala-Konawaena
Kaua'i	Kaua'i-Ni'ihau	Kapa'a-Kaua'i-Waimea
Maui	Maui, Moloka'i, Lāna'i	Baldwin-Kekaulike-Maui Hāna-Lahainaluna-Lāna'i-Moloka'i
Central	'Ewa O'ahu	Aiea-Moanalua-Radford Campbell-Kapolei Pearl City-Waipahu
Honolulu	Kona O'ahu	Farrington-Kaiser-Kalani Kaimukī-McKinley-Roosevelt
Windward	Ko'olau O'ahu	Castle-Kahuku Kailua-Kalāheo
North Shore	Waialua O'ahu	Leilehua-Mililani-Waialua
Leeward	Wai'anae O'ahu	Nānākuli-Wai'anae

Overall, our data show several indicators of educational progress among school-age learners. In most cases, at the school level, disparities that existed more than a decade ago (Kana'iaupuni, Malone, and Ishibashi 2005) have diminished between schools with high concentrations of Native Hawaiian students and those with low levels. Further, schools with high concentrations of Native Hawaiians exhibit improvement in regard to many indicators, suggesting that on the whole, school environments are becoming more conducive to learning for Native Hawaiian students.

On the other hand, Native Hawaiians constitute a diminishing share of the Hawai'i public school population—a trend that warrants further research. Native Hawaiian learners also experience comparatively low rates of academic achievement, persistence from grade to grade, high school completion, and postsecondary education. Related to these outcomes, Native Hawaiian school-age learners are more likely than their peers to be chronically absent—perhaps due to their overrepresentation for chronic health conditions like asthma. Outside of school, Native Hawaiian keiki continue to experience higher rates of economic disadvantage relative to their peers.

## Hawai'i Public School Enrollment

From 2013 to 2017, the Hawai'i DOE served between 179,000 and 186,000 students each year.<sup>4</sup> Out of Hawai'i's largest ethnic groups,<sup>5</sup> three out of five saw decreases in the number of students attending public schools. Recent data from 2019 show that Native Hawaiians<sup>6</sup> constitute 24 percent of the Hawai'i DOE student population (Hawai'i Department of Education 2020b). However, Native Hawaiians witnessed the largest decline in public school enrollment in recent years, with a decrease of about five thousand students between 2013 and 2017. Whites witnessed an increase of about four thousand students during the same period (fig. 3.41).

One possible explanation for shifts in enrollment might involve migration rates. Over the past decade in Hawai'i, Whites had the highest positive net migration rate, meaning more people coming into, rather than moving away from, Hawai'i. The opposite pattern was observed for Native Hawaiians, who are the only major ethnicity in Hawai'i with a consistent negative net migration rate. This means that more Native Hawaiian families are moving away from, rather than coming into, Hawai'i (see the [Introduction](#) to this volume).

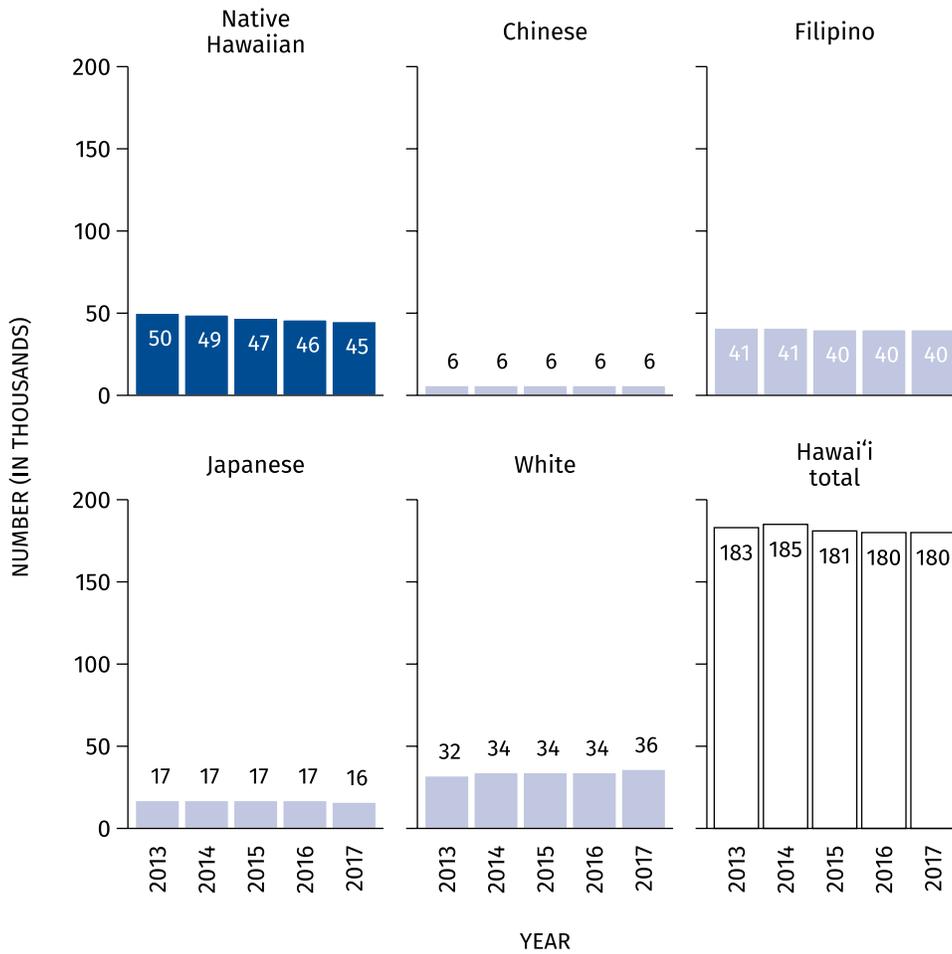
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<sup>4</sup> When discussing data in this section, the year refers to the end of a given school year; e.g., 2017 refers to school year 2016–17.

<sup>5</sup> The five ethnic groups—Native Hawaiian, Chinese, Filipino, Japanese, and White—are the largest groups in the overall population in Hawai'i, not necessarily the largest in public schools.

<sup>6</sup> For all Hawai'i DOE data, Native Hawaiian status is self-reported or reported by a parent. The categorization includes individuals who are “full-” and “part-” Native Hawaiian.

**FIGURE 3.41** Student enrollment in Hawai'i public schools  
[by ethnicity, Hawai'i, 2013 to 2017]



Data source: Hawai'i Department of Education, Hawai'i Data eXchange Partnership, DXP469 cross-section; prepared at the request of Kamehameha Schools

Note 1: The years displayed represent the end of a given school year; e.g., 2017 refers to school year 2016–17.

- Between 2013 and 2017, the number of students enrolled in Hawai'i public schools ranged from 180,000 to 185,000.
- All of Hawai'i's major ethnicities, except Whites and Chinese, showed a decline in public school enrollment from 2013 to 2017, with overall enrollment down by about three thousand students.
- Native Hawaiians witnessed the largest decrease in enrollment relative to that of other ethnicities, declining by about five thousand students between 2013 and 2017.
- The number of White students increased by approximately four thousand over the same five-year period.

Charter schools and nā kula kaiapuni make up a small but essential component of the 287 schools in the Hawai'i DOE. As of 2019, thirty-six charter schools were in operation across Hawai'i—an increase from thirty-one schools in 2009. Most charter schools are on Hawai'i Island and O'ahu (fourteen each), followed by five charter schools on Kaua'i, one on Maui and Moloka'i, and one statewide school operated by the State Public Charter School Commission (Hawai'i Public Charter School Commission 2019).

Of the thirty-six charter schools, seventeen are designated as Hawaiian-focused charter schools. Created in the early 2000s, these charters design and promote learning environments and experiences grounded in Hawaiian culture-based learning. Hawaiian-focused charter schools currently serve more than four thousand students, 81 percent of whom are Native Hawaiian (Espania et al. 2019).

Nā kula kaiapuni schools were formally established in 1987 and offer programs that use 'ōlelo Hawai'i as a medium of instruction. As of this writing, twenty-three Hawai'i DOE schools, including six charter schools, offer Hawaiian language programs (Omaye and Scheer 2019).

Table 3.5 summarizes enrollment numbers for all students in public charter schools and private schools from 2014 to 2018. During these years, charter school enrollment increased by about thirteen hundred students. Similarly, Hawai'i private school enrollment showed gains, increasing from 33,109 to 35,454 between 2014 and 2018. In 2019, there were one hundred licensed and/or accredited private schools (Hawai'i Association of Independent Schools 2020).

**TABLE 3.5** Public charter school and private school enrollment in Hawai'i, 2014 to 2018

Year	Number of students in public charter schools	Number of students in private schools
2018	11,160	35,454
2017	10,634	32,888
2016	10,422	32,794
2015	10,413	33,230
2014	9,797	33,109

*Data Source:* Office of Hawaiian Affairs 2020

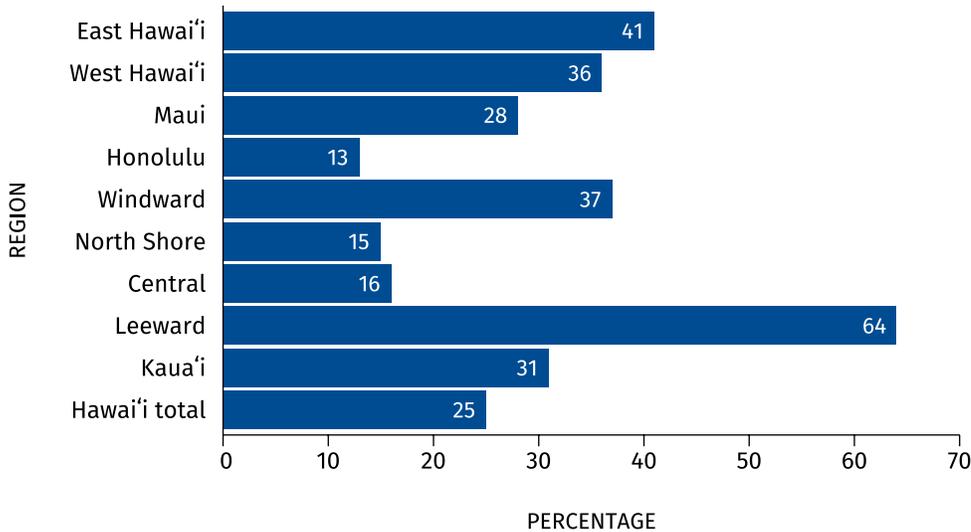
Note 1: The years displayed represent the end of a given school year: e.g., 2017 refers to school year 2016–17.

The COVID-19 pandemic has raised considerable implications for school enrollment. For example, between July and September of 2020, the Hawai'i DOE reported a 43 percent increase in requests for homeschooling, compared with all requests in school year 2019–20 (Lee 2020a). The onset of COVID-19 is also thought to have driven down private school enrollment (Lee 2020b; Daysog 2020), prompting schools to offer greater financial aid to assist families struggling with economic hardship (Boneza 2020). Toward the latter end of 2020, some private schools began to report slight upticks in enrollment, possibly due to the schools' ability to offer in-person classes five days a week as parents return to work (Ako 2020).

## ENROLLMENT—REGIONAL HIGHLIGHTS

Ethnic distributions within public school enrollment vary by region. Across Hawai'i in 2017, Native Hawaiian students constituted 25 percent of all public school students; however, the proportion of Native Hawaiian students was higher in all regions except Honolulu, Central, and North Shore. In 2017, the region serving the largest proportion of Native Hawaiian public school students was Leeward, where nearly two-thirds (64 percent) of all public school students are Native Hawaiian. Conversely, Honolulu has the smallest proportion of Native Hawaiian public school students, at 13 percent (fig. 3.42).

**FIGURE 3.42** Native Hawaiian students in public schools—regional comparison  
[as a percentage of public school students, by region, Hawai'i, 2017]



*Data source:* Hawai'i Department of Education, Hawai'i Data eXchange Partnership, DXP469 cross-section; prepared at the request of Kamehameha Schools

Note 1: The years displayed represent the end of a given school year; e.g., 2017 refers to school year 2016–17.

Note 2: Regional data refer to where the student is enrolled or graduated from, rather than where they live.

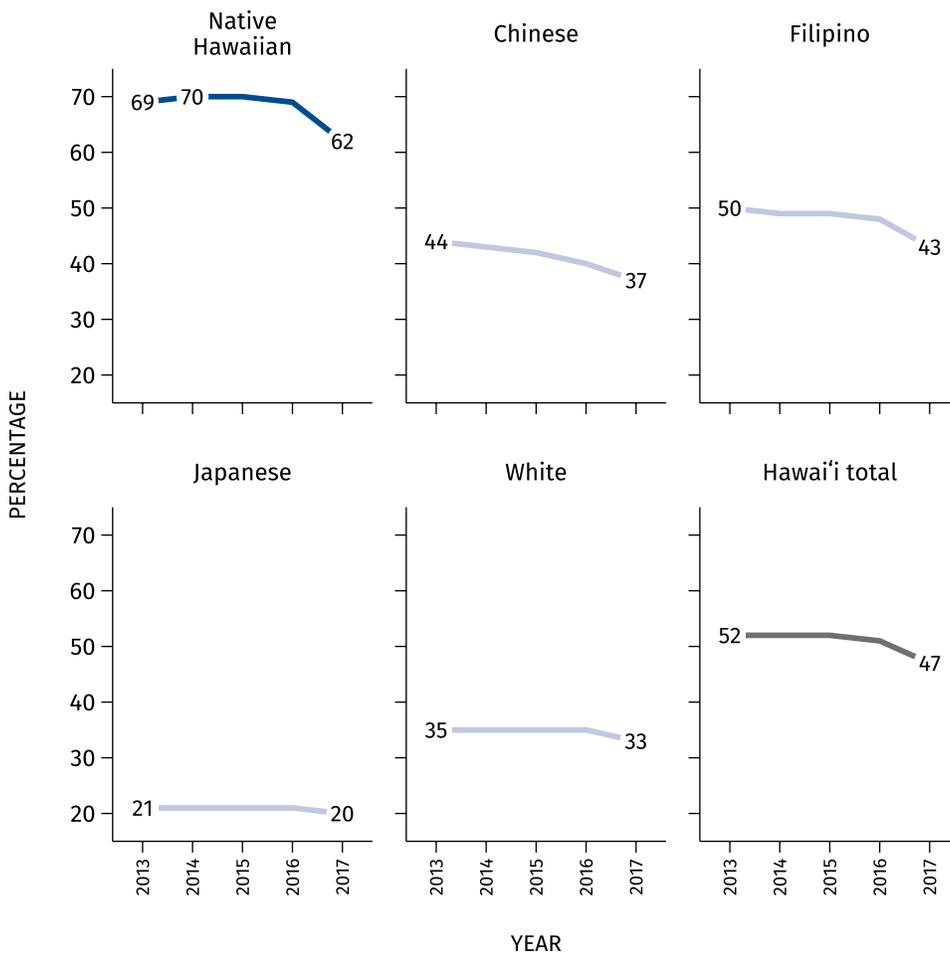
- Across regions, the proportion of Native Hawaiian enrollment—as a percentage of the total public school enrollment in each region—is highest in Leeward (64 percent).
- Compared with other regions, Honolulu has the smallest proportion of Native Hawaiians enrolled in public schools (13 percent).

## ECONOMIC DISADVANTAGE

A strong body of literature describes the pervasive role socioeconomic status plays in conventional education outcomes (Milner 2013; Zhang 2009). “Economic disadvantage” is a term used as an indicator of school-community poverty. This indicator includes students whose families meet certain income qualifications and helps administrators determine levels of need for students (Hawai'i Department of Education 2020a). From 2013 to 2017, half of all public school students in Hawai'i, on average, were economically disadvantaged. The year 2017 marked the first time in recent years that the Hawai'i total of economically disadvantaged students (47 percent) fell below the 50 percent mark (fig. 3.43).

Of the five major ethnicities in Hawai'i, Native Hawaiians constitute the largest share of public school students with economic disadvantage, ranging from 36 to 34 percent between 2013 and 2017 (not shown). Native Hawaiians have also consistently witnessed higher rates of economic disadvantage relative to their peers. Although economic disadvantage rates among public school students in Hawai'i trended downward from 2013 to 2017, they remained highest among Native Hawaiian learners: In 2017, 62 percent of all Native Hawaiian students in Hawai'i public schools were economically disadvantaged—15 percentage points higher than the Hawai'i total in the same year.

**FIGURE 3.43** Trends in economic disadvantage among public school students [as a percentage of public school students, by ethnicity, Hawai'i, 2013 to 2017]



*Data source:* Hawai'i Department of Education, Hawai'i Data eXchange Partnership, DXP469 cross-section; prepared at the request of Kamehameha Schools

Note 1: The years displayed represent the end of a given school year; e.g., 2017 refers to school year 2016–17.

Note 2: Data labels are presented for the first and last points, the maximum and minimum points, and some inflection points where the trend changes.

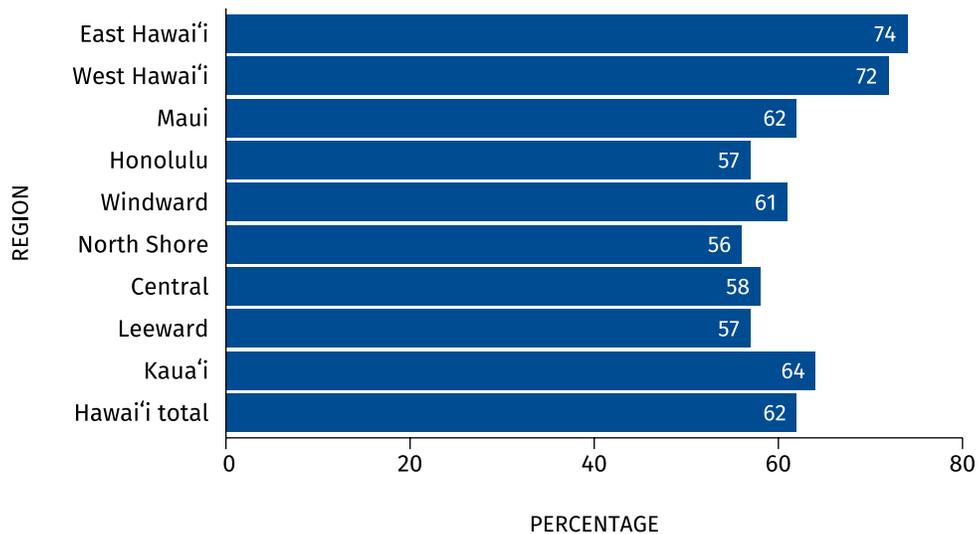
- There is a downward trend in the proportion of Native Hawaiian public school students who are economically disadvantaged, declining from a high of 70 percent in 2014 to 62 percent in 2017.
- Despite marked improvement in recent years, Native Hawaiians have the highest proportion of public school students who are economically disadvantaged, compared with other ethnic groups and the Hawai'i total.
- Based on the Hawai'i total, about half of all public school students in Hawai'i, on average, are economically disadvantaged.
- From 2013 to 2017, all ethnicities saw slight to significant decreases in the proportion of students who are economically disadvantaged.

### **Economic Disadvantage—Regional Highlights**

Because economic disadvantage poses constraints on family resources such as housing, transportation, and jobs, the proportion of economically disadvantaged children varies by location. Among all Native Hawaiian students in public schools, 62 percent are economically disadvantaged, with East Hawai'i (74 percent) and West Hawai'i (72 percent) having notably higher percentages. This is consistent with findings showing that East Hawai'i has the largest percentage of Native Hawaiians living in poverty (see [fig. 1.37](#)). North Shore has the lowest proportion (56 percent) of Native Hawaiian students who are economically disadvantaged (fig. 3.44). From 2013 to 2016, Leeward had the highest rate of economically disadvantaged students, with rates between 82 and 83 percent (not shown); however, by 2017, the rate for that region was much lower, at 57 percent.

**FIGURE 3.44** Economic disadvantage among Native Hawaiian students in public schools—regional comparison

[as a percentage of Native Hawaiian public school students, by region, Hawai'i, 2017]



Data source: Hawai'i Department of Education, Hawai'i Data eXchange Partnership, DXP469 cross-section; prepared at the request of Kamehameha Schools

Note 1: The years displayed represent the end of a given school year; e.g., 2017 refers to school year 2016–17.

Note 2: Regional data refer to where the student is enrolled or graduated from, rather than where they live.

- Regions with the highest proportion of Native Hawaiian public school students who are economically disadvantaged are East Hawai'i (74 percent) and West Hawai'i (72 percent).
- The North Shore region has the lowest percentage of Native Hawaiian students who face economic strain (56 percent).

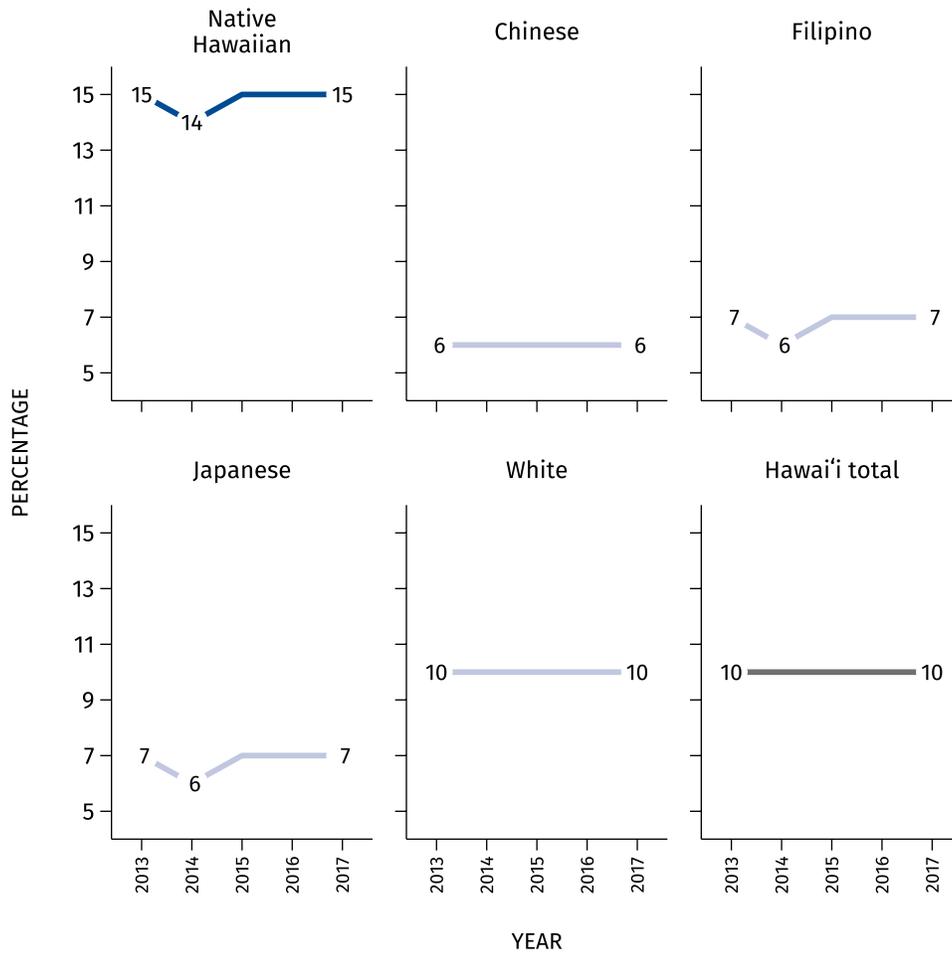
Given the relatively higher rates of poverty among Native Hawaiian families with children, it is unsurprising that schools with higher concentrations of Native Hawaiian students also have higher rates of students facing economic disadvantage (see [table 3.6](#)). In 2017, among schools with low concentrations of Native Hawaiian students, 44 percent of students were economically disadvantaged. In contrast, among schools with high concentrations of Native Hawaiians, the percentage of economically disadvantaged students is 78 percent—a difference of 34 percentage points (see [table 3.6](#)).

## ENROLLMENT IN SPECIAL EDUCATION PROGRAMS

Special education programs offer individual learning experiences by providing physical and occupational therapy, language services, counseling, parent education, and other services to improve overall learning outcomes. The over- and underrepresentation of certain ethnic or socioeconomic groups in special education continues to be debated nationally and locally. Research suggests that student achievement, family income, and access to resources such as food are among the factors that influence a student's participation in special education (Haliniak 2017; Gordon 2017). These factors are often overlooked, potentially minimizing access for some students in need of special education services (Gordon 2017).

In 2017, one in ten students in Hawai'i public schools (10 percent) was enrolled in special education programs. From 2013 to 2017, the proportion of special education students in Hawai'i's public schools did not change substantially; however, by 2017, Native Hawaiian students (15 percent) were more than twice as likely as their Chinese (6 percent), Filipino (7 percent), and Japanese (7 percent) peers to be enrolled in special education programs (fig. 3.45).

**FIGURE 3.45** Trends in special education enrollment among students in public schools  
 [as a percentage of public school students, by ethnicity, Hawai'i, 2013 to 2017]



Data source: Hawai'i Department of Education, Hawai'i Data eXchange Partnership, DXP469 cross-section; prepared at the request of Kamehameha Schools

Note 1: The years displayed represent the end of a given school year; e.g., 2017 refers to school year 2016-17.

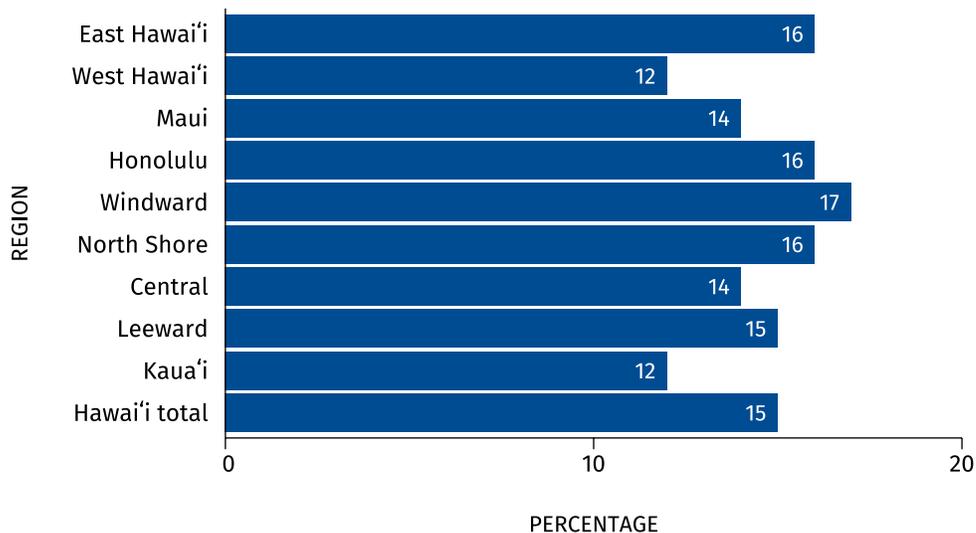
Note 2: Data labels are presented for the first and last points, the maximum and minimum points, and some inflection points where the trend changes.

- Native Hawaiian enrollment in special education programs has remained relatively steady over a five-year period, with a slight dip in 2014.
- From 2013 to 2017, the proportion of Native Hawaiian students enrolled in special education programs generally has been 5 percentage points higher than the Hawai'i total.
- For the Hawai'i total, the percentage of public school students enrolled in special education programs (10 percent) has not changed from 2013 to 2017.

### Enrollment Special Education Programs—Regional Highlights

Across regions, Native Hawaiian students experience slight variations in special education program participation, with all regions within 3 percentage points of the Hawai'i total (15 percent). Compared with other regions, Windward has the highest proportion of Native Hawaiian public school students enrolled in special education programming (17 percent), followed by East Hawai'i, Honolulu, and North Shore (each at 16 percent). West Hawai'i and Kaua'i have the lowest percentage of Native Hawaiian students in special education, each at 12 percent) (fig. 3.46). Between 2013 and 2016, East Hawai'i had the highest rate of Native Hawaiian students in special education programming (around 17 percent) but saw slight decreases each year, whereas the Windward rate has increased by a few tenths of a percentage point each year since 2014 (not shown).

**FIGURE 3.46** Special education enrollment among Native Hawaiian students in public schools—regional comparison  
[as a percentage of Native Hawaiian students in public schools, by region, Hawai'i, 2017]



*Data source:* Hawai'i Department of Education, Hawai'i Data eXchange Partnership, DXP469 cross-section; prepared at the request of Kamehameha Schools

Note 1: The years displayed represent the end of a given school year; e.g., 2017 refers to school year 2016–17.

Note 2: Regional data refer to where the student is enrolled or graduated from, rather than where they live.

- Looking across regions, Windward has the highest proportion (17 percent) of Native Hawaiian public school students enrolled in special education—2 percentage points higher than the Hawai'i total.
- Compared with other regions, West Hawai'i and Kaua'i have the lowest percentage of Native Hawaiian public school students (12 percent) enrolled in special education.
- In all regions except North Shore, Native Hawaiian students represent the largest proportion of special education enrollment, compared with students from other ethnicities (not shown).

Schools with higher concentrations of Native Hawaiian students have higher rates of special education program participation than schools with lower concentrations of Native Hawaiian students (see [table 3.6](#)). For example, in 2017, in schools with high concentrations of Native Hawaiian students, 14 percent of students were in special education programs—5 percentage points higher than the rate for schools that have a low concentration of Native Hawaiian students (see [table 3.6](#)).

The rate of students in special education programs is increasing in schools with high concentrations of Native Hawaiian students, rising from 13 to 15 percent between 2015 and 2017, before dropping to 14 percent in 2018 (not shown). During the same period, special education enrollment rates remained fairly stable in schools with low and moderate concentrations of Native Hawaiian students.

## School Staffing and Human Capital

It is well recognized that school leadership and teacher quality are key for student learning. A lack of qualified educators and patterns of high turnover rates (for both teachers and principals) are generally associated with lower student achievement and proficiency; lower teacher retention, effectiveness, and morale; and higher economic costs (Opper 2019; National Association of Secondary School Principals 2013; Darling-Hammond 2000; Harbatkin and Henry 2019; García and Weiss 2019; Ronfeldt, Loeb, and Wyckoff 2013). In this section, we examine principal and teacher data in relation to the concentration of Native Hawaiian students in schools.

During the 2008 recession, many US school districts were forced to lay off teachers. After the recession, schools faced difficulties in rehiring qualified teachers and achieving adequate student-to-teacher ratios (Sutcher, Darling-Hammond, and Carver-Thomas 2016). By 2012, teacher shortages had increased across the country, and some scholars projected that the supply of teachers would remain below the demand for new hires through 2025 (García and Weiss 2019). High principal turnover rates have also become increasingly apparent. A 2017 survey from the US Department of Education reported that about 18 percent of principals had chosen to leave their position from the previous year; for principals in high-poverty schools, the rate was slightly higher, at 21 percent (Goldring and Taie 2018).

In previous decades, many schools with high concentrations of Native Hawaiian students employed disproportionately more emergency hires and fewer teachers with advanced degrees, while also experiencing greater teacher and principal turnover (Kana'iaupuni, Malone, and Ishibashi 2005; Kamehameha Schools 2014). Furthermore, despite the fact that Native Hawaiians make up almost one-fourth of the student population in the Hawai'i DOE system, only 10 percent of Hawai'i DOE teachers are Native Hawaiian—less than the percentage of teachers who identify as Caucasian (25 percent), Japanese (23 percent), and Other (25 percent) (Hawai'i Department of Education 2020b).

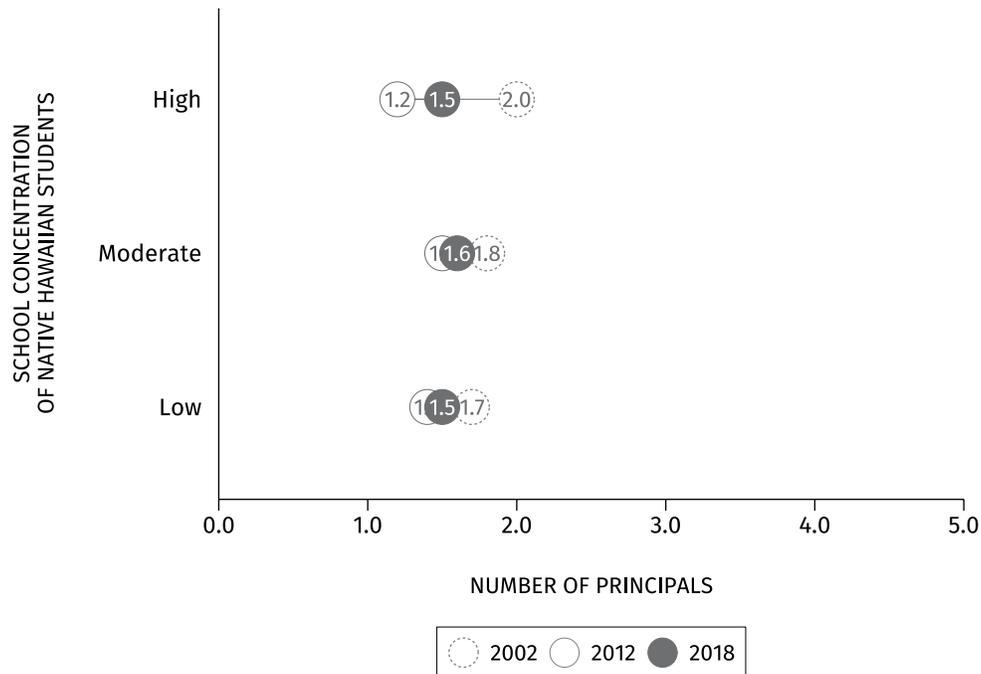
## PRINCIPAL TURNOVER

Principals play an essential role in setting the vision for a school's learning environment and student success. The responsibilities of a principal include ensuring that students' needs are met, creating a safe and engaging school community, and providing faculty and staff the resources they require, thereby supporting and maintaining a quality teacher workforce (National Association of Secondary School Principals 2013). High principal turnover rates can lead to school instability as a result of shifting priorities and goals, a lack of vision and direction, and overall low staff morale. Research has shown that the effect of principals on learner outcomes is pronounced in schools that struggle with high rates of poverty among students and low teacher retention (Harbatkin and Henry 2019).

To approximate principal turnover in Hawai'i public schools, we analyze trend data that show the average number of principals in a five-year period. More specifically, we examine three five-year periods ending in 2002, 2012, and 2018 and present the data by school concentration of Native Hawaiian students. Our findings reveal that schools with low, moderate, and high concentrations of Native Hawaiian students observed a decrease in the rate of principal turnover between 2002 and 2012, and an increase from 2012 to 2018. Schools with high concentrations of Native Hawaiians saw the greatest fluctuation in principal turnover (fig. 3.47).

**FIGURE 3.47** Trends in public schools' average number of principals over a five-year period, by Native Hawaiian school concentration

[as an average of school rates, by school concentration of Native Hawaiian students, Hawai'i; 2002, 2012, and 2018]



*Data source:* Hawai'i Department of Education, School Status and Improvement Report

Note 1: These data show the number of principals over a five-year period; the year refers to the final year of that five-year period, e.g., 2018 refers to the period from 2013 to 2018. Principal refers to the head principal only and does not include assistant principals.

Note 2: The concentration of Native Hawaiian students, relative to the schools' total student population, is indicated by three levels tabulated specifically for this publication: Low: < 25%, Moderate: 25 to 50%, High: > 50%.

Note 3: This chart includes overlapping and sometimes obscured data points. The most recent data points are all visible; older data points that are not discernible suggest little or no change over time.

- From 2002 to 2018, Hawai'i public schools with a high concentration of Native Hawaiian students experienced more fluctuation than low- and moderate-concentration schools in the average number of principals over a five-year period.
- In 2002, Hawai'i public schools with a low concentration of Native Hawaiian students averaged 1.7 principals over a five-year period, while schools with a high concentration of Native Hawaiian students averaged 2.0 principals.
- By 2012, schools with low, moderate, and high concentrations of Native Hawaiian students had reached a lower rate of principal turnover than in 2002, with the lowest number (1.2) among schools with a high concentration of Native Hawaiian students.
- By 2018, there was little difference between schools with low, moderate, and high concentrations of Native Hawaiian students, each with 1.5 or 1.6 principals over a five-year period.
- On the whole, Hawai'i public schools generally witnessed a decrease in principal turnover between 2002 and 2012, followed by an increase from 2012 to 2018.

## STUDENT-TO-TEACHER RATIOS

Student-to-teacher ratios are considered valuable measures of school environments by many principals, teachers, and parents. Despite an abundance of research on student-to-teacher ratios, scholars have reported mixed findings or difficulty in establishing causal links between class size and student learning (Whitehurst and Chingos 2011). Among studies that have estimated direct short-term and long-term effects of class size on student outcomes (Finn and Achilles 1999; Krueger 1999; Chetty et al. 2011; Rivkin, Hanushek, and Kain 2005), findings suggest that smaller class size generally leads to higher academic achievement and positive student outcomes (e.g., college enrollment). Other studies report potentially greater benefits from small class sizes for minority or disadvantaged students (Krueger and Whitmore 2001; Nye, Hedges, and Konstantopoulos 2004).

In Hawai'i, public schools with high concentrations of Native Hawaiian students have lower student-to-teacher ratios in regular instruction (non-special education), compared with low- and moderate-concentration schools (fig. 3.48). This suggests potential advantages for students attending schools where Native Hawaiians constitute more than half of the student body, as low student-to-teacher ratios are often associated with greater accessibility to teachers, less competition for assistance, and more opportunities to demonstrate and engage in learning (Stamos 2018).

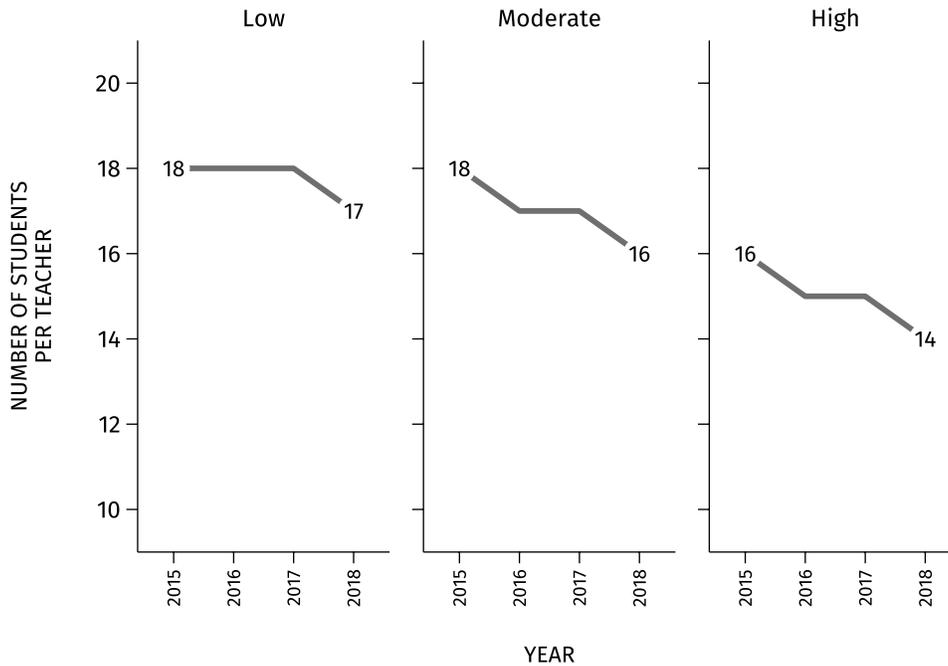


Hawai'i public schools are seeing lower student-to-teacher ratios over time, especially in schools with a high concentration of Native Hawaiian students.



**FIGURE 3.48** Trends in public schools' student-to-teacher ratios for regular instruction, by Native Hawaiian school concentration

[as an average of school rates for the number of students per teacher, by school concentration of Native Hawaiian students, Hawai'i, 2015 to 2018]



Data source: Hawai'i Department of Education, School Status and Improvement Report

Note 1: The years displayed represent the end of a given school year; e.g., 2018 refers to school year 2017-18.

Note 2: The concentration of Native Hawaiian students, relative to the schools' total student population, is indicated by three levels tabulated specifically for this publication: Low: < 25%, Moderate: 25 to 50%, High: > 50%.

Note 3: Regular instruction refers to instruction that is not designated as special education.

- From 2015 to 2018, schools with low, moderate, and high concentrations of Native Hawaiian students saw a decrease in the student-to-teacher ratio for regular instruction.
- Compared with other schools, those with a high concentration of Native Hawaiian students have consistently lower student-to-teacher ratios, ranging from 16 students per teacher in 2015 to 14 students per teacher in 2018.
- Schools with moderate and low Native Hawaiian concentration have roughly 2 to 3 more students per teacher, compared with schools that have a high concentration of Native Hawaiian students.

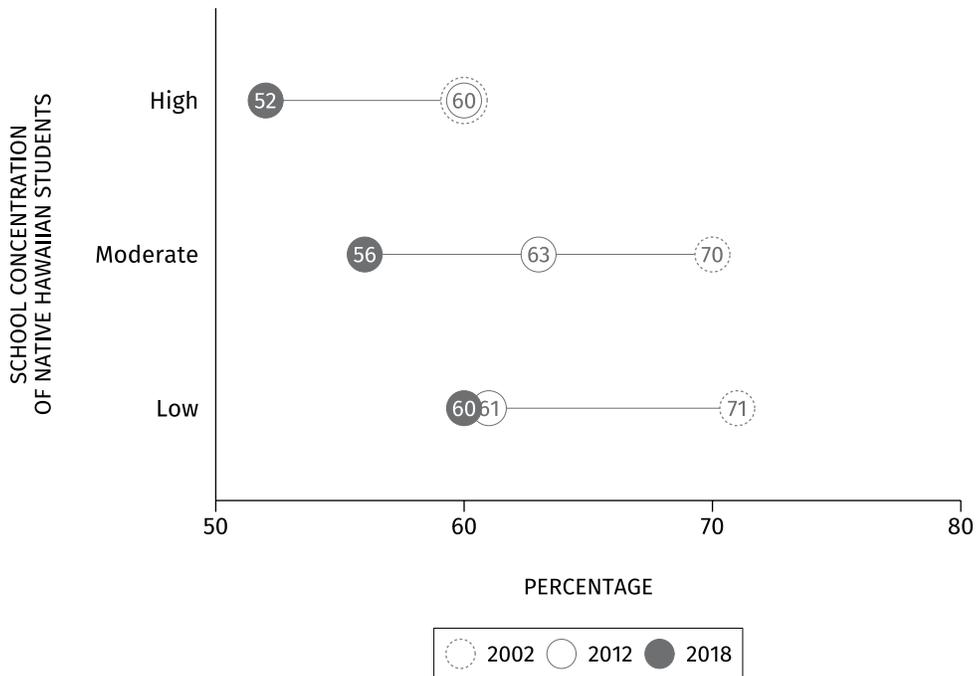
## TEACHER EXPERIENCE AND CREDENTIALS

Teachers play a key role in classrooms, school administration, and education systems. In this section, we present findings on four dimensions of teacher experience and credentials: tenure (i.e., staying at their current school for a designated length of time), average years of teaching experience, advanced degree attainment, and emergency credentials.

Whether teachers stay at their current schools is an important indicator of school stability and climate. Our data show that among Hawai'i public schools with low, moderate, and high concentrations of Native Hawaiian students, the percentages of teachers who taught at the same school for five years or longer have fallen considerably since 2002 (fig. 3.49). The biggest decrease was observed for schools with a moderate concentration of Native Hawaiian students, declining from 70 to 56 percent between 2002 and 2018. Across schools, the notable gaps in teacher tenure in 2002 had narrowed slightly by 2018, ranging from 60 percent of teachers who taught in the same school for five years in low-concentration schools to 52 percent in high-concentration schools.

**FIGURE 3.49** Trends in public schools' teachers who have five or more years of teaching experience at that school, by Native Hawaiian school concentration

[as a percentage of public school teachers, by school concentration of Native Hawaiian students, Hawai'i; 2002, 2012, and 2018]



Data source: Hawai'i Department of Education, School Status and Improvement Report

Note 1: The years displayed represent the end of a given school year; e.g., 2018 refers to school year 2017–18.

Note 2: The concentration of Native Hawaiian students, relative to the schools' total student population, is indicated by three levels tabulated specifically for this publication: Low: < 25%, Moderate: 25 to 50%, High: > 50%.

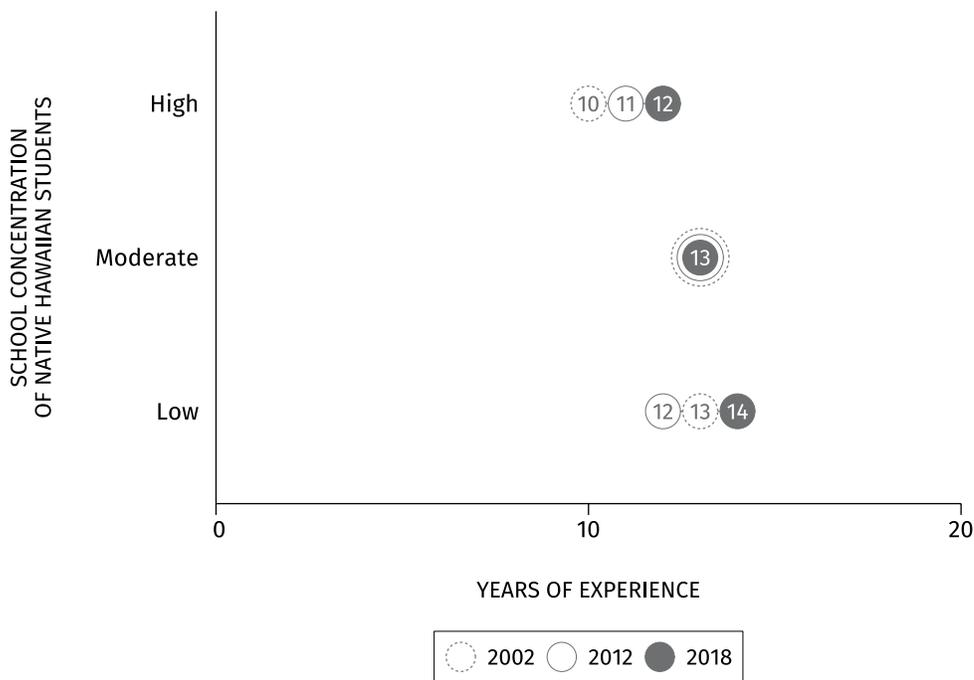
- Among public schools with low, moderate, and high concentrations of Native Hawaiian students, there was a decrease between 2002 and 2018 in the percentage of teachers with five or more years of experience at the same school.
- Public schools with higher concentrations of Native Hawaiian students generally have lower percentages of teachers who have been at their school for five or more years.
- However, by 2018, the gap had closed slightly, with 60 percent of teachers having more than five years' tenure in schools with a low concentration of Native Hawaiian students, compared with 52 percent in schools with high concentrations.
- On the whole, the trend in Hawai'i public schools is toward fewer teachers with tenures of five years or more at their school.

Teaching experience, or the cumulative number of years spent teaching at any school, is a common measure of school capacity and climate. Teachers with more years of teaching experience are often associated with outcomes such as higher rates of student attendance, higher student academic achievement, and greater levels of support for a teacher's peers and colleagues (Kini and Podolsky 2016). Between 2002 and 2018, rates for the average years

of teaching in Hawai'i public schools were stable for schools with moderate concentrations of Native Hawaiian students, at 13 years. The average years of teaching among schools with high and low concentrations of Native Hawaiians varied slightly from 2002 to 2018. Among teachers at schools with a high concentration of Native Hawaiian students, the average years of teaching increased to 12 years during the same time period (fig. 3.50).

**FIGURE 3.50** Trends in public schools' teachers' average amount of teaching experience, by Native Hawaiian school concentration

[as an average of school rates, by school concentration of Native Hawaiian students, Hawai'i; 2002, 2012, and 2018]



*Data source:* Hawai'i Department of Education, School Status and Improvement Report

Note 1: The years displayed represent the end of a given school year; e.g., 2018 refers to school year 2017–18.

Note 2: The concentration of Native Hawaiian students, relative to the schools' total student population, is indicated by three levels tabulated specifically for this publication: Low: < 25%, Moderate: 25 to 50%, High: > 50%.

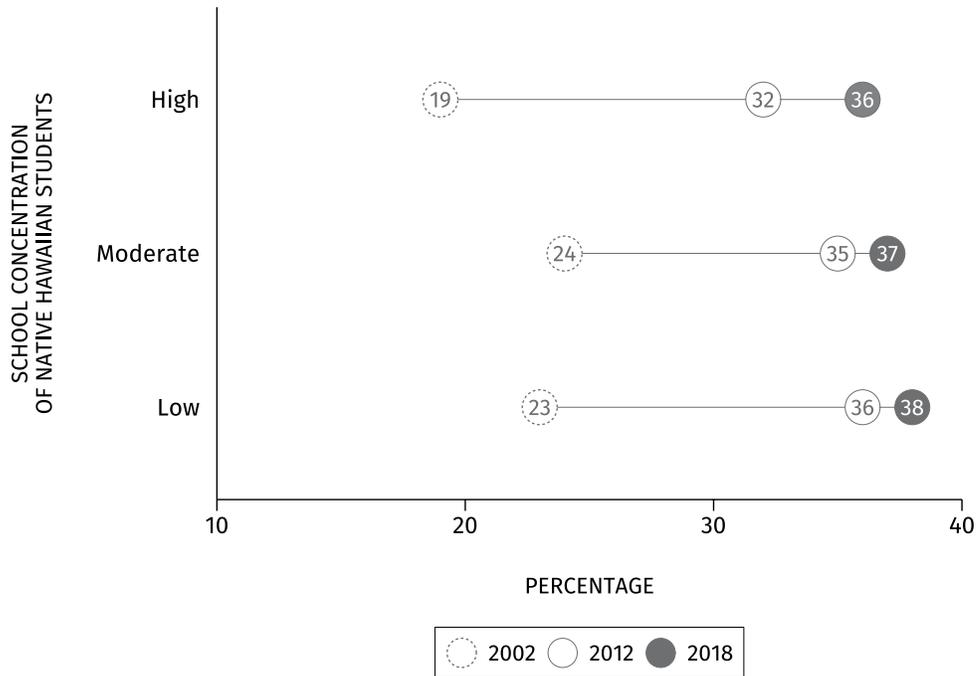
- In 2018, teachers at schools with a low concentration of Native Hawaiian students had an average of 14 years of teaching experience, compared with 13 years among teachers in schools with moderate concentrations of Native Hawaiian students and 12 years for high-concentration schools.
- Over time, schools with high concentrations of Native Hawaiian students show a small but steady increase in the average amount of experience among teachers.

Teacher qualifications provide insights into the training that accompanies teacher experience. Pursuing degrees beyond a bachelor's degree has become increasingly common for teachers. In 2018, for example, 58 percent of all public school teachers in the United States held an advanced degree—11 percentage points higher than in 2000 (National Center for Education Statistics, n.d.). While a master's degree may be required for some teacher licensure programs, taking graduate credits may also fulfill recertification requirements (Hill 2007). The Hawai'i DOE does not require teachers to obtain an advanced degree for licensure (Hawai'i Department of Education, n.d.[c]).

In 2018, the rates of Hawai'i public school teachers with advanced degrees were similar across schools with low, moderate, and high concentrations of Native Hawaiian students, ranging from 36 to 38 percent. This is a substantial increase from sixteen years prior, when advanced degrees were held by fewer than one-fourth of teachers in schools with low and moderate concentrations of Native Hawaiian students, and fewer than one-fifth of teachers in schools with a high concentration of Native Hawaiian students (fig. 3.51).

**FIGURE 3.51** Trends in public schools' teachers with advanced degrees, by Native Hawaiian school concentration

[as a percentage of public school teachers, by school concentration of Native Hawaiian students, Hawai'i; 2002, 2012, and 2018]



Data source: Hawai'i Department of Education, School Status and Improvement Report

Note 1: The years displayed represent the end of a given school year; e.g., 2018 refers to school year 2017–18.

Note 2: The concentration of Native Hawaiian students, relative to the schools' total student population, is indicated by three levels tabulated specifically for this publication: Low: < 25%, Moderate: 25 to 50%, High: > 50%.

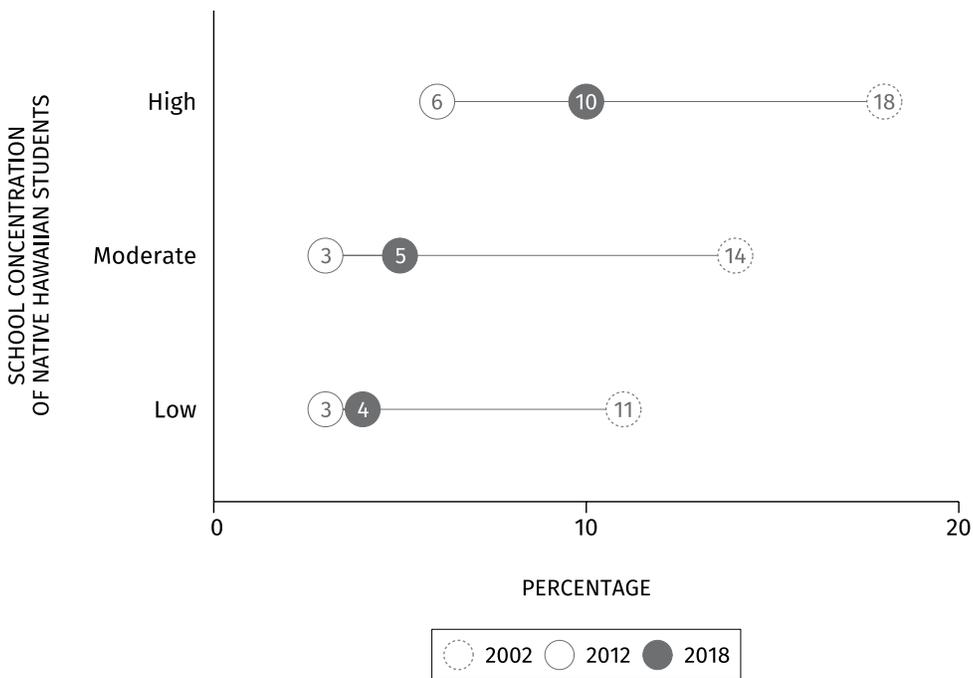
- The proportion of teachers with advanced degrees was substantially higher in 2018 than in 2002, regardless of the schools' concentration of Native Hawaiian students.
- In 2018, 36 percent of Hawai'i public school teachers in schools with a high concentration of Native Hawaiian students had advanced degrees—2 percentage points lower than teachers in schools with a low concentration of Native Hawaiian students.

Regardless of teachers' level of educational attainment and years of experience, many schools make emergency hires to provide temporary relief for unfilled faculty vacancies. Hiring teachers with emergency credentials can disrupt the pool of teachers and place additional burdens on credentialed teachers, which may have negative effects on the school community (Sutcher, Darling-Hammond, and Carver-Thomas 2016). However, even though emergency hires are often viewed as being less qualified and prepared than certified teachers are, the evidence suggesting that students fare worse in classrooms taught by teachers with just emergency credentials is mixed (Clotfelter, Ladd, and Vigdor 2007; Darling-Hammond, Berry, and Thoreson 2001; Goldhaber and Brewer 2000).

In Hawai'i, the proportion of public school teachers with emergency credentials has decreased dramatically since 2002. However, differences are apparent across schools, with those that have higher concentrations of Native Hawaiians generally having higher percentages of teachers with emergency credentials. For example, in 2002, nearly one-fifth (18 percent) of teachers in schools with high concentrations of Native Hawaiian students had emergency credentials—4 percentage points higher than what is seen in moderate-concentration schools (14 percent) and 7 percentage points higher than the proportion in low-concentration schools (11 percent). The same pattern was prevalent in 2018 (fig. 3.52).

A recent study on teacher compensation in the Hawai'i DOE reinforces these findings. For example, complex areas such as Hāna–Lahainaluna–Lāna'i–Moloka'i, Honoka'a–Kealakehe–Kohala–Konawaena, and Nānākuli–Wai'anae have higher proportions of new teachers and teachers with emergency credentials, compared with other complex areas (Augenblick, Palaich and Associates 2020). Schools within these complex areas, particularly in Nānākuli–Wai'anae, serve high concentrations of Native Hawaiians.

**FIGURE 3.52** Trends in teachers with emergency credentials, by Native Hawaiian school concentration [as a percentage of public school teachers, by school concentration of Native Hawaiian students, Hawai'i; 2002, 2012, and 2018]



Data source: Hawai'i Department of Education, School Status and Improvement Report

Note 1: The years displayed represent the end of a given school year; e.g., 2018 refers to school year 2017–18.

Note 2: The concentration of Native Hawaiian students, relative to the schools' total student population, is indicated by three levels tabulated specifically for this publication: Low: < 25%, Moderate: 25 to 50%, High: > 50%.

- In 2002, 2012, and 2018, schools with low concentrations of Native Hawaiian students were less likely than high-concentration schools to employ teachers with emergency credentials.
- Schools with a high concentration of Native Hawaiian students had faculties where nearly one-fifth of their teachers (18 percent) were emergency hires in 2002—a proportion that fell to 10 percent by 2018.
- Of the three years analyzed, 2012 represents the lowest rates of hiring teachers with emergency credentials across all schools.

## Student Achievement

Student achievement generally refers to how learners perform on standardized tests and other measures. The association between student achievement and ethnicity has been the focus of ongoing research and debate, especially in the years following segregation in the United States. Despite federal mandates like No Child Left Behind, stark achievement and performance differences exist between minority and nonminority ethnic groups. Standardized tests tend to be normalized based on the scores of the majority (i.e., nonminority ethnic groups), and what becomes normalized is not representative of students who come from different cultural and linguistic backgrounds (Kim and Zabelina 2015). Differences in backgrounds can lead to variations in the interpretation or understanding of assessment and test questions (Kim and Zabelina 2015), resulting in what can appear to be low achievement and proficiency.

Further research explores broader associations of race and achievement, including teacher–student racial pairings (Driessen 2015; Egalite, Kisida, and Winters 2015; Dee 2004), language of instruction and testing (Ciotti, Shriner, and Shriner 2019; Metz 2018; Au 2008), demonstration of knowledge acquired (Keehne 2017), and school culture (Coryn, Schröter, and McCowen 2014; Kana'iaupuni, Ledward, and Jensen 2010; Takayama 2008). Indeed, the consequences of standardized tests for minority students are paramount, as the rigidity and inherent biases of the tests may inhibit opportunities to demonstrate learning that is grounded in cultural ways of knowing and being.

Despite assessment biases and the complexities of examining race and achievement, standardized tests continue to serve as the primary form of assessment for Hawai'i's public school learners. In this section we present student achievement data for three subject areas: language arts, mathematics, and science. For each subject area, there are four "views" of achievement data:

1. Trends in subject proficiency among all public school students
2. Subject proficiency among Native Hawaiian students by school level (elementary, middle, high)
3. Trends in language arts and mathematics proficiency<sup>7</sup> among all public school students, by school concentration of Native Hawaiian students (low, moderate, high)
4. Subject proficiency among Native Hawaiian students, by region

The achievement data presented below aggregate and summarize proficiency rates for any standardized test administered in Hawai'i public schools from 2015 to 2017. These include the following tests:

- Smarter Balanced Assessment (SBA) for language arts and mathematics from 2015 to 2017
- Hawai'i State Assessment (HSA) for science from 2015 to 2017
- Alternative assessments<sup>8</sup> offered from 2015 to 2017
- Kaiapuni Assessment of Education Outcomes (KĀ'EO), which was administered in kaiapuni elementary schools in 2016 and 2017 for language arts and mathematics, and in 2017 for science.

The accompanying analysis is purely descriptive. That is, while the findings document and illustrate trends and achievement gaps, the analysis does not explain why the trends and gaps exist. It is hoped that future research will extend this work by examining factors that mediate or predict achievement and, in particular, the extent to which efforts implemented by the Hawai'i DOE and partners support Native Hawaiian learners to increase proficiency rates and reduce achievement gaps.

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<sup>7</sup> Science proficiency data are unavailable.

<sup>8</sup> Although alternative assessments and the KĀ'EO assessments are included in our data, the HSA and SBA account for a vast majority of standardized tests administered.

## HAWAII DOE CHANGES IN STANDARDIZED TESTS

Our analysis of student achievement data summarizes proficiency rates across all standardized tests administered between 2015 and 2017. To understand student achievement in the Hawai'i DOE, it is essential to first discuss assessment changes made prior to 2015 and the resulting influence on student test scores.

Between 2003 and 2013, the Hawai'i DOE administered the HSA in reading and mathematics to students enrolled in Grades 3–8 and 11, and the HSA in science to students enrolled in Grades 4 and 8 (Haliniak 2017). Then, in 2012, the Hawai'i DOE implemented new Hawai'i Common Core Standards that defined “what students should understand and be able to do at each grade level” (Hawai'i Department of Education Offices, What it is, what it is not, n.d.[b]). Hawai'i also participated in—as part of a multistate consortium to develop the SBA systems—a new assessment system for mathematics and English language arts/literacy that would ultimately replace the HSA in 2015. The SBA aligned to the new Hawai'i Common Core Standards and was designed to measure students' college, career, and community readiness.

In 2014, a “bridge” assessment (derived from part-HSA and part-SBA) was administered to students. The SBA officially replaced the HSA in reading and mathematics in 2015. Today, all Hawai'i DOE students in Grades 3–8 and 11 (including those in public charter schools) take the SBA. Students in Grades 4 and 8 continued to take the HSA in science (Haliniak 2017) through 2020. In 2016, the Hawai'i DOE adopted the Next Generation Science Standards (NGSS), and individual schools began to align and implement NGSS standards to existing HSA tests (Hawai'i Department of Education, n.d.[e]). A science bridge assessment was planned for spring 2020 but was postponed due to the COVID-19 pandemic.

Grade 3 and 4 students in kaiapuni schools take the KĀ'EO tests. First administered in 2016, the KĀ'EO assessments were developed by a partnership between the Hawai'i DOE and the University of Hawai'i at Mānoa (Hawai'i Department of Education, n.d.[g]). Kaiapuni students do not take the SBA.

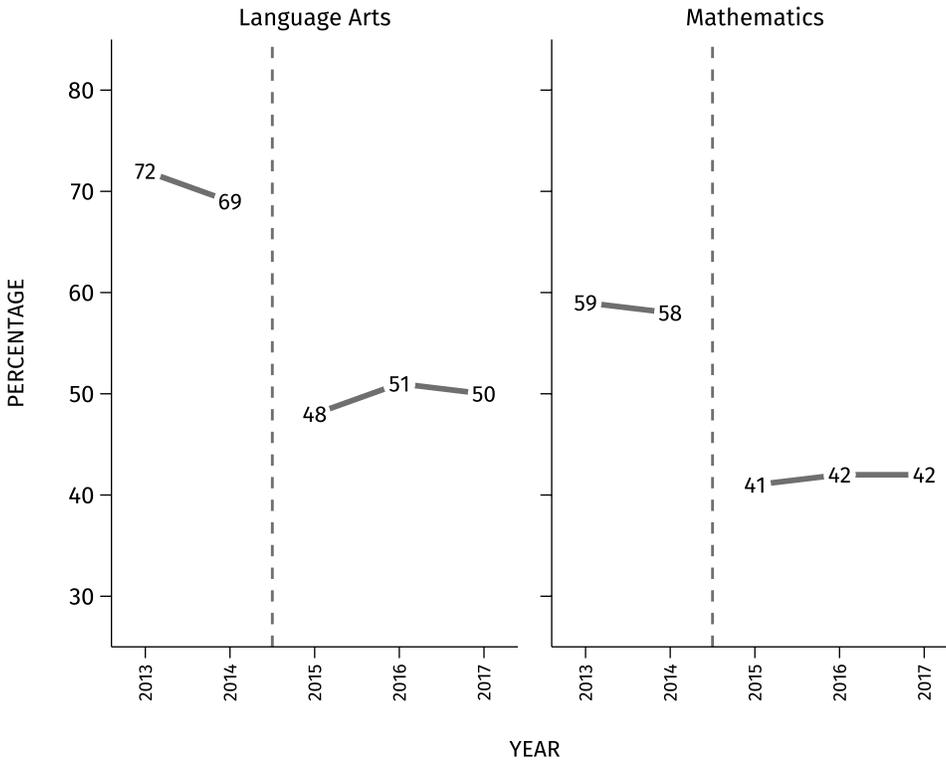
Other Hawai'i DOE assessments<sup>9</sup> include the End-of-Course exams in Algebra I, Algebra II, Biology I, and US History (the Biology I test was aligned to NGSS standards in 2019); the HSA-Alt (administered to students with significant cognitive disabilities), and the National Assessment of Educational Progress (administered to a sample of Grade 4 and 8 students every other year) (Hawai'i Department of Education Offices, “Other Assessments,” n.d.[f]).

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<sup>9</sup> For our analysis, other assessments may be referred to as “alternative assessments” when applicable.

Figure 3.53 illustrates subject area proficiency before and after the shift between HSA in 2013 to full implementation of SBA in 2015. Pre-SBA, 72 percent of Hawai'i public school students (across all grade levels) met language arts proficiency in 2013. This percentage dropped slightly (3 percentage points) in 2014 when the bridge assessment was administered. In the first year of SBA implementation (2015), fewer than half (48 percent) of students met language arts proficiency, increasing slightly to 50 percent in 2017. A similar pattern was observed for mathematics, where students had higher proficiency rates on the 2013 HSA (59 percent) and the 2014 bridge assessment (58 percent), compared with results from the SBA in 2015 to 2017 (about 42 percent).

**FIGURE 3.53** Trends in standardized test proficiency among students in public schools [as a percentage of public school students, by subject area, Hawai'i, 2013 to 2017]



Data source: Hawai'i Department of Education, Hawai'i Data eXchange Partnership, DXP469 cross-section; prepared at the request of Kamehameha Schools

Note 1: The years displayed represent the end of a given school year; e.g., 2017 refers to school year 2016–17.

Note 2: Proficiency rates include all standardized tests administered in Hawai'i public schools: HSA in 2013; HSA/SBA bridge assessment in 2014; SBA in 2015 to 2017; Alternative assessment offered in 2014 to 2017; and KĀ'EO in kaiaupuni elementary schools in 2016 and 2017 for language arts and mathematics and in 2017 only for science.

Note 3: The dotted line in this chart indicates a change in standardized tests administered in Hawai'i public schools.

- In 2013—the last year of HSA administration for language arts and mathematics—72 percent of students in Hawai'i public schools were proficient in language arts, while 59 percent were proficient in mathematics.
- In 2014—when the HSA/SBA bridge assessment was administered—69 percent of students met language arts proficiency, and 58 percent were proficient in mathematics.
- In 2015, when SBA was first administered, 48 percent of students met language arts proficiency; by 2017, the proficiency rate had increased to 50 percent.
- Hawai'i public school students are less proficient in mathematics than in language arts, with 41 percent meeting mathematics proficiency on new SBA tests in 2015, rising slightly to 42 percent in 2016 and 2017.

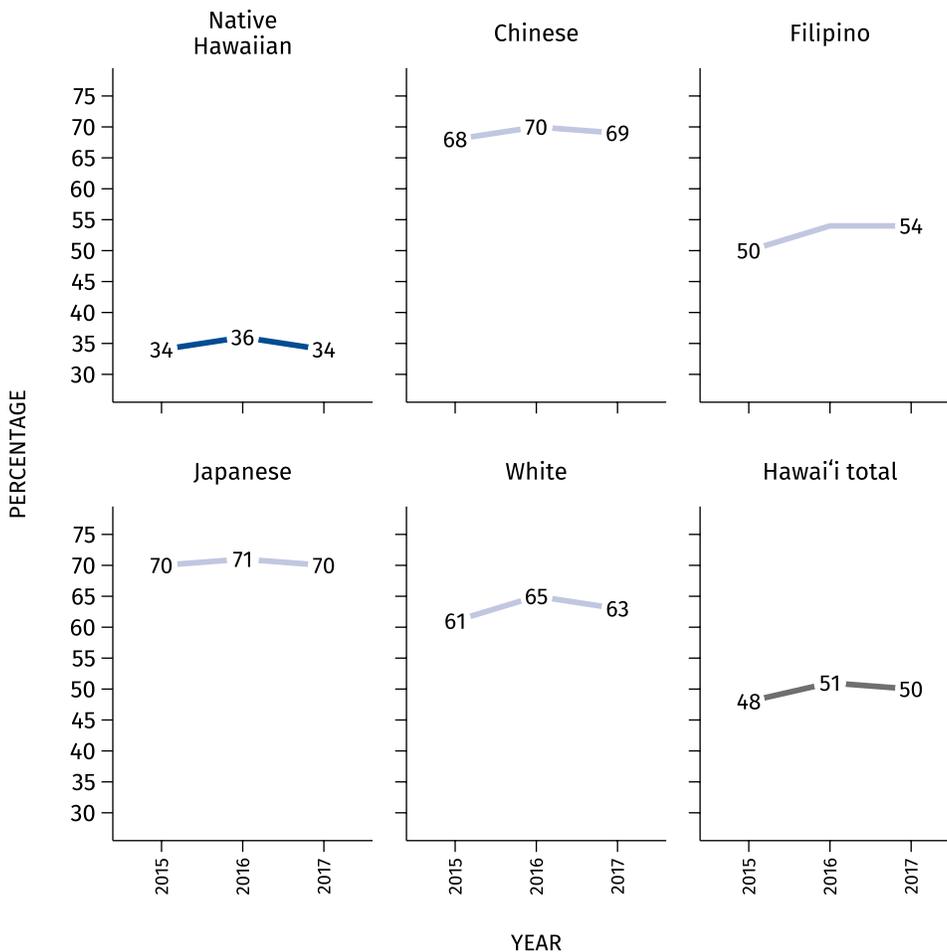
The intention of including figure 3.53 is not to compare the HSA and SBA tests, which use different methods to measure competency and proficiency standards. Rather, it is to acknowledge the changes in assessment that occurred in the Hawai'i DOE prior to 2015, which is the starting year for data presented in the analyses that follow. More importantly, we wish to highlight how the shift from HSA to SBA in reading and mathematics appears to correlate with abrupt changes in the percentage of students meeting proficiency. And although all students appear to have been impacted by the shift from HSA to SBA, internal analysis suggests that Native Hawaiian and Filipino students, compared with other ethnicities, were the most affected by the change in standardized tests (not shown).

Science achievement data are not presented in figure 3.53 because the science assessments did not change between 2013 and 2017 (students continued to take the HSA science tests, as there is no SBA for science). Any notable changes would have occurred in 2017, in which the KĀ'EO science test for kaiapuni elementary students was first administered, as well as the school-level alignment of NGSS standards to HSA tests. Our internal analyses did not show a shift in science proficiency that correlates with these changes (not shown).

## LANGUAGE ARTS PROFICIENCY

Among Hawai'i's major ethnic groups, Native Hawaiians have the lowest proficiency rates in language arts (fig. 3.54). In 2015, for example, 34 percent of Native Hawaiian students in public schools achieved language arts proficiency—14 percentage points lower than the Hawai'i total of all public school students in the same year. By 2017, the gap in language arts proficiency between Native Hawaiians and the Hawai'i total widened to 16 percentage points. When comparing across subject matter, overall proficiency rates in language arts are higher than they are in mathematics (see [fig. 3.58](#)).

**FIGURE 3.54** Trends in language arts proficiency among students in public schools  
[as a percentage of public school students, by ethnicity, Hawai'i, 2015 to 2017]



Data source: Hawai'i Department of Education, Hawai'i Data eXchange Partnership, DXP469 cross-section; prepared at the request of Kamehameha Schools

Note 1: The years displayed represent the end of a given school year; e.g., 2017 refers to school year 2016–17.

Note 2: These data include proficiency outcomes based on any standardized test at any grade level.

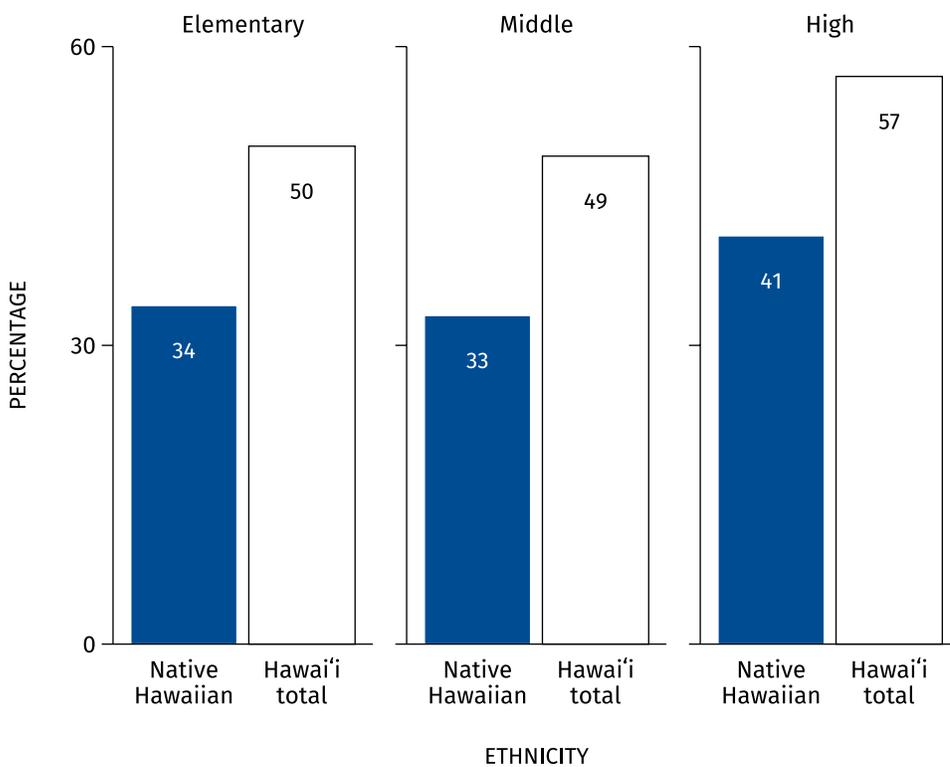
Note 3: Data labels are presented for the first and last points, the maximum and minimum points, and some inflection points where the trend changes.

- Compared with their peers in public schools, Native Hawaiian students have the lowest proficiency rates in language arts (34 percent), a rate that was relatively consistent from 2015 to 2017.
- For the Hawai'i total in 2017, half of all Hawai'i public school students (50 percent) were proficient in language arts—a slight increase (2 percentage points) from 2015 rates.
- With the exception of Filipino students, all of Hawai'i's major ethnicities showed a slight increase (less than 5 percentage points) in language arts proficiency between 2015 and 2016 and then dropped slightly (less than 3 percentage points) by 2017.

In looking at different school levels, high schoolers (Native Hawaiian and statewide) are the most likely to meet language arts proficiency, compared with students in lower grade levels. However, at each school level, a gap of 16 percentage points exists between Native Hawaiian students and the Hawai'i total (fig. 3.55).

**FIGURE 3.55** Language arts proficiency among elementary, middle, and high school students in public schools

[as a percentage of Native Hawaiian and all public school students, by school level, Hawai'i, 2017]



*Data source:* Hawai'i Department of Education, Hawai'i Data eXchange Partnership, DXP469 cross-section; prepared at the request of Kamehameha Schools

Note 1: 2017 refers to school year 2016–17.

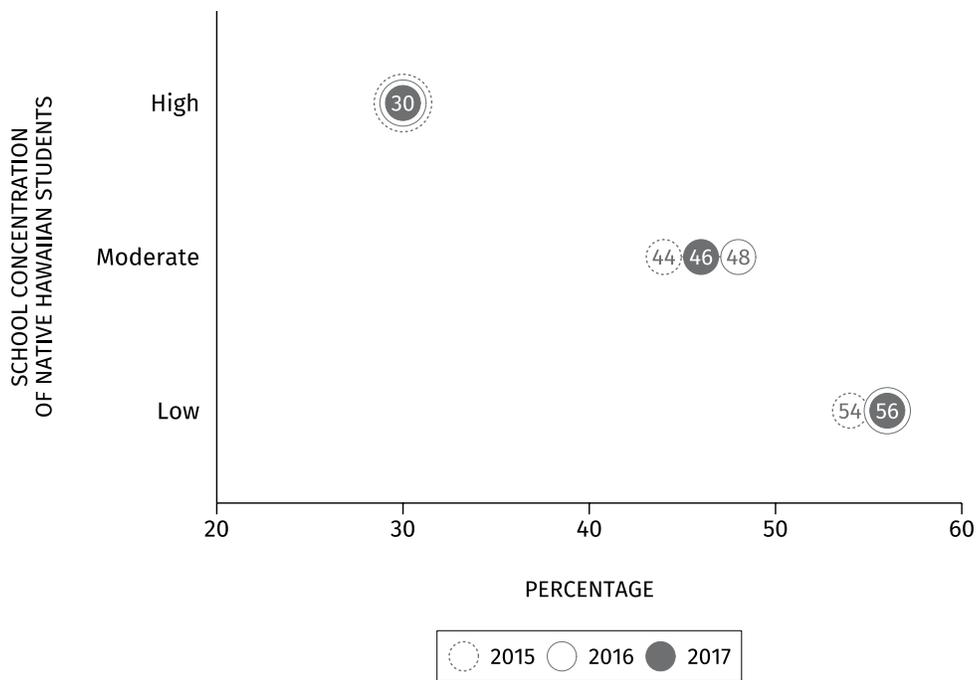
Note 2: These data include proficiency outcomes based on any standardized test at any grade level.

- Looking at language arts proficiency, a gap of 16 percentage points exists between Native Hawaiian students and the Hawai'i total across all school levels.
- Among Native Hawaiian students, proficiency rates in language arts are highest among high schoolers (41 percent), followed by elementary school students (34 percent) and middle schoolers (33 percent).
- For the Hawai'i total, more than half (57 percent) of public high schoolers are proficient in language arts—exceeding the proportion among elementary students (50 percent) and middle schoolers (49 percent).
- On the whole, Hawai'i public school students at all school levels are more proficient in language arts than they are in mathematics (see [fig. 3.59](#)).

Further data show that students in schools with a low concentration of Native Hawaiian students have comparatively high rates of language arts proficiency (fig. 3.56). For example, in 2017, more than half (56 percent) of all test takers in schools with low concentrations of Native Hawaiian students achieved proficiency in language arts, compared with 30 percent of test takers in high-concentration schools.

**FIGURE 3.56** Trends in language arts proficiency, by Native Hawaiian school concentration

[as a percentage of public school students who took the standardized test, by school concentration of Native Hawaiian students, Hawai'i, 2015 to 2017]



*Data source:* Hawai'i Department of Education, Hawai'i Data eXchange Partnership, DXP469 cross-section; prepared at the request of Kamehameha Schools

Note 1: The years displayed represent the end of a given school year; e.g., 2017 refers to school year 2016–17.

Note 2: The concentration of Native Hawaiian students, relative to the schools' total student population, is indicated by three levels tabulated specifically for this publication: Low: < 25%, Moderate: 25 to 50%, High: > 50%.

Note 3: These data include proficiency outcomes based on any standardized test at any grade level.

- Proficiency rates in language arts are consistently lower among test takers in schools with a high concentration of Native Hawaiian students, compared with test takers in schools with a low or moderate concentration of Native Hawaiian students.
- In 2015, 2016, and 2017, more than 50 percent of students in schools with a low concentration of Native Hawaiian students were proficient in language arts, compared with 30 percent of students attending schools with a high concentration of Native Hawaiian students.
- Among test takers in schools with a low or moderate concentration of Native Hawaiian students, language arts proficiency trended upward from 2015 to 2017; a different pattern is observed among test takers in schools with a high concentration of Native Hawaiian students, where language arts proficiency rates remained unchanged at 30 percent.

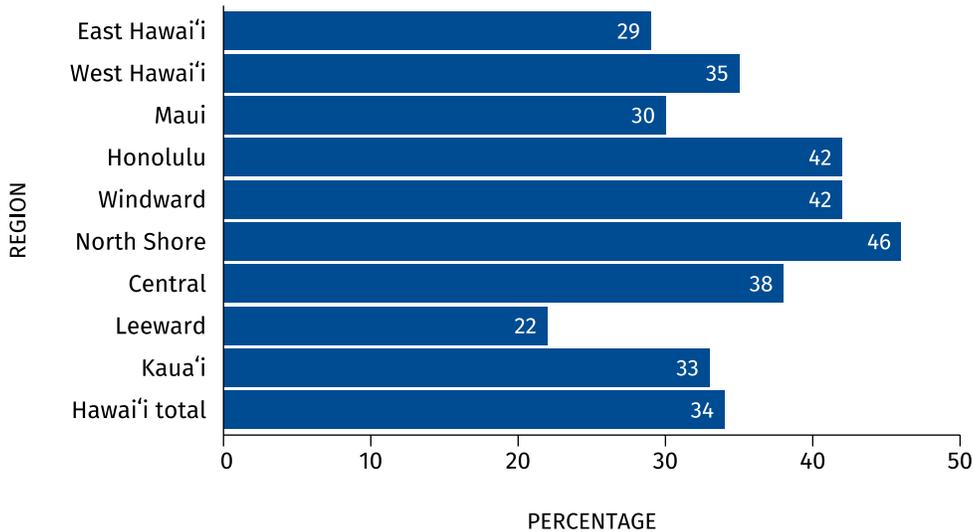
In 2017, the greatest disparities in language arts proficiency occurred among test takers at the elementary school level. Test takers at elementary schools with a low concentration of Native Hawaiian students had a 55 percent proficiency rate, compared with 28 percent among test takers at elementary schools with a high concentration of Native Hawaiian students. Such disparity persists among test takers at the high school level but to a lesser degree (not shown).

### **Language Arts Proficiency—Regional Highlights**

Among all Native Hawaiian test takers in Hawai'i, 34 percent are proficient in language arts. The North Shore region has the highest rate of language arts proficiency among Native Hawaiian students (46 percent)—12 percentage points higher than the Hawai'i total. For Native Hawaiian learners, the lowest rates of language arts proficiency are in Leeward (22 percent) and East Hawai'i (29 percent) (fig. 3.57).

**FIGURE 3.57** Language arts proficiency among Native Hawaiian students in public schools—regional comparison

[as a percentage of Native Hawaiian public school students, by region, Hawai'i, 2017]



Data source: Hawai'i Department of Education, Hawai'i Data eXchange Partnership, DXP469 cross-section; prepared at the request of Kamehameha Schools

Note 1: The years displayed represent the end of a given school year; e.g., 2017 refers to school year 2016–17.

Note 2: These data include proficiency outcomes based on any standardized test at any grade level.

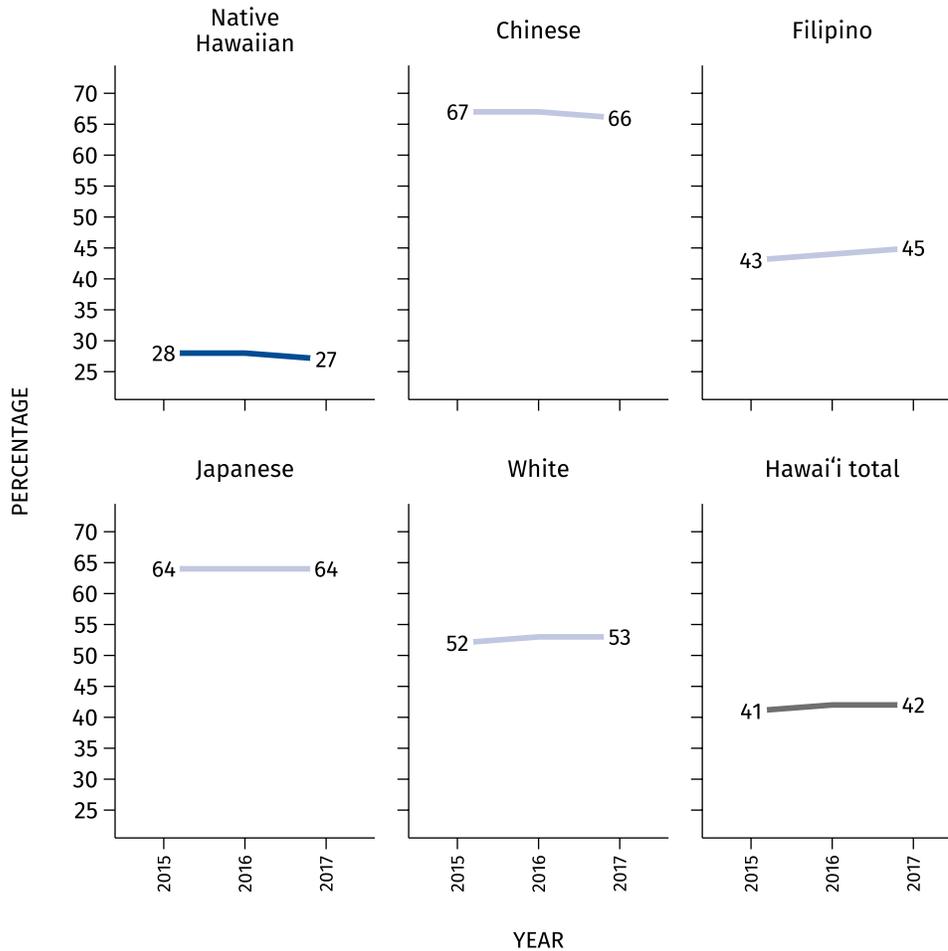
Note 3: Regional data refer to where the student is enrolled or graduated from, rather than where they live.

- Across regions, North Shore has the highest rate (46 percent) of Native Hawaiian public school students who are proficient in language arts.
- The Leeward region has the lowest rate of language arts proficiency among Native Hawaiian students in public schools (22 percent).

## MATHEMATICS PROFICIENCY

In general, Hawai'i public school students have lower proficiency rates in mathematics than they do in language arts (see [fig. 3.54](#)). Among Native Hawaiian learners in particular, mathematics proficiency rates are relatively low. For example, between 2015 and 2017, Native Hawaiians persistently exhibited the lowest mathematics proficiency rates of all major ethnicities in Hawai'i. In 2017, just 27 percent of Native Hawaiian test takers achieved math proficiency—18 percentage points below the rate of Filipino students, who had the second-lowest scores ([fig. 3.58](#)).

**FIGURE 3.58** Trends in mathematics proficiency among students in public schools  
[as a percentage of public school students, by ethnicity, Hawai'i, 2015 to 2017]



*Data source:* Hawai'i Department of Education, Hawai'i Data eXchange Partnership, DXP469 cross-section; prepared at the request of Kamehameha Schools

Note 1: The years displayed represent the end of a given school year; e.g., 2017 refers to school year 2016–17.

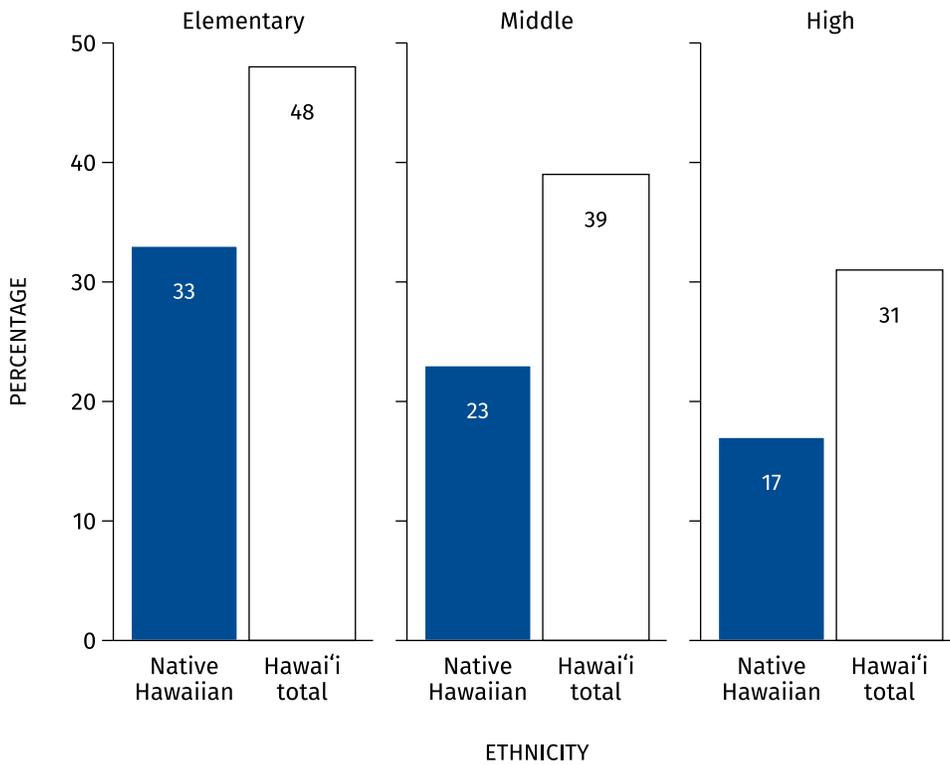
Note 2: These data include proficiency outcomes based on any standardized test at any grade level.

Note 3: Data labels are presented for the first and last points, the maximum and minimum points, and some inflection points where the trend changes.

- For the Hawai'i total in 2017, about two-fifths (42 percent) of public school students were proficient in mathematics.
- Among public school students in Hawai'i, Native Hawaiians have the lowest mathematics proficiency rates, while Chinese and Japanese students have the highest rates.
- Between 2015 and 2017, students from all major ethnicities in Hawai'i demonstrated little variation in mathematics proficiency.

Analysis by school level shows a higher proportion of Native Hawaiian elementary students meeting math proficiency (33 percent), compared with Native Hawaiian middle and high school students (23 and 17 percent, respectively). Across all three school levels, large gaps are evident between Native Hawaiians and the Hawai'i total: a 15 percentage point gap in elementary, a 16 percentage point gap in middle school, and a 14 percentage point gap in high school (fig. 3.59).

**FIGURE 3.59** Mathematics proficiency among elementary, middle, and high school students in public schools  
 [as a percentage of Native Hawaiian and all public school students, by school level, Hawai'i, 2017]



Data source: Hawai'i Department of Education, Hawai'i Data eXchange Partnership, DXP469 cross-section; prepared at the request of Kamehameha Schools

Note 1: 2017 refers to school year 2016–17.

Note 2: These data include proficiency outcomes based on any standardized test at any grade level.

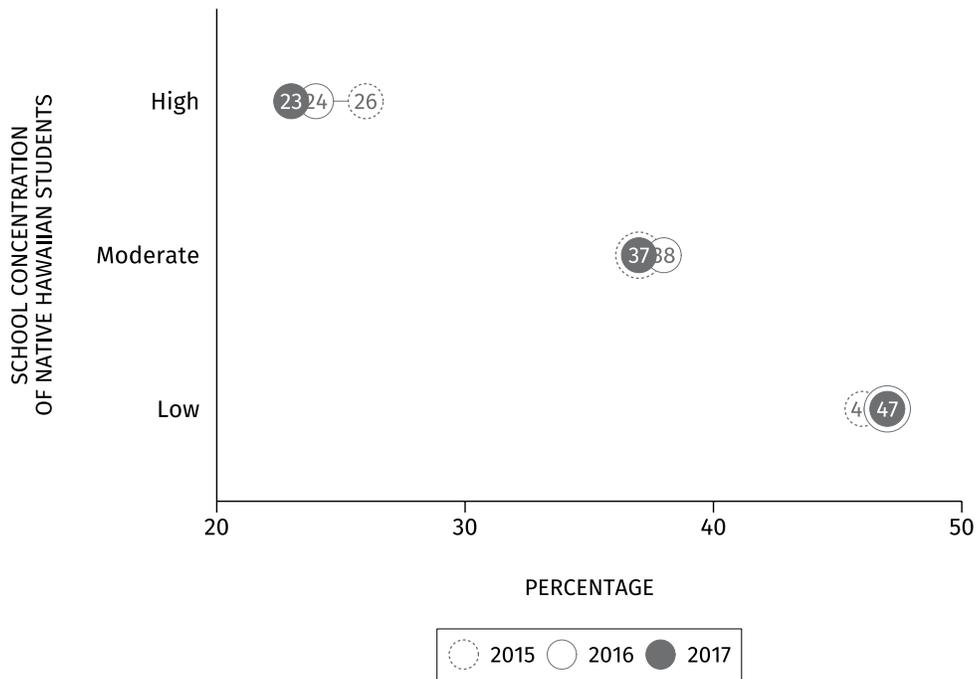
- For the Hawai'i total, nearly half (48 percent) of elementary students in Hawai'i public schools meet mathematics proficiency, followed by middle schoolers (39 percent) and high schoolers (31 percent).
- Among Native Hawaiians, one-third (33 percent) of elementary students are proficient in mathematics—a proportion that decreases among middle school students (23 percent) and high schoolers (17 percent).

- Across school levels, achievement gaps in mathematics proficiency between Native Hawaiians and the Hawai'i total range from 14 to 16 percentage points.
- On the whole, Hawai'i public school students at all school levels are less proficient in mathematics than they are in language arts (see [fig. 3.55](#)).

Over the three school years examined, mathematics proficiency rates were highest among schools with low concentrations of Native Hawaiians, followed by moderate- and high-concentration schools (fig. 3.60). Data also suggest a downward trend in math proficiency among schools with a high concentration of Native Hawaiian students, while lower-concentration schools appear to have increased between 2015 to 2017.

**FIGURE 3.60** Trends in mathematics proficiency, by Native Hawaiian school concentration

[as a percentage of public school students who took the standardized test, by school concentration of Native Hawaiian students, Hawai'i, 2015 to 2017]



*Data source:* Hawai'i Department of Education, Hawai'i Data eXchange Partnership, DXP469 cross-section; prepared at the request of Kamehameha Schools

Note 1: The years displayed represent the end of a given school year; e.g., 2017 refers to school year 2016–17.

Note 2: The concentration of Native Hawaiian students, relative to the schools' total student population, is indicated by three levels tabulated specifically for this publication: Low: < 25%, Moderate: 25 to 50%, High: > 50%.

Note 3: These data include proficiency outcomes based on any standardized test at any grade level.

- Proficiency rates in mathematics are consistently lower among test takers in schools with a high concentration of Native Hawaiian students, compared with test takers in schools with a low or moderate concentration of Native Hawaiian students.
- In 2017, nearly half (47 percent) of test takers in schools with a low concentration of Native Hawaiian students achieved mathematics proficiency, while only 23 percent of test takers in schools with a high concentration of Native Hawaiian students achieved proficiency.
- While data from 2015 to 2017 show a slight uptick (1 percentage point) in math proficiency among test takers in schools with a low concentration of Native Hawaiian students, proficiency rates among test takers in schools with a high concentration of Native Hawaiian students decreased by 3 percentage points during the same period.

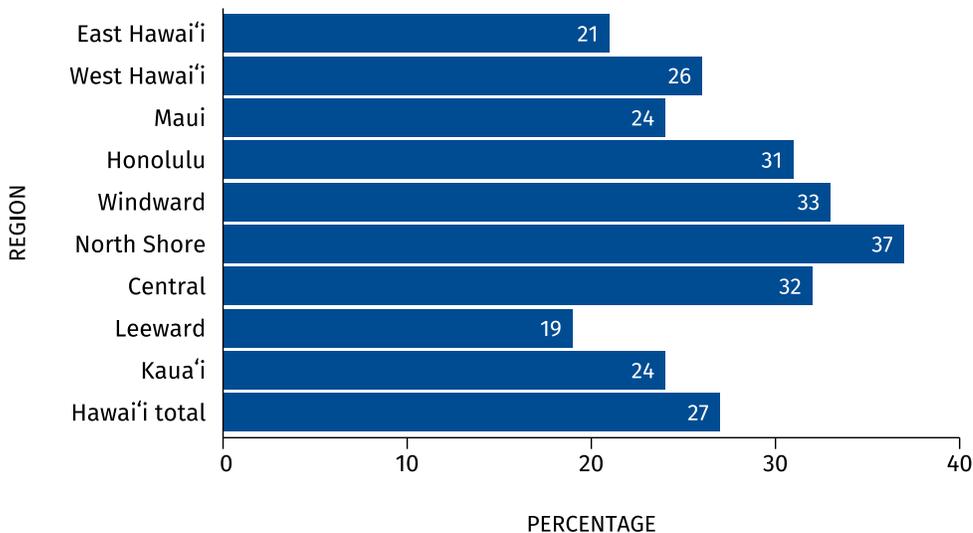
In 2017, the greatest disparities in mathematics proficiency occurred among test takers at the elementary school level. Test takers at elementary schools with low concentrations of Native Hawaiians had a 53 percent proficiency rate, compared with 26 percent of test takers at elementary schools with a high concentration of Native Hawaiian students. The same pattern holds true for high school students (not shown).

### Mathematics Proficiency—Regional Highlights

Regional patterns in mathematics proficiency are similar to those in language arts proficiency. The Hawai'i total shows that 27 percent of all Native Hawaiian public school test takers are proficient in mathematics. The North Shore region has the highest mathematics proficiency rates (37 percent) among Native Hawaiian students, while Leeward's rates are the lowest (19 percent) (fig. 3.61). On the whole, proficiency in mathematics is lower than language arts proficiency in every region (not shown).

**FIGURE 3.61** Mathematics proficiency among Native Hawaiian students in public schools—regional comparison

[as a percentage of Native Hawaiian public school students, by region, Hawai'i, 2017]



*Data source:* Hawai'i Department of Education, Hawai'i Data eXchange Partnership, DXP469 cross-section; prepared at the request of Kamehameha Schools

Note 1: The years displayed represent the end of a given school year; e.g., 2017 refers to school year 2016–17.

Note 2: These data include proficiency outcomes based on any standardized test at any grade level.

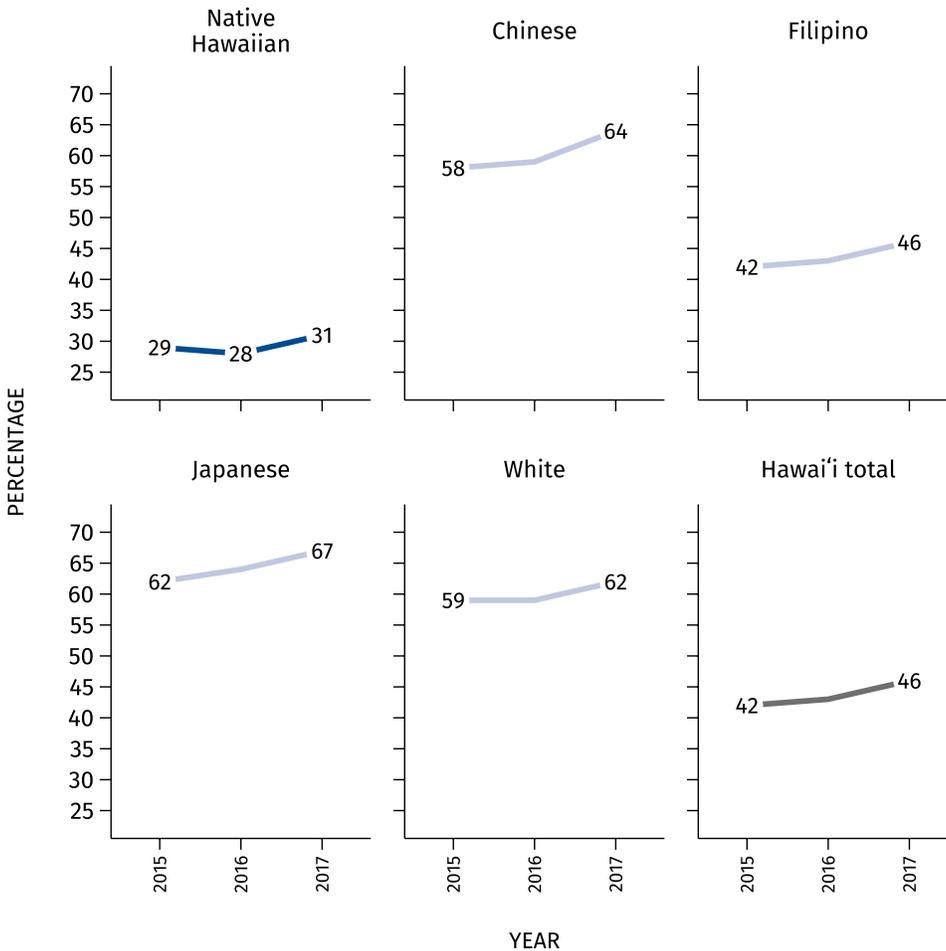
Note 3: Regional data refer to where the student is enrolled or graduated from, rather than where they live.

- Comparing regions, North Shore has the highest proportion (37 percent) of Native Hawaiian public school students who are proficient in mathematics.
- Among Native Hawaiian public school students in the Leeward region, 19 percent are proficient in mathematics—the lowest rate across regions.

### SCIENCE PROFICIENCY

Consistent with results of other standardized tests, proficiency rates in science among Native Hawaiian students were the lowest of the major ethnic groups in Hawai'i (fig. 3.62). However, data also show a slight increase (2 percentage points) in science proficiency rates for Native Hawaiian students between 2015 and 2017. Upward trends in science proficiency are also observed for all major ethnicities in Hawai'i.

**FIGURE 3.62** Trends in science proficiency among students in public schools [as a percentage of public school students, by ethnicity, Hawai'i, 2015 to 2017]



Data source: Hawai'i Department of Education, Hawai'i Data eXchange Partnership, DXP469 cross-section; prepared at the request of Kamehameha Schools

Note 1: The years displayed represent the end of a given school year; e.g., 2017 refers to school year 2016–17.

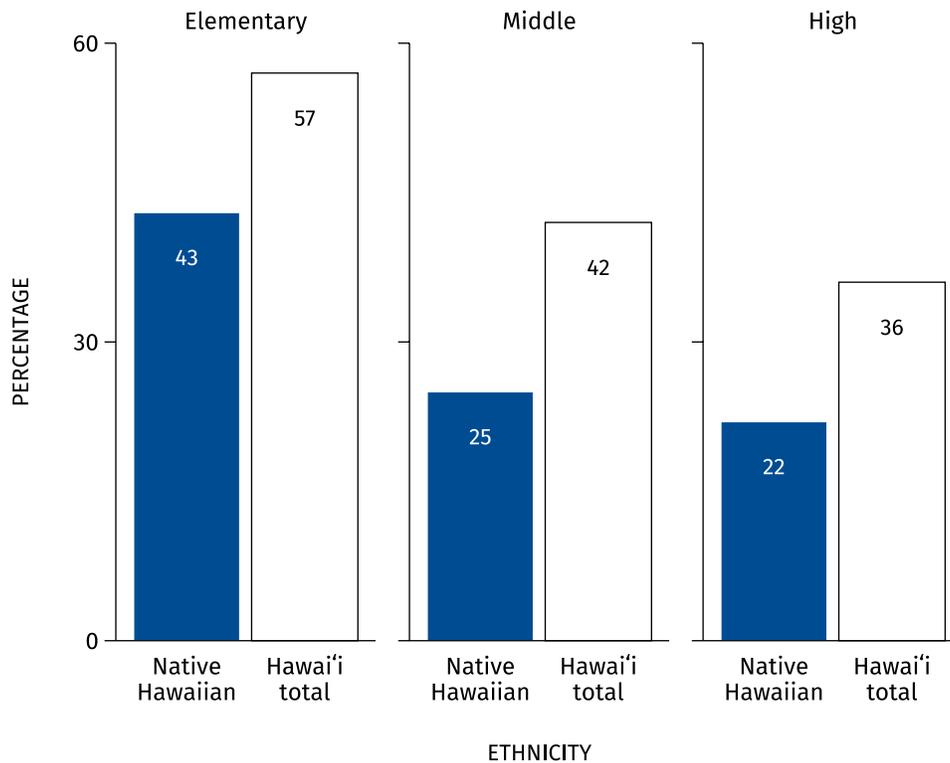
Note 2: These data include proficiency outcomes based on any standardized test at any grade level; the KĀ'EO science assessment was introduced for kaiapuni elementary students in 2016.

Note 3: Data labels are presented for the first and last points, the maximum and minimum points, and some inflection points where the trend changes.

- For the Hawai'i total in 2017, nearly half (46 percent) of all test takers in public schools were proficient in science.
- Compared with their peers, Native Hawaiian students were the least proficient in science between 2015 and 2017; for example, in 2017, fewer than one-third (31 percent) of Native Hawaiians were proficient in science—15 percentage points below the Hawai'i total (46 percent).
- Students from all of Hawai'i's major ethnicities demonstrated increases in science proficiency between 2015 and 2017.

A comparison of science proficiency among school levels suggests that more than two-fifths (43 percent) of Native Hawaiian elementary students are proficient in science—a considerably higher proportion than that of Native Hawaiian middle and high schoolers. Similar to results in language arts and mathematics, large gaps exist between Native Hawaiian students and the Hawai'i total across school levels, with the biggest gap (17 percentage points) in middle school (fig. 3.63).

**FIGURE 3.63** Science proficiency among elementary, middle, and high school students in public schools [as a percentage of Native Hawaiian and all public school students, by school level, Hawai'i, 2017]



Data source: Hawai'i Department of Education, Hawai'i Data eXchange Partnership, DXP469 cross-section; prepared at the request of Kamehameha Schools

Note 1: 2017 refers to school year 2016–17.

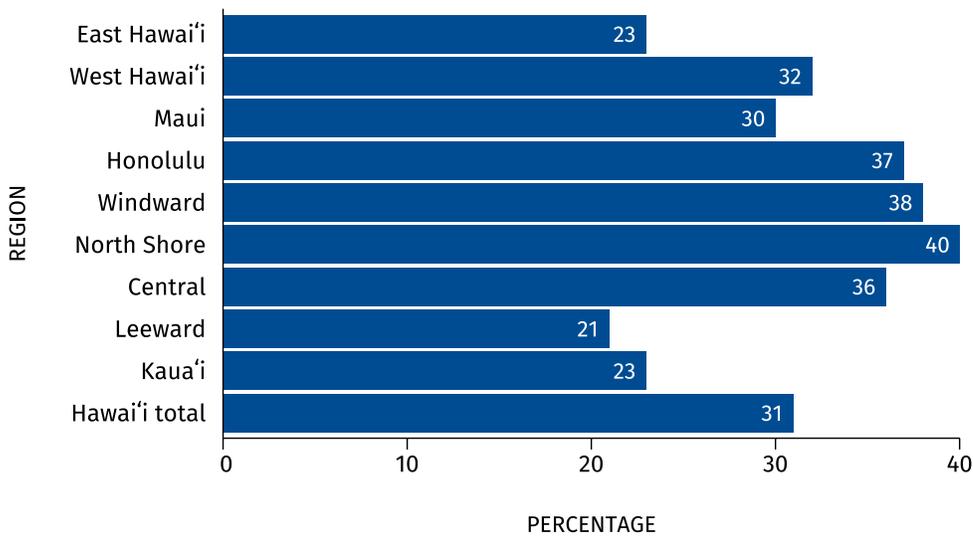
Note 2: These data include proficiency outcomes based on any standardized test at any grade level; the KĀ'EO science assessment was introduced for kaiapuni elementary students in 2016.

- All school levels show notable achievement gaps in science proficiency between Native Hawaiian students and the Hawai'i total, with the largest gap among middle schoolers (17 percentage points).
- Similar to results for math proficiency, the proportion of Native Hawaiian students who are proficient in science is higher in elementary (43 percent) and middle school (25 percent) than it is in high school (22 percent).
- For the Hawai'i total, nearly three-fifths (57 percent) of elementary students in Hawai'i public schools are proficient in science.

### Science Proficiency—Regional Highlights

Among Native Hawaiian students across all regions, the Hawai'i total for science proficiency is 31 percent. On the whole, regional patterns of science proficiency among Native Hawaiian students are somewhat similar to those of language arts and mathematics, with the highest rates (40 percent) in the North Shore region and the lowest rates (21 percent) in Leeward (fig. 3.64). Science proficiency rates for Native Hawaiian students on Kaua'i (23 percent) are 8 percentage points lower than the Hawai'i total, whereas Kaua'i's rates of proficiency in language arts are just 1 percentage point below the Hawai'i total (see fig. 3.57) and just 3 percentage points lower than the Hawai'i total for mathematics (see fig. 3.61).

**FIGURE 3.64** Science proficiency among Native Hawaiian students in public schools—regional comparison



[as a percentage of Native Hawaiian public school students, by region, Hawai'i, 2017]

*Data source:* Hawai'i Department of Education, Hawai'i Data eXchange Partnership, DXP469 cross-section; prepared at the request of Kamehameha Schools

Note 1: The years displayed represent the end of a given school year; e.g., 2017 refers to school year 2016–17.

Note 2: These data include proficiency outcomes based on any standardized test at any grade level; the KĀ'EO science assessment was introduced for kaiapuni elementary students in 2016.

Note 3: Regional data refer to where the student is enrolled or graduated from, rather than where they live.

- Across regions in 2017, North Shore had the highest proportion (40 percent) of Native Hawaiian public school students who are proficient in science—a finding that is consistent with results from 2013 to 2016 (not shown).
- Comparing regions, Leeward has the lowest rate (21 percent) of Native Hawaiian students who are proficient in science.
- East Hawai'i and Kaua'i also have relatively low rates of science proficiency among Native Hawaiian students (23 percent), compared with the Hawai'i total (31 percent).

## Student Persistence and Timely High School Completion

The Hawai'i DOE posits that students who earn a high school diploma meet the vision of a Hawai'i public school graduate (Hawai'i Department of Education, Student Success Indicator, n.d.[h]), and are able to

- Realize their individual goals and aspirations
- Possess the attitudes, knowledge, and skills necessary to contribute positively to and compete in a global society
- Exercise the rights and responsibilities of citizenship
- Pursue postsecondary education and/or careers without need for remediation

Completing high school is a significant milestone that increases opportunities for higher educational and economic success such as greater employment prospects and earnings. Conversely, students who drop out of high school face higher chances of being arrested, using illicit substances, relying on government assistance, being fired from employment, and battling adverse health outcomes, including premature death (Lansford et al. 2016; US Department of Health and Human Services 2020b; Wong et al. 2002; Rumberger 2013; Lee-St. John et al. 2018). High school dropouts also pose costs for society—each US high school dropout accounts for an estimated \$163,000 in lost tax revenue over a lifetime (Rumberger and Losen 2016). For these reasons and more, considerable efforts are made to keep students engaged in school (i.e., persisting through school) and to identify early warning signs of disengagement (e.g., absenteeism).

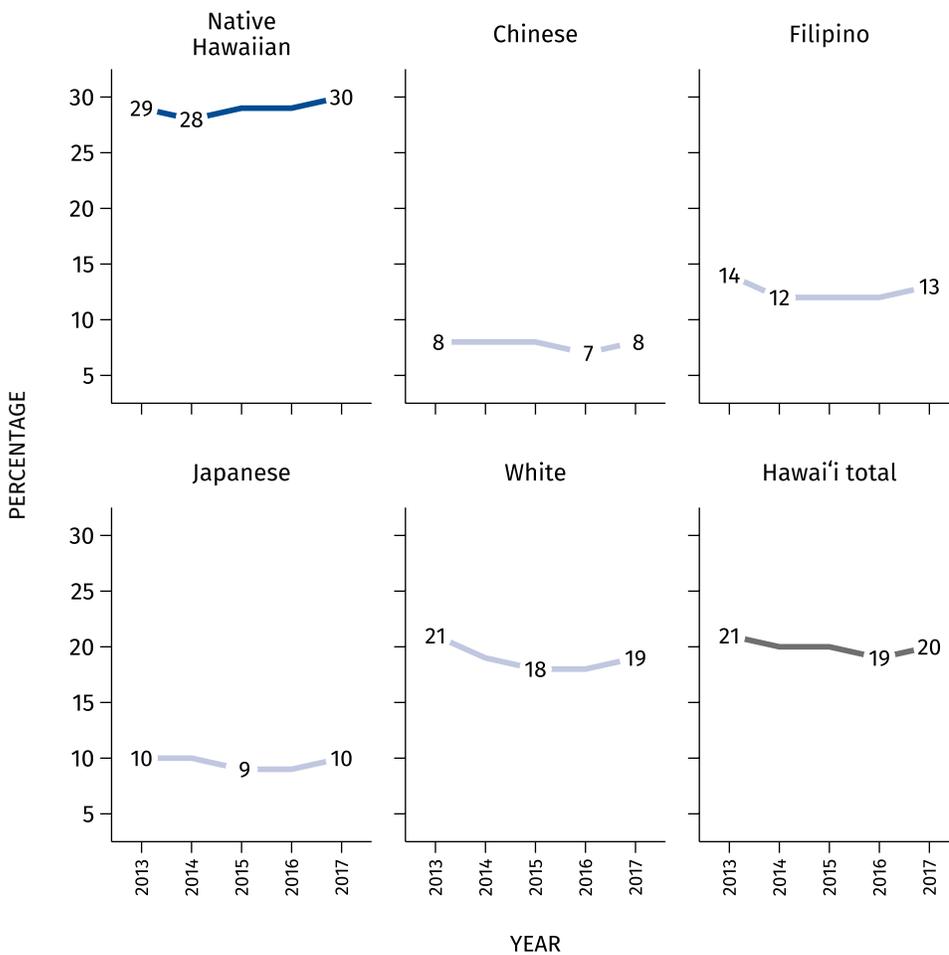
In this section, we examine Hawai'i DOE student persistence using two measures that serve as proxies for engagement and persistence: chronic absenteeism and grade retention (or in-grade retention). We also present dropout rates among Hawai'i public school students and conclude with timely high school completion rates.

### CHRONIC ABSENTEEISM

The US Department of Education defines chronic absenteeism as fifteen or more days absent within a school year. Absenteeism may be the result of a number of factors such as health issues, limited transportation, or lack of safety (US Department of Education 2019b). Whether voluntary or involuntary, absences from school erode a student's sense of belonging and jeopardize their progress along the educational journey (Lim et al. 2019; Conry and Richards 2018; Gee 2018). Consistent chronic absenteeism has deleterious effects, often resulting in failure to complete schooling (Coelho et al. 2015).

Our findings reveal that Native Hawaiian students exhibit the highest chronic absenteeism rates in Hawai'i, relative to other ethnicities. Rates of chronic absenteeism have remained largely consistent among Hawai'i's major ethnic groups from 2013 to 2017 (fig. 3.65). Recent research (Uchima and Grennon 2018) suggests that asthma is a primary contributor to absenteeism among Hawai'i students, especially for Native Hawaiians.

**FIGURE 3.65** Trends in chronic absenteeism among students in public schools [as a percentage of public school students, by ethnicity, Hawai'i, 2013 to 2017]



Data source: Hawai'i Department of Education, Hawai'i Data eXchange Partnership, DXP469 cross-section; prepared at the request of Kamehameha Schools

Note 1: The years displayed represent the end of a given school year; e.g., 2017 refers to school year 2016–17.

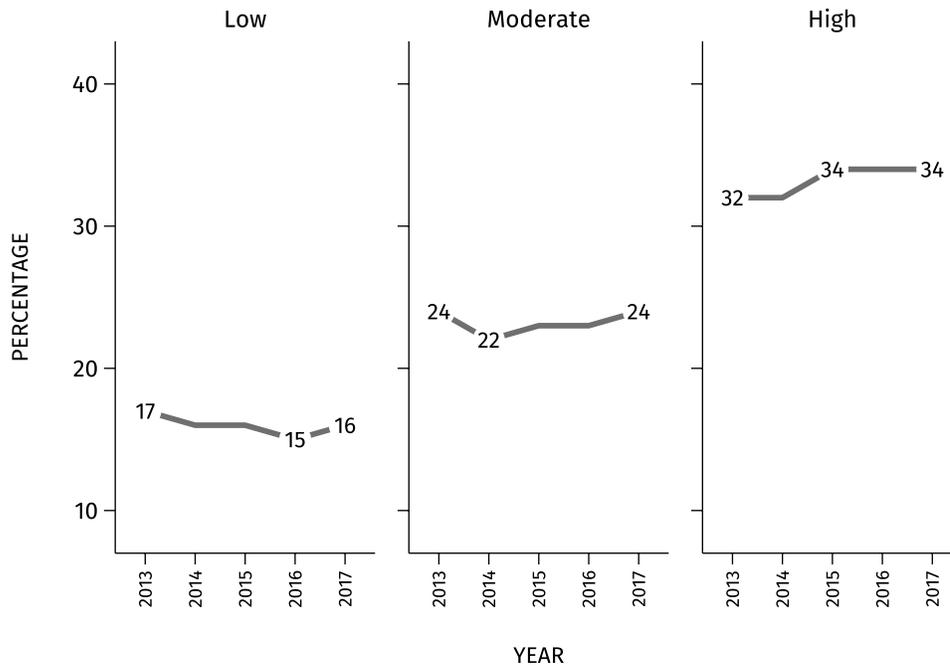
Note 2: Chronic absenteeism is defined as missing fifteen or more days of school during the academic year.

Note 3: Data labels are presented for the first and last points, the maximum and minimum points, and some inflection points where the trend changes.

- From 2013 to 2017, rates of chronic absenteeism in Hawai'i were relatively consistent and hovered around 20 percent for the Hawai'i total.
- Relative to other ethnicities, Native Hawaiian students are the most likely to be chronically absent, with a rate of 30 percent in 2017—10 percentage points higher than the Hawai'i total.

Between 2013 and 2017, schools with high concentrations of Native Hawaiian students were more likely than low- and moderate-concentration schools to report high rates of chronic absenteeism (fig. 3.66). For example, in 2017, schools with a high concentration of Native Hawaiian students reported a chronic absenteeism rate of 34 percent, while low-concentration schools reported a rate of 16 percent. Between 2013 and 2017, chronic absenteeism rates decreased by 1 percentage point for schools with a low concentration of Native Hawaiian students, remained the same (24 percent) for moderate-concentration schools, and increased by 2 percentage points for high-concentration schools.

**FIGURE 3.66** Trends in chronic absenteeism, by Native Hawaiian school concentration  
 [as a percentage of public school students, by school concentration of Native Hawaiian students, Hawai'i, 2013 to 2017]



*Data source:* Hawai'i Department of Education, Hawai'i Data eXchange Partnership, DXP469 cross-section; prepared at the request of Kamehameha Schools

Note 1: The years displayed represent the end of a given school year; e.g., 2017 refers to school year 2016–17; data labels are presented for the first and last points, the maximum and minimum points, and some inflection points where the trend changes.

Note 2: The concentration of Native Hawaiian students, relative to the schools' total student population, is indicated by three levels tabulated specifically for this publication: Low: < 25%, Moderate: 25 to 50%, High: > 50%.

Note 3: Chronic absenteeism is defined as missing fifteen or more days of school during the academic year.

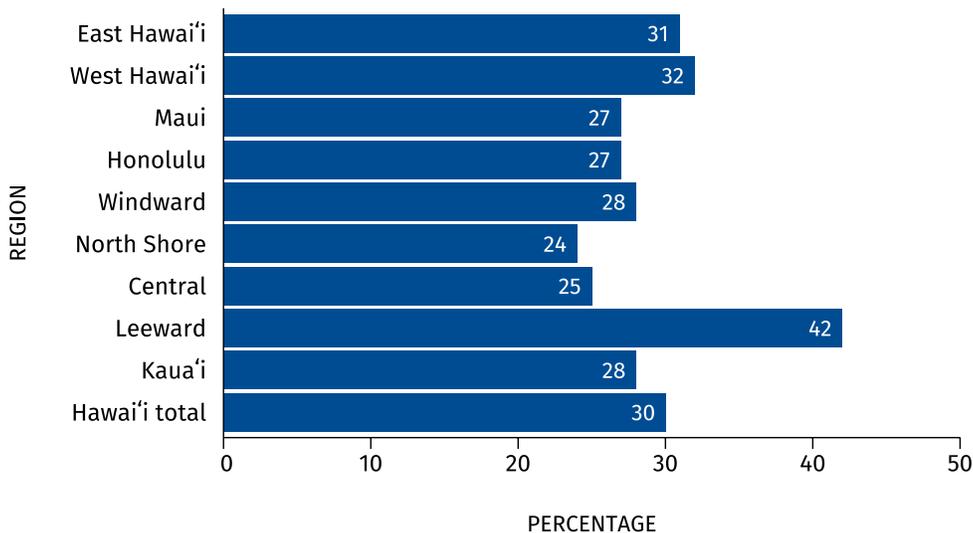
- In 2017, chronic absenteeism was more than twice as prevalent among students in schools with high concentrations of Native Hawaiian students (34 percent) as it was in schools with a low concentration of Native Hawaiian students (16 percent).
- Schools with a low concentration of Native Hawaiian students witnessed a slight decrease in chronic absenteeism, declining from 17 to 16 percent between 2013 and 2017), while schools with high concentrations of Native Hawaiian students saw a slight increase, rising from 32 to 34 percent during the same period.

### Chronic Absenteeism—Regional Highlights

More than two-fifths (42 percent) of Native Hawaiian students in the Leeward region are chronically absent—the highest rate of chronic absenteeism across all regions and 12 percentage points higher than the Hawai'i total (fig. 3.67). The North Shore reported the lowest rates of chronic absenteeism among its Native Hawaiian students (24 percent), followed closely by Central (25 percent). All other regions show rates within 2 percentage points of the Hawai'i total.

**FIGURE 3.67** Chronic absenteeism among Native Hawaiian students in public schools—regional comparison

[as a percentage of Native Hawaiian public school students, by region, Hawai'i, 2017]



*Data source:* Hawai'i Department of Education, Hawai'i Data eXchange Partnership, DXP469 cross-section; prepared at the request of Kamehameha Schools

Note 1: The years displayed represent the end of a given school year; e.g., 2017 refers to school year 2016–17.

Note 2: Chronic absenteeism is defined as missing fifteen or more days of school during the academic year.

Note 3: Regional data refer to where the student is enrolled or graduated from, rather than where they live.

- Comparing Native Hawaiian students across regions, Leeward has the highest prevalence of chronic absenteeism (42 percent)—a rate that is 10 percentage points higher than the second-highest rate in West Hawai'i.
- The North Shore region reported the lowest percentage of chronic absenteeism among Native Hawaiian students (24 percent), just slightly below that of the Central region (25 percent).

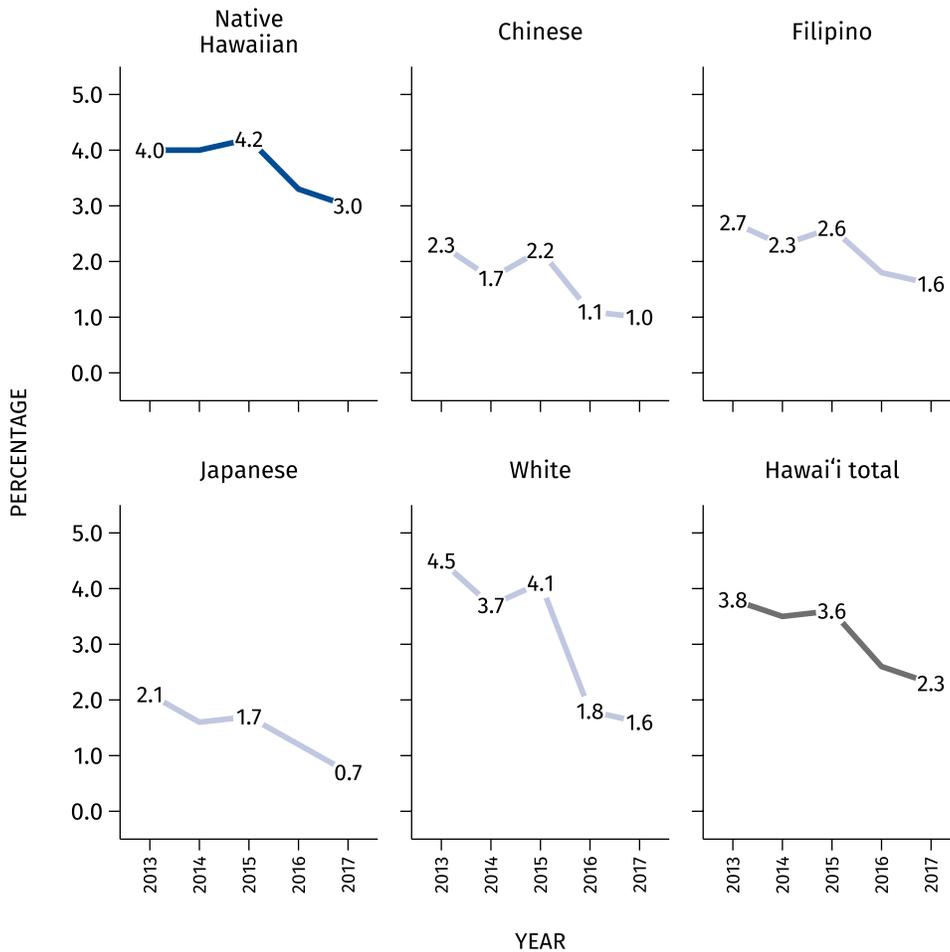
## GRADE RETENTION

Grade retention (i.e., when students repeat a particular grade, also known as being “held back”) ebbed during years of social promotion in the latter decades of the twentieth century but witnessed a resurgence during the years of No Child Left Behind and high-stakes testing (Jimerson and Renshaw 2012; Tingle, Schoenberger, and Algozzine 2012). Some advocates note that repeating a grade gives learners additional time to develop the necessary skills to move to the next grade level. Others have pointed to a well-established body of research showing that grade retention can lead to behavioral problems and increased high school dropout rates.

Research has further shown that grade retention can have different effects, depending on grade level. For example, students who are retained in middle school have increased likelihood of dropping out of high school when they surpass what would have been their on-time graduation year—a finding that was not the case for those who were retained in early grades (Mariano, Martorell, and Berglund 2018). Additional research shows that students retained in early grades (e.g., third grade) performed better academically than did their peers who were not retained. The study also found that students retained in early grades were comparatively less likely to be retained in a later grade. The benefits of their retention lose significance as they progress through school, effectively becoming insignificant by seventh grade (West 2012).

In Hawai‘i, Native Hawaiians and Whites exhibit the highest rates of grade retention among the major ethnic groups (fig. 3.68). However, all major ethnic groups witnessed decreases in retention rates over the five-year period examined. Grade retention was highest for Native Hawaiians in 2015, reaching 4.2 percent, before dropping to its lowest rate of 3.0 in 2017.

**FIGURE 3.68** Trends in grade retention among public school students  
 [as a percentage of public school students, by ethnicity, Hawai'i, 2013 to 2017]



Data source: Hawai'i Department of Education, Hawai'i Data eXchange Partnership, DXP469 cross-section; prepared at the request of Kamehameha Schools

Note 1: The years displayed represent the end of a given school year; e.g., 2017 refers to school year 2016–17.

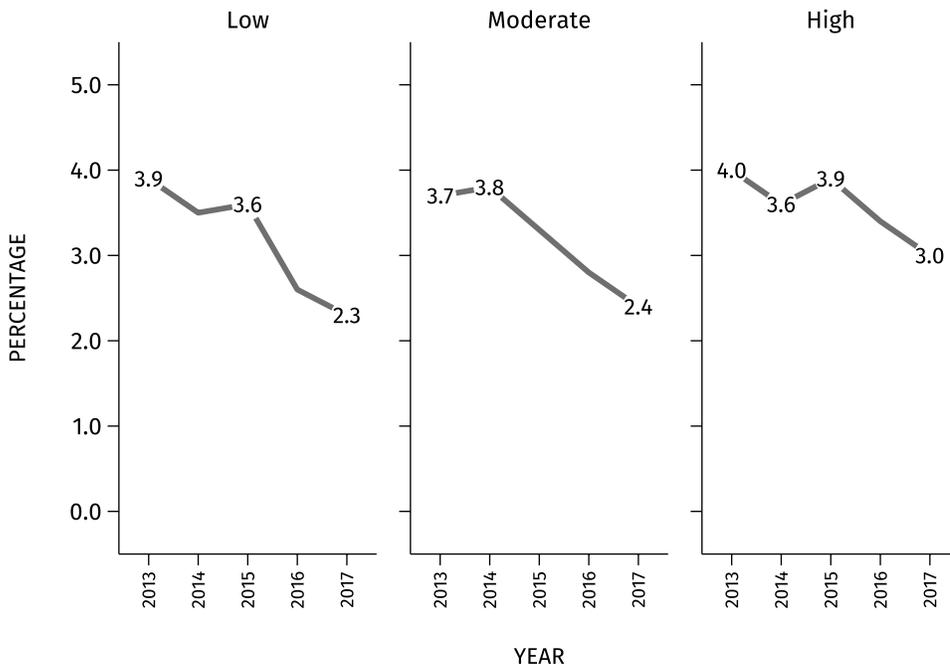
Note 2: Data labels are presented for the first and last points, the maximum and minimum points, and some inflection points where the trend changes.

- For the Hawai'i total, 2.3 percent of public school students were retained in 2017.
- In 2017, Native Hawaiian students were the most likely of Hawai'i's major ethnic groups to be retained (3.0 percent), while Japanese (0.7 percent) and Chinese (1.0 percent) students were the least likely.
- From 2013 to 2017, students from all ethnicities experienced a downward trend in grade retention, ranging from 1 to nearly 3 percentage points.
- High schoolers generally have higher rates of grade retention, compared with students in lower grades (not shown).

Schools with low, moderate, and high concentrations of Native Hawaiian students exhibited grade retention rates between 2 and 4 percent between 2013 and 2017 and showed a downward trend in grade retention from 2015 to 2017 (fig. 3.69).

**FIGURE 3.69** Trends in grade retention, by Native Hawaiian school concentration

[as a percentage of public school students, by school concentration of Native Hawaiian students, Hawai'i, 2013 to 2017]



Data source: Hawai'i Department of Education, Hawai'i Data eXchange Partnership, DXP469 cross-section; prepared at the request of Kamehameha Schools

Note 1: The years displayed represent the end of a given school year; e.g., 2017 refers to school year 2016–17.

Note 2: The concentration of Native Hawaiian students, relative to the schools' total student population, is indicated by three levels tabulated specifically for this publication: Low: < 25%, Moderate: 25 to 50%, High: > 50%.

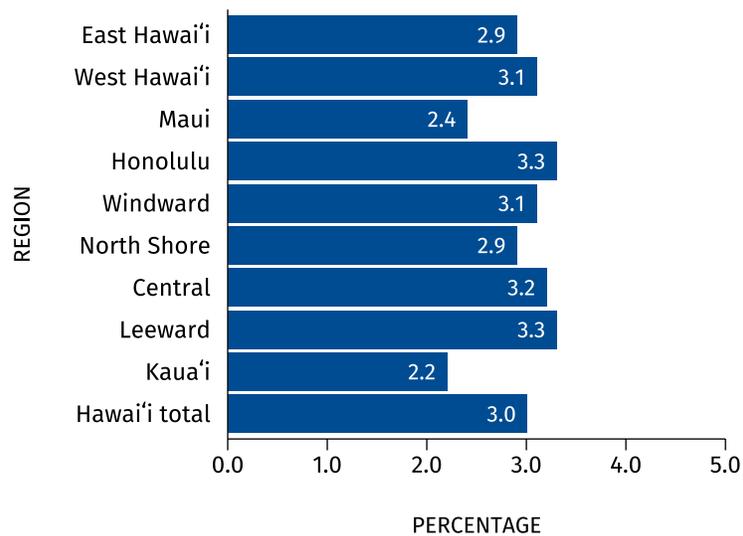
Note 3: Data labels are presented for the first and last points, the maximum and minimum points, and some inflection points where the trend changes.

- Rates of grade retention decreased among schools with low, moderate, and high concentrations of Native Hawaiian students.
- In 2017, the difference between grade retention rates in schools with low concentrations of Native Hawaiian students (2.3 percent) and schools with high concentrations of Native Hawaiian students (3.0 percent) was less than 1 percentage point.
- Economically disadvantaged students are more likely than their peers to be retained in grade, regardless of the school's concentration of Native Hawaiian students (not shown).
- In 2017, there was little difference in retention rates of students in elementary schools with low, moderate, and high concentrations of Native Hawaiian students (not shown).

### Grade Retention—Regional Highlights

For Native Hawaiians, grade retention rates fluctuate across regions. As of 2017, the lowest rates of Native Hawaiian students retained were on Kaua'i (2.2 percent) and Maui (2.4 percent), while Honolulu and Leeward had the highest rates (3.3 percent each) (fig. 3.70). Between 2013 and 2017, no single region consistently had the highest or lowest rates of Native Hawaiian retention. For example, in 2013 Kaua'i had the highest rate of Native Hawaiian students retained (5.2 percent) but the lowest rate in 2016 (1.8 percent) (not shown).

**FIGURE 3.70** Grade retention among Native Hawaiian students in public schools—regional comparison  
[as a percentage of Native Hawaiian public school students, by region, Hawai'i, 2017]



*Data source:* Hawai'i Department of Education, Hawai'i Data eXchange Partnership, DXP469 cross-section; prepared at the request of Kamehameha Schools

Note 1: The years displayed represent the end of a given school year; e.g., 2017 refers to school year 2016–17.

Note 2: Regional data refer to where the student is enrolled or graduated from, rather than where they live.

- Across regions, rates of grade retention for Native Hawaiian students in public schools ranged from 2.2 to 3.3 percent.
- Compared with other regions in 2017, Kaua'i and Maui had the lowest proportion of Native Hawaiian students who were retained in grade.
- Between 2013 and 2017, rates of grade retention among Native Hawaiian students have fluctuated and do not show clear regional patterns (not shown).

## DROPOUT

According to the National Center for Education Statistics, 523,000 fifteen- to twenty-four-year-olds in the United States (4.7 percent) left school without obtaining a high school credential between 2016 and 2017 (McFarland et al. 2020). Research suggests a multitude of reasons for why students may miss classes, entire days of school, or drop out altogether (Liu and Loeb 2016), including physical or emotional health issues, family economic insecurity, and disengagement from the school community (Matthews 2009; Haaland 2017; Thurlow, Sinclair, and Johnson 2002). Dropping out of high school presents numerous barriers to well-being, including difficulties obtaining living-wage jobs, increased reliance on public assistance, higher engagement in crime, and increased risk of incarceration and feelings of depression (Liem, Dillon, and Gore 2001; Rumberger 2013; Ramsdal, Bergvik, and Wynn 2018).

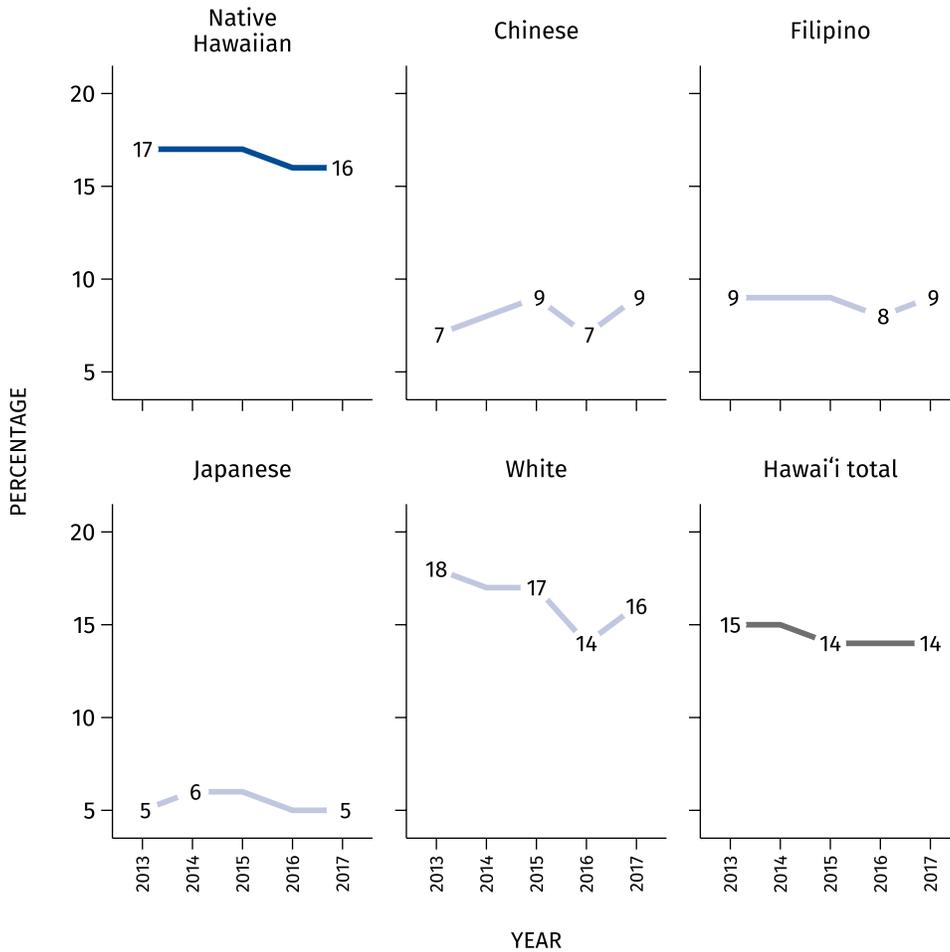
The dropout data presented below are based on five cohorts of students who began high school as ninth-graders in Hawai'i public schools and were expected to graduate four years later. Each cohort is identified by its anticipated year of graduation:

- 2013 cohort: entered high school in 2009, anticipated graduation in 2013
- 2014 cohort: entered high school in 2010, anticipated graduation in 2014
- 2015 cohort: entered high school in 2011, anticipated graduation in 2015
- 2016 cohort: entered high school in 2012, anticipated graduation in 2016
- 2017 cohort: entered high school in 2013, anticipated graduation in 2017

The term “dropout” refers to high school students who have not returned to school and have either officially exited or have an enrollment status that is undetermined (Hawai'i Department of Education 2020a). Dropout data therefore include students who formally withdrew from school and those who stopped attending without any formal notification.

Across Hawai'i, the 2013 cohort had the highest dropout rate (15 percent) compared with that of other cohorts (fig. 3.71). In comparing ethnicities, Native Hawaiian students across cohorts exhibit relatively high dropout rates, second only to Whites. Military status and mobility may partially explain the high percentage of White dropouts.

**FIGURE 3.71** Trends in the dropout rate among cohorts of public high school students  
 [by ethnicity and cohorts' anticipated year of graduation, Hawai'i, 2013 to 2017]



Data source: Hawai'i Department of Education, Hawai'i Data eXchange Partnership, DXP469 9th Grade Cohorts; prepared at the request of Kamehameha Schools

Note 1: In this context, a cohort is a group of students who started ninth grade together; the year refers to when the cohort was anticipated to graduate from high school.

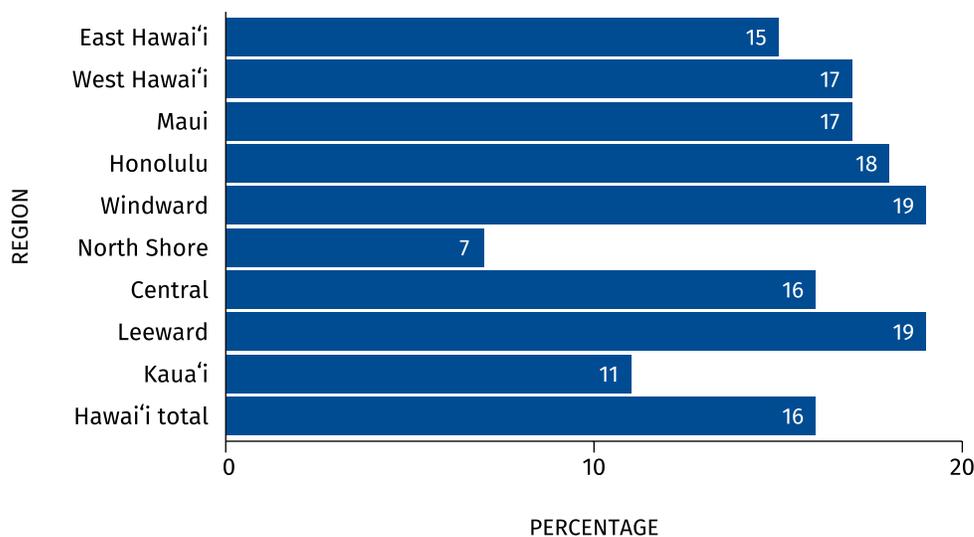
Note 2: Data labels are presented for the first and last points, the maximum and minimum points, and some inflection points where the trend changes.

- For the Hawai'i total, 14 percent of public high school students in the 2017 cohort dropped out before their anticipated graduation.
- Among Native Hawaiian high schoolers in the 2017 cohort, about one in six (16 percent) dropped out before their anticipated year of graduation.
- Across ethnicities and cohorts, dropout rates have been consistently highest among Native Hawaiian and White students, and lowest among Japanese students.

### Dropout—Regional Highlights

For Native Hawaiian students in the 2017 cohort, the Hawai'i total dropout rate was 16 percent (fig. 3.72). Windward and Leeward had the highest dropout rate for Native Hawaiians (19 percent), while North Shore had the lowest, at 7 percent. From 2013 to 2017, the highest dropout rate among Native Hawaiian students occurred in Leeward in 2013, with 24 percent (not shown).

Figure 3.72 Dropout rates among Native Hawaiian public high school students—regional comparison [as a percentage of Native Hawaiian students in the 2017 cohort of high school students, by region, Hawai'i, 2017]



*Data source:* Hawai'i Department of Education, Hawai'i Data eXchange Partnership, DXP469 9th Grade Cohorts; prepared at the request of Kamehameha Schools

Note 1: In this context, Native Hawaiian high schoolers are part of the 2017 cohort, which started high school as ninth-graders in 2014 and were anticipated to graduate in 2017.

Note 2: Regional data refer to where the student is enrolled or graduated from, rather than where they live.

- The Hawai'i total indicates a dropout rate of 16 percent of Native Hawaiian public school students in the 2017 cohort.
- Across regions, North Shore has the lowest dropout rate among Native Hawaiian students (7 percent), while Windward and Leeward have the highest rate (19 percent).
- Looking at cohorts over a five-year period, the Leeward region had the highest dropout rates among Native Hawaiian students between 2013 and 2017 (not shown).

## TIMELY HIGH SCHOOL COMPLETION

On-time high school graduation can be defined in multiple ways (Stetser and Stillwell 2014). For the purposes of *Ka Huaka'i*, on-time high school completion is defined as meeting graduation requirements within four years of beginning high school.<sup>10</sup> Our analysis examines on-time completion based on five cohorts of students who began high school as ninth-graders in Hawai'i public schools and were expected to graduate four years later. These five high school cohorts are the same as those presented above in the discussion on dropout rates. Each cohort is identified by its anticipated year of graduation. For example, the 2017 cohort includes students who entered high school in 2013 and were anticipated to graduate in 2017.

Nearly four out of five Native Hawaiians in the 2017 cohort (79 percent) graduated from high school on time (fig. 3.73). Compared with other major ethnicities across cohorts, Native Hawaiians are the least likely to graduate from high school on time, with rates that are slightly lower than those of White students. Conversely, Japanese and Chinese students exhibit the highest on-time completion rates for each cohort.

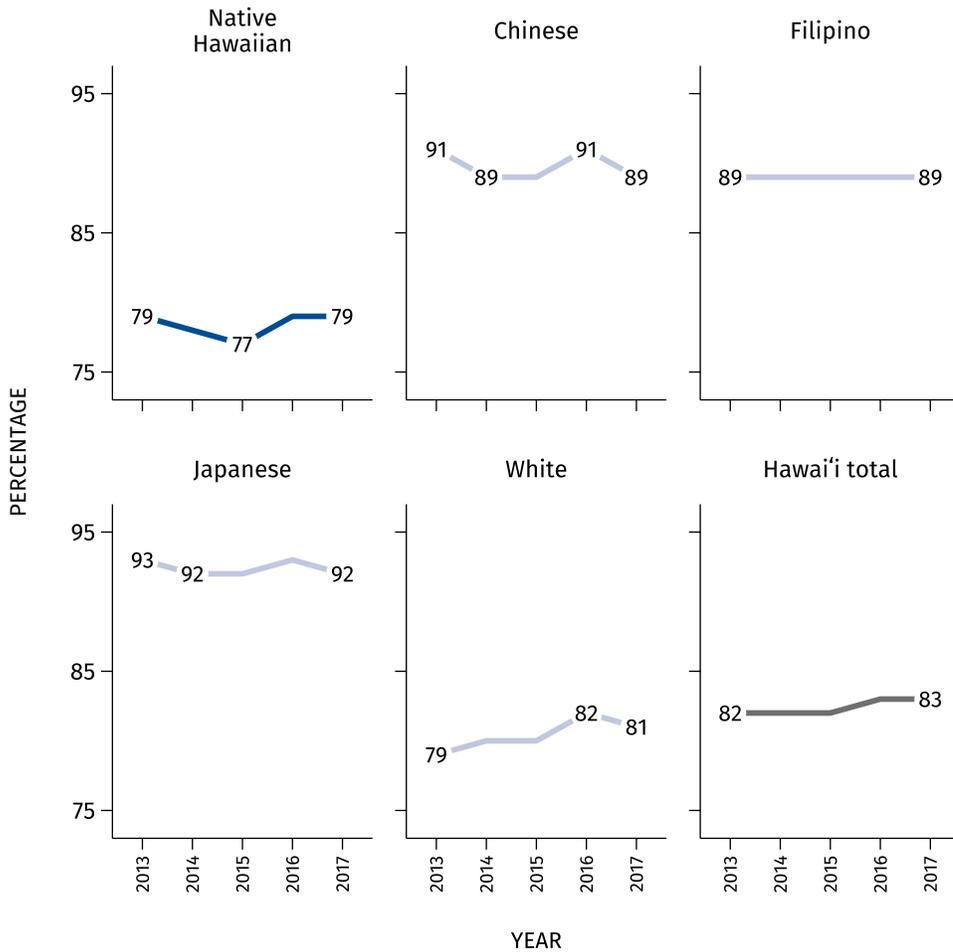


Compared with other regions, the North Shore has the highest proportion of Native Hawaiian students (91 percent) who graduate from high school on time (see page 482).

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<sup>10</sup> Cohort data include high schoolers who transferred to a different public school in Hawai'i and completed high school within four years. Data do not include students who transferred to a private school in Hawai'i or to an out-of-state high school.

**FIGURE 3.73** Trends in cohorts of public high school students graduating on time  
 [by ethnicity and cohorts' anticipated year of high school graduation, Hawai'i, 2013 to 2017]



Data source: Hawai'i Department of Education, Hawai'i Data eXchange Partnership, DXP469 9th Grade Cohorts; prepared at the request of Kamehameha Schools

Note 1: In this context, a cohort is a group of students who started ninth grade together; the year refers to when the cohort was anticipated to graduate from high school.

Note 2: Graduating on time means graduating within four years of starting ninth grade.

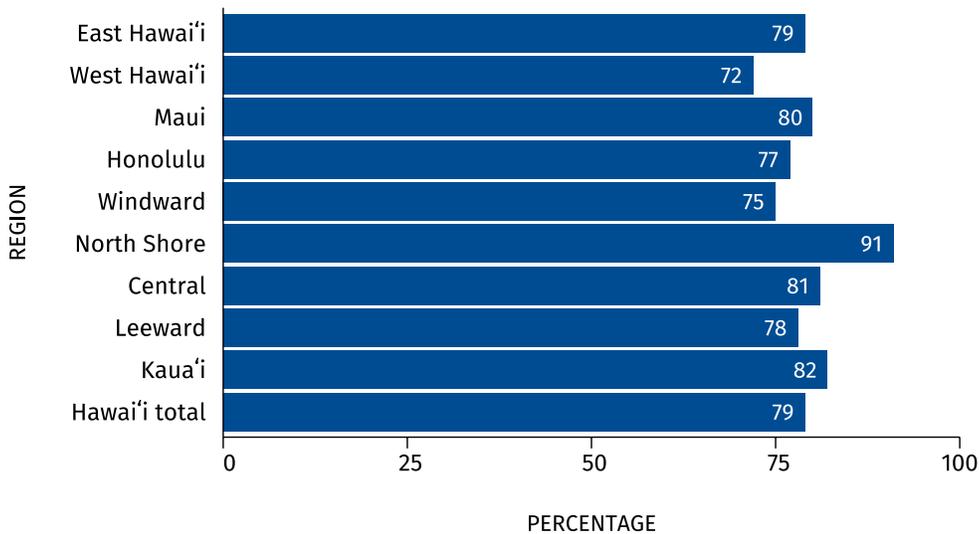
Note 3: Data labels are presented for the first and last points, the maximum and minimum points, and some inflection points where the trend changes.

- For the Hawai'i total, more than four out of every five high schoolers in the 2017 cohort (83 percent) graduated on time; a similar rate was observed among previous cohorts.
- Among Native Hawaiian high schoolers across cohorts, 77 to 79 percent of students graduated on time, representing the lowest rates among Hawai'i's major ethnicities.
- Across ethnicities and cohorts, Japanese students exhibited the highest on-time graduation rates (92 to 93 percent).

### Timely High School Completion—Regional Highlights

An examination of timely completion across regions reveals that in the 2017 cohort, North Shore had the highest proportion of Native Hawaiian students finishing high school on time (91 percent)—12 percentage points higher than the Hawai'i total of 79 percent (fig. 3.74). Compared with other regions, the North Shore also had the highest rates of Native Hawaiians graduating on time every year from 2014 to 2017, though West Hawai'i had the highest rate for the 2013 cohort, with 87 percent (not shown). In 2017, West Hawai'i had the lowest rate of any region, with 72 percent of Native Hawaiian public school students graduating on time.

**FIGURE 3.74** Native Hawaiian public high school students graduating on time—regional comparison [as a percentage of Native Hawaiian students in the 2017 cohort of high school students, by region, Hawai'i, 2017]



Data source: Hawai'i Department of Education, Hawai'i Data eXchange Partnership, DXP469 9th Grade Cohorts; prepared at the request of Kamehameha Schools

Note 1: In this context, Native Hawaiian high schoolers are part of the 2017 cohort, which started high school as ninth-graders in 2014 and were anticipated to graduate in 2017.

Note 2: Regional data refer to where the student is enrolled or graduated from, rather than where they live.

- Across all regions, about four in five Native Hawaiian high schoolers from the 2017 cohort graduated on time.
- Comparing regions, North Shore had the highest rate of on-time graduation (91 percent) among Native Hawaiians in the 2017 cohort—12 percentage points higher than the Hawai'i total.
- For the cohorts anticipated to graduate between 2013 and 2017, the North Shore region had the highest rate of on-time graduation among Native Hawaiian high schoolers for four out of five cohort years (not shown).

## College-Going Opportunities and College Completion

While postsecondary education is not yet accessible to all students, opportunities for higher learning today are more numerous than in generations past. Recent data suggest that college degree attainment is a common goal for many Hawai'i public school students.<sup>11</sup> For example, among all Hawai'i DOE graduates who earned their high school diploma on time in 2019, more than half (55 percent) enrolled in a postsecondary institution immediately after high school.<sup>12</sup> Of these, 21 percent enrolled in a two-year college, and 34 percent enrolled in a four-year institution (Hawai'i P-20 Partnerships for Education n.d.[a]).

The following section examines opportunities that promote college-going behavior and analyzes college completion data for students in the Hawai'i DOE system.<sup>13</sup> We first look at Hawai'i DOE student enrollment in advanced placement (AP) courses and dual credit programs.<sup>14</sup> Such courses provide opportunities for students to earn college credits while also satisfying their high school graduation requirements. AP and dual credit courses not only offer incentives to pursue postsecondary education but also orient students to the content, rigor, and pace of collegiate life. Despite research that questions course recruitment and enrollment practices (Solórzano and Ornelas 2002), course instruction and assessment methods (Wagner 2006), and gender, racial, and socioeconomic biases inherent in course content in AP and dual credit programs (Jensen 2020; Taylor 2015), both are generally perceived as supportive for promoting college access and attainment. In Hawai'i, enrollment in early college programs has grown considerably over the past decade (Hawai'i P-20 Partnerships for Education 2014).

The data for AP and dual credit enrollment presented below are based on five cohorts of students who began high school as ninth-graders in Hawai'i public schools and were expected to graduate four years later. These five high school cohorts are the same as those in the preceding discussion on dropout rates and timely graduation. Each cohort is identified by its anticipated year of high school graduation. For example, the 2013 cohort includes students who entered high school in 2009 and were anticipated to graduate in 2013.

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<sup>11</sup> See Chapter 1, "[Post-High School Decisions and Transitions](#)," for a brief discussion on non-college pathways.

<sup>12</sup> Immediate enrollment is defined as enrolling into a postsecondary institution in the first fall following high school graduation. Research tends to focus on first fall enrollment, as "students who enroll in college immediately after high school are more likely to receive a greater economic return over time than are those who delay enrollment" (Rowan-Kenyon 2007, 191).

<sup>13</sup> See Chapter 1 for a more comprehensive discussion of postsecondary outcomes for all Native Hawaiian students (not only those in the Hawai'i DOE system).

<sup>14</sup> We acknowledge that while enrollment offers a glimpse into the number of Hawai'i public school students who engage in AP and dual credit courses, it fails to tell us how many actually earn college credits. Further study on the latter is necessary for obtaining a more comprehensive view of Native Hawaiian postsecondary access and achievement.

We then turn to college completion data for Hawai'i DOE students who graduated from high school in 2012 to 2015. Unlike the cohorts for AP and dual credit enrollment, these data represent *actual* high school graduates in the classes of 2012, 2013, 2014, and 2015 who enrolled into college immediately after high school graduation.

## ADVANCED PLACEMENT ENROLLMENT

AP courses were developed to provide high school students with opportunities to earn early college credits or advanced placement in college-level courses. Beyond the prospect of gaining college credits by passing an AP exam or achieving a score of 3 or higher, AP courses also have become a means to identify highly motivated students. Early research shows that students who enroll in and complete AP courses outperform their peers who did not take AP courses in measures such as college entrance exam scores, postsecondary GPA, writing ability, graduation rates, and advanced degree attainment. That said, these early studies often did not consider external factors influencing students' enrollment and thus do not show how AP and non-AP students may differ in other ways (Klopfenstein and Thomas 2009; Warne 2017).

AP course offerings vary by school, and most high school students have the opportunity to enroll in AP courses in specific subjects. The data presented below account for Hawai'i DOE student enrollment in any AP course (e.g., AP English, AP History, AP Statistics, etc.).

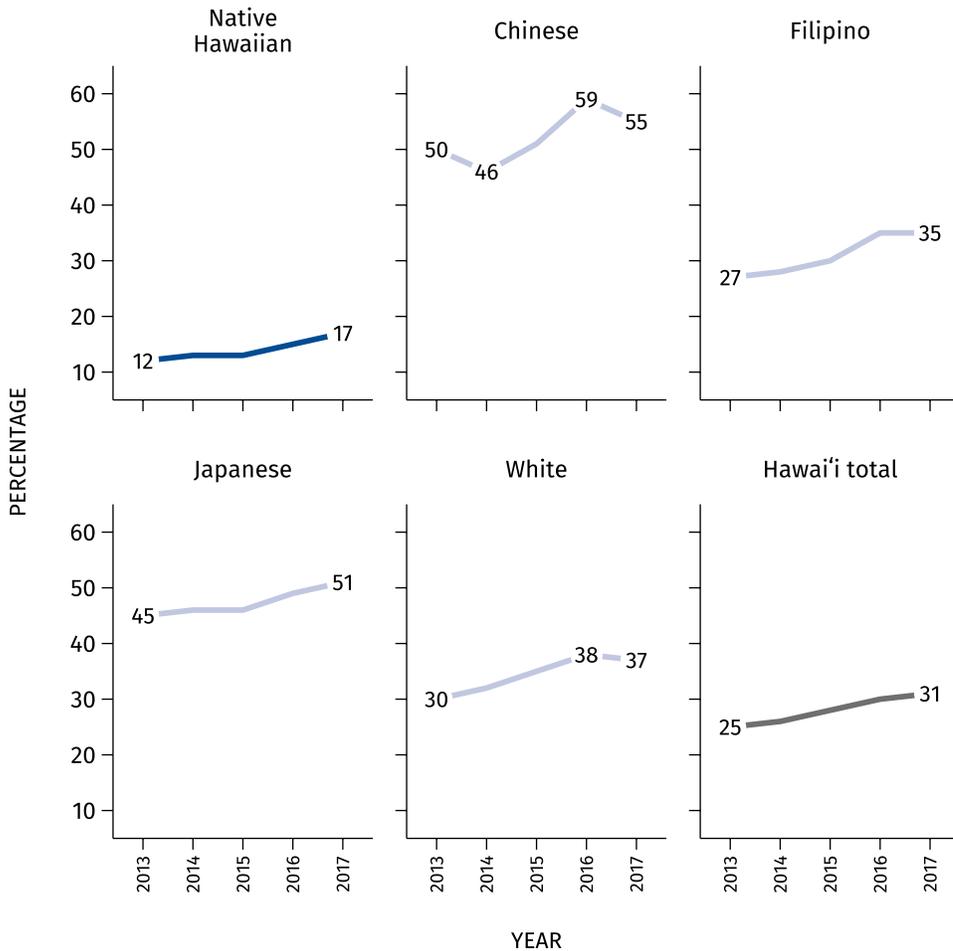
Trend data show that AP enrollment rates for Native Hawaiians increased gradually with each successive cohort. Still, AP enrollment rates among Native Hawaiian high schoolers were the lowest of the five major ethnic groups in Hawai'i. For example, in the 2017 cohort, there was a 14 percentage point difference between Native Hawaiian students (17 percent) and the Hawai'i total (31 percent). Chinese and Japanese students, relative to their peers, generally had higher rates of AP enrollment across all cohorts (fig. 3.75).



Looking at high school cohorts from 2013 to 2017,  
Native Hawaiians demonstrate an upward trend  
in AP course participation.



**FIGURE 3.75** Trends in cohorts of public high school students taking at least one AP course  
[by ethnicity and cohorts' anticipated year of high school graduation, Hawai'i, 2013 to 2017]



*Data source:* Hawai'i Department of Education, Hawai'i Data eXchange Partnership, DXP469 9th Grade Cohorts; prepared at the request of Kamehameha Schools

Note 1: In this context, a cohort is a group of students who started ninth grade together; the year refers to when the cohort was anticipated to graduate from high school.

Note 2: These data include enrollment in any AP course at any grade level in high school.

Note 3: Data labels are presented for the first and last points, the maximum and minimum points, and some inflection points where the trend changes.

- For the Hawai'i total, AP course participation is on the rise among cohorts of high schoolers, increasing from 25 percent of the 2013 cohort to 31 percent of the 2017 cohort.
- Native Hawaiians saw an upward trend in AP course participation, increasing from 12 percent of Native Hawaiians in the 2013 cohort to 17 percent of the 2017 cohort.
- Across all ethnicities and cohorts, rates of participation in AP courses were consistently lowest among Native Hawaiian students.
- Among the 2013 and 2017 cohorts, a gap of 38 percentage points exists between Chinese and Native Hawaiian high schoolers participating in AP courses.

### Advanced Placement Enrollment—Regional Highlights

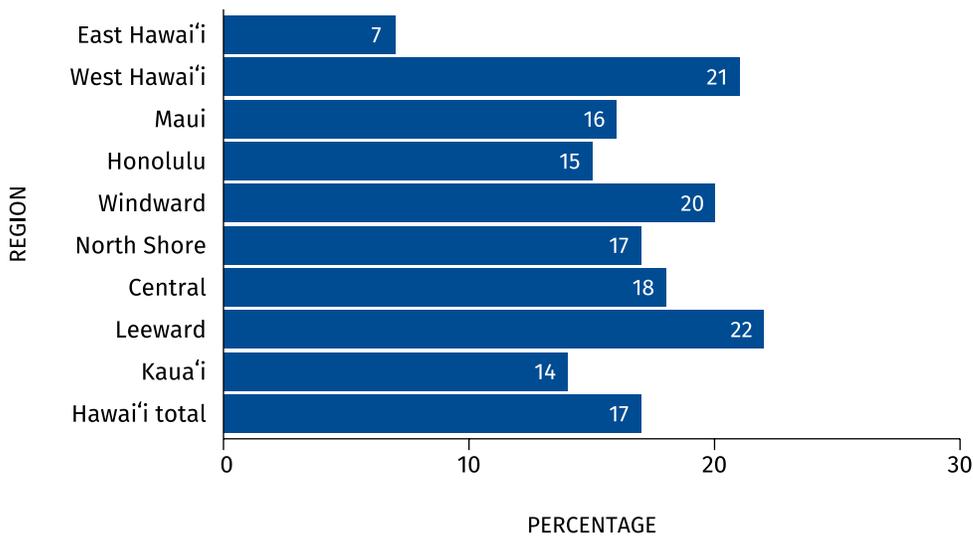
The 2017 cohort saw regional variation in AP enrollment among Native Hawaiian students. Among regions, Leeward schools saw the highest proportion (22 percent) of Native Hawaiians enrolled in AP courses (fig. 3.76). This finding may correspond with previous federal grant programs such as GEAR UP, as well as community programmatic efforts aimed at increasing the number of students in the region who are prepared to succeed in post-secondary education (University of Hawai'i 2011; Shimokawa 2017a, 2017b). Leeward high schoolers also topped the list in dual credit enrollment (see [fig. 3.78](#)). Given that Leeward is often faced with subpar student success indicators relative to other regions, these findings suggest a bright spot that is occurring in—and supported by—predominantly Native Hawaiian communities.

Schools in West Hawai'i (21 percent) and Windward (20 percent) also had relatively high rates of Native Hawaiians taking AP courses. Conversely, East Hawai'i had the lowest proportion of Native Hawaiian AP course takers—10 percentage points lower than the Hawai'i total of 17 percent (fig. 3.76). From 2013 to 2017, rates of AP course participation among Native Hawaiians increased in most regions; however, rates in East Hawai'i remained steady, while Kaua'i and North Shore saw decreases (not shown).



Among regions, Leeward has the highest proportion of Native Hawaiian students enrolled in AP courses (22 percent) and dual credit courses (21 percent).

**FIGURE 3.76** Native Hawaiian public high school students taking at least one AP course—regional comparison  
[as a percentage of Native Hawaiian students in the 2017 cohort of high school students, by region, Hawai'i, 2017]



*Data source:* Hawai'i Department of Education, Hawai'i Data eXchange Partnership, DXP469 9th Grade Cohorts; prepared at the request of Kamehameha Schools

Note 1: In this context, Native Hawaiian high schoolers are part of the 2017 cohort, which started high school as ninth-graders in 2014 and were anticipated to graduate in 2017.

Note 2: These data include enrollment in any AP course at any grade level in high school.

Note 3: Regional data refer to where the student is enrolled or graduated from, rather than where they live.

- For the Hawai'i total, 17 percent of Native Hawaiian high schoolers in the 2017 cohort enrolled in AP courses.
- Across regions, Leeward had the highest proportion (22 percent) of Native Hawaiian high schoolers in the 2017 cohort taking AP courses, while East Hawai'i had the lowest proportion (7 percent).

## DUAL CREDIT ENROLLMENT

Dual credit courses offer an additional path to early postsecondary exposure for high school students. Dual credit courses are generally established based on an agreement between a high school and a specific college, allowing students to earn both high school and college credit at the same time. Agreements typically infer that course credits earned are not transferable or recognized by other colleges. College credits obtained through dual credit programs entail enrollment and successful completion of a course—unlike AP courses, for which college credits are earned by passing an exam.

Participating in dual credit courses is associated with increased likelihood of completing high school, enrolling in a four-year college after high school, and persisting through postsecondary education. Research finds that these outcomes are especially beneficial for underachieving and underrepresented populations in higher education (Hughes et al. 2012).

Dual credit courses in Hawai'i public schools have grown in number over the past decade, in part due to several public-private partnerships to promote and facilitate the courses (Hawai'i P-20 Partnerships for Education 2014). Hawai'i currently offers three dual credit programs: Running Start, Early College, and Jump Start.

1. **Running Start** is a joint partnership program between the Hawai'i DOE and the University of Hawai'i. This program allows high school students to take college classes, on college campuses, and earn credits that count toward their high school diploma and college education (Hawai'i P-20 Partnerships for Education n.d.[d]). GEAR UP programs offer scholarships to low-income students participating in Running Start to help defray the costs of tuition and books (Hawai'i P-20 Partnerships for Education n.d.[d]).
2. **Early College** programs are offered at participating high schools and are taught by a college professor or qualified high school teacher. Similar to Running Start, students earn high school and college credits. However, the types of courses and college credits earned vary by high school (Hawai'i P-20 Partnerships for Education n.d.[c]).
3. **Jump Start** programs are designed for public high school seniors who, while completing their high school degree, are enrolled full time in career and technical education (CTE) programs at participating community colleges (University of Hawai'i Community Colleges, n.d.).

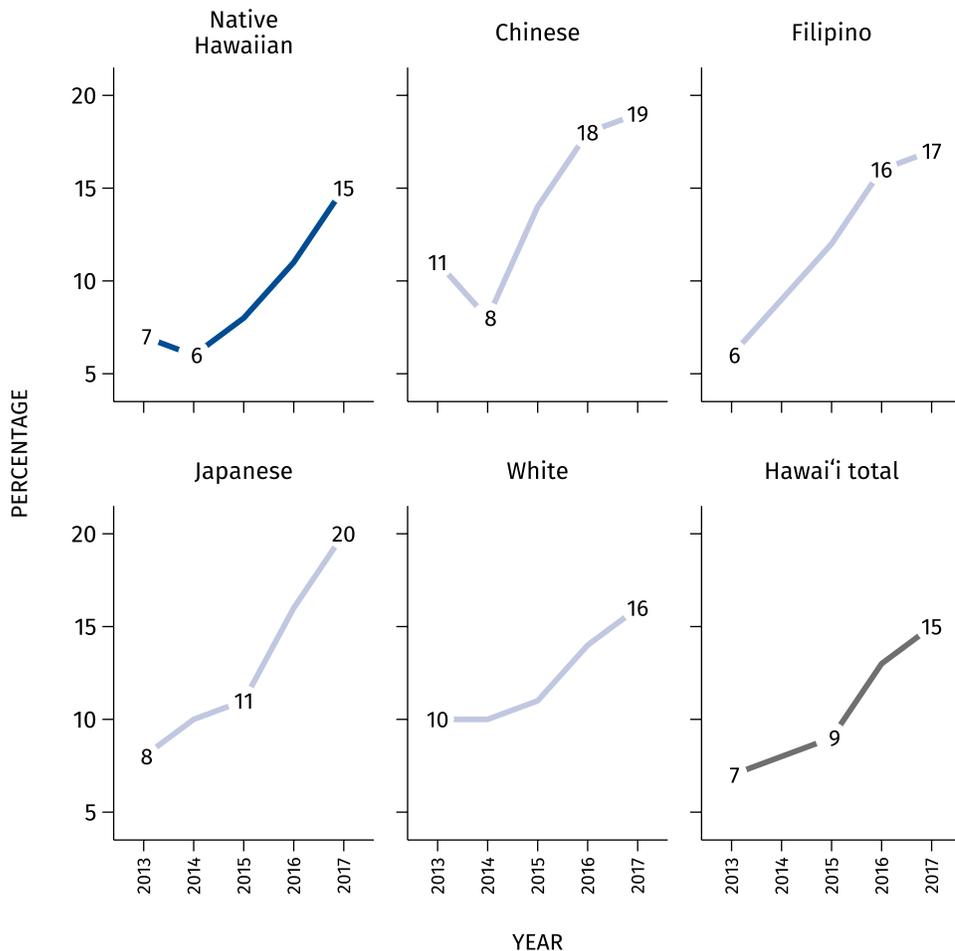


In recent years, the percentage of Native Hawaiian high schoolers enrolled in dual credit courses more than doubled, increasing from 7 to 15 percent between 2013 and 2017.

The data presented below encompass dual credit participation in any of the three programs.

Generally speaking, dual credit enrollment rates in Hawai'i have increased steadily in recent years, with the exception of a slight dip among Native Hawaiian and Chinese students in the 2014 cohort. The general growth in dual credit course-taking across all ethnicities and cohorts is consistent with efforts to increase accessibility to dual credit courses in Hawai'i. Within the 2017 cohort, Japanese and Chinese students had the largest proportions (20 and 19 percent, respectively) of students enrolled in dual credit courses (fig. 3.77).

**FIGURE 3.77** Trends in cohorts of public high school students taking at least one dual credit course [by ethnicity and cohorts' anticipated year of high school graduation, Hawai'i, 2013 to 2017]



Data source: Hawai'i Department of Education, Hawai'i Data eXchange Partnership, DXP469 9th Grade Cohorts; prepared at the request of Kamehameha Schools

Note 1: In this context, a cohort is a group of students who started ninth grade together; the year refers to when the cohort was anticipated to graduate from high school.

Note 2: These data represent students who participated in at least one class during high school in any dual credit program offered in Hawai'i, including Running Start, Jump Start, and Early Admit.

Note 3: Data labels are presented for the first and last points, the maximum and minimum points, and some inflection points where the trend changes.

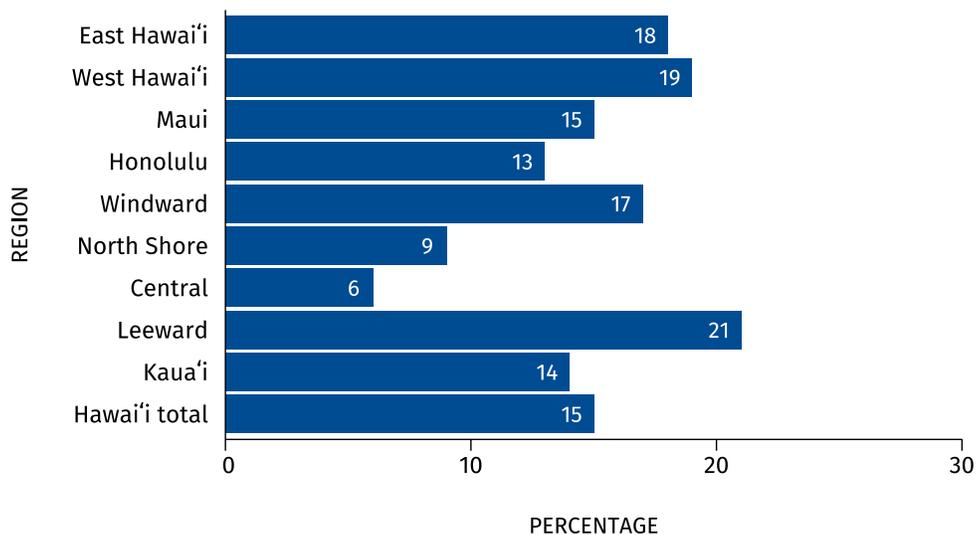
- For the Hawai'i total, the percentage of students in the 2017 cohort who took at least one dual credit course (15 percent) was more than double that of the 2013 cohort (7 percent).
- Native Hawaiian high schoolers followed a similar pattern, with those in the 2017 cohort (15 percent) being twice as likely as those in the 2013 cohort (7 percent) to take at least one dual credit course.
- Across the five cohorts spanning 2013 to 2017, all of Hawai'i's major ethnicities saw large increases in the proportion of high schoolers taking at least one dual credit course.
- Compared with their peers from other ethnicities, Native Hawaiians taking dual credit courses had the lowest rates of earning six or more credits, ranging from 27 percent in the 2014 cohort to 44 percent in the 2016 cohort (not shown).

### Dual Credit Enrollment—Regional Highlights

The Hawai'i total indicates that 15 percent of Native Hawaiian students in the 2017 cohort participated in at least one dual credit class (fig. 3.78). Leeward shows the highest dual credit participation rate in Hawai'i, where slightly more than one in five Native Hawaiian students (21 percent) took dual credit courses—similar to Leeward's high rates of AP course participation (see [fig. 3.76](#)). Native Hawaiian students in the Central region had the lowest dual credit participation rate (6 percent)—9 percentage points lower than the Hawai'i total. From 2013 to 2017, all regions showed increases in dual credit participation rates among all students (not shown). The smallest increase among Native Hawaiian students since 2013 was in Central, from 3 to 6 percent, while the largest increases were in Windward, from 5 to 17 percent, and Leeward, from 8 to 21 percent (not shown).

**FIGURE 3.78** Native Hawaiian public high school students taking at least one dual credit course—regional comparison

[as a percentage of Native Hawaiian students in the 2017 cohort of high school students, by region, Hawai'i, 2017]



*Data source:* Hawai'i Department of Education, Hawai'i Data eXchange Partnership, DXP469 9th Grade Cohorts; prepared at the request of Kamehameha Schools

Note 1: In this context, Native Hawaiian high schoolers are part of the 2017 cohort, which started high school as ninth-graders in 2014 and were anticipated to graduate in 2017.

Note 2: These data represent students who participated in at least one class during high school in any dual credit program offered in Hawai'i, including Running Start, Jump Start, and Early Admit.

Note 3: Regional data refer to where the student is enrolled or graduated from, rather than where they live.

- For the Hawai'i total, 15 percent of Native Hawaiian high schoolers in the 2017 cohort took dual credit courses.
- Across regions, Leeward had the highest proportion (21 percent) of Native Hawaiian high schoolers in the 2017 cohort who took dual credit courses, followed by West Hawai'i (19 percent).
- Comparing regions, Central (6 percent) and North Shore (9 percent) had the smallest proportion of Native Hawaiians in the 2017 cohort who enrolled in dual credit courses.

## COLLEGE COMPLETION

For Native Hawaiians and other Indigenous students, college completion can be a complex journey. Research has found numerous instances in which people of color are dissuaded from pursuing postsecondary education owing to social isolation by members of the campus community, structural racism that favors students of different socioeconomic and racial backgrounds, and culturally incongruent support systems that fail to meet student needs (Akiona 2018; Keels 2013; Witkow, Gillen-O’Neel, and Fuligni 2012). A recent evaluation of Title III-funded programs across the University of Hawai‘i system found that culturally responsible support services, the presence of Native Hawaiian administrators, faculty, and staff, and the visible expressions of Hawaiian history and culture on campuses generated high levels of a sense of belonging, educational agency, and academic success among Native Hawaiian beneficiaries on campuses (Malone et al. 2020).

In the discussion below, we examine college completion rates among four classes of Hawai‘i DOE students who attended two-year colleges and four-year institutions immediately after high school graduation. Immediate enrollment refers to students who enrolled in college in the first fall after high school graduation. First-fall enrollment is an important indicator, as “students who enroll in college immediately after high school are more likely to receive a greater economic return over time than are those who delay enrollment” (Rowan-Kenyon 2007, 191).

In the data that follow, the completion rate for two-year colleges is defined by earning an associate’s degree or certificate in three years or less. For four-year institutions, the completion rate is defined as earning a bachelor’s degree in six years or less.<sup>15</sup>

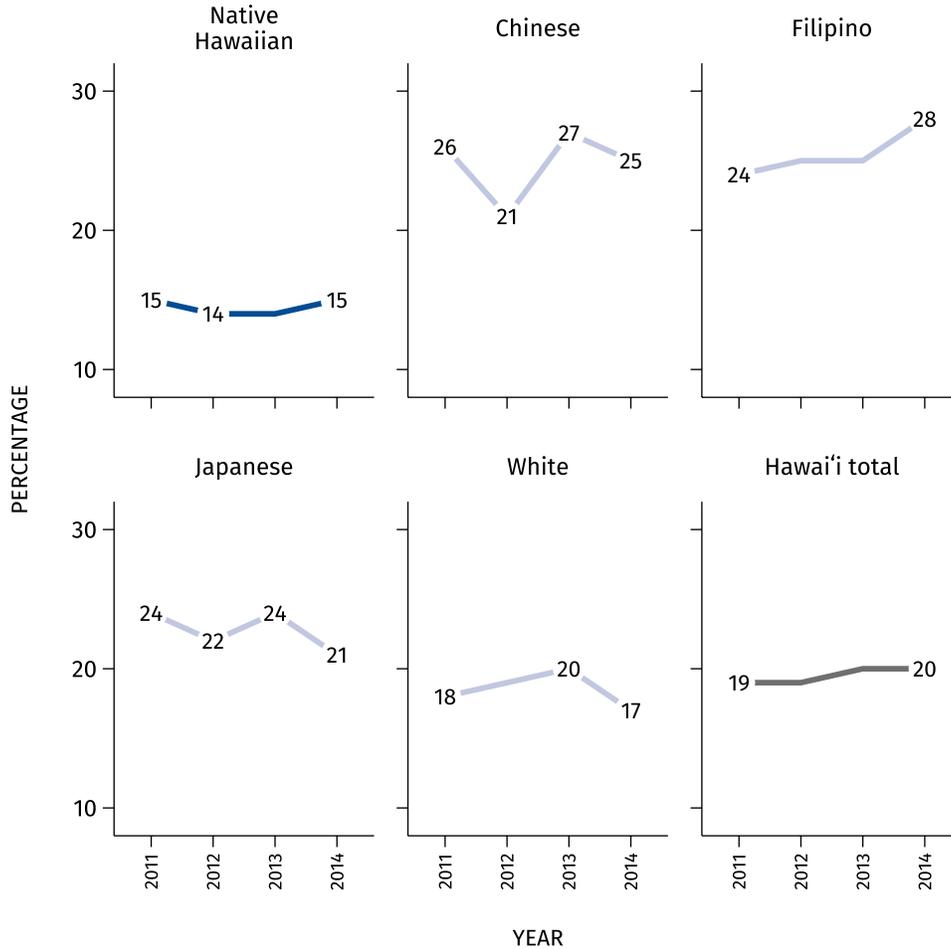
### Two-year Colleges

Among all Hawai‘i DOE students in the classes of 2011 to 2014 who enrolled in UH community colleges in the first fall after finishing high school, the three-year graduation rate was approximately 20 percent. College completion rates of Native Hawaiian students were consistently the lowest among each graduating class (fig. 3.79).

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<sup>15</sup> It is possible that completion percentages presented for students who transfer from two-year to four-year institutions might be slightly lower than actual percentages. This is because students may have transferred within the timeframe of this study, and our analysis was unable to discern which students transferred and where they ultimately earned their degree.

**FIGURE 3.79 Trends in college completion rates at two-year colleges**  
 [as a percentage of public school graduates who enrolled in college in the first fall after high school graduation, by ethnicity, Hawai'i, high school classes of 2011 to 2014]



Data source: Hawai'i Department of Education, Hawai'i Data eXchange Partnership, DXP465 CCRI; prepared at the request of Kamehameha Schools

Note 1: In this context, a class is a group of students who graduated from high school together; the year refers to when the class graduated from high school.

Note 2: These data represent students who finish their two-year degree within three years.

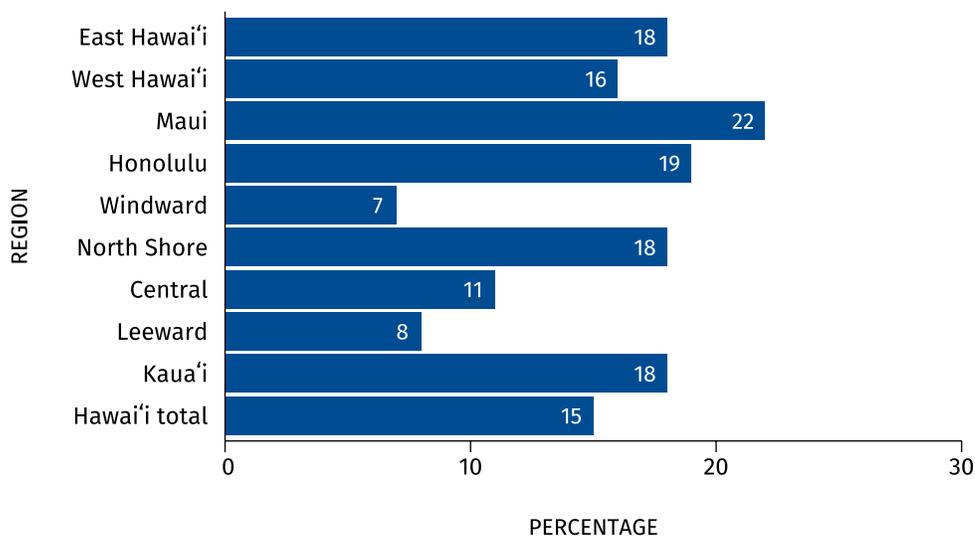
Note 3: Data labels are presented for the first and last points, the maximum and minimum points, and some inflection points where the trend changes.

- For the Hawai'i total, overall completion rates at two-year colleges remained stable (approximately 20 percent) across high school classes of 2011 to 2014.
- Among Hawai'i's major ethnicities, the lowest rates of completion at two-year colleges were seen among Native Hawaiians, with 14 to 15 percent graduating within three years.
- For each ethnicity, completion rates at two-year colleges show variation among the classes of 2011 to 2014—except for Filipino students, who demonstrate a consistently upward trend.

## TWO-YEAR COLLEGES—REGIONAL HIGHLIGHTS

Among the Hawai'i DOE high school graduating class of 2014, fewer than one in five Native Hawaiians (15 percent) graduated from a UH community college within three years. For Native Hawaiian high school graduates from schools in Windward, Central, and Leeward regions, this figure is closer to one in ten. Across all regions, Maui shows the highest three-year completion rates for Native Hawaiians (fig. 3.80); however, in terms of completing four-year degrees, students in Maui are closer to the Hawai'i total (see [fig. 3.82](#)). Conversely, although West Hawai'i shows completion rates for two-year degrees that are close to the Hawai'i total, that region has some of the highest rates of four-year degree completion, well above the Hawai'i total (see [fig. 3.82](#)).

**FIGURE 3.80** Native Hawaiian college completion rates at two-year colleges—regional comparison  
[as a percentage of Native Hawaiian public school graduates who enrolled in college in the first fall after high school graduation, by region, Hawai'i, high school class of 2014]



*Data source:* Hawai'i Department of Education, Hawai'i Data eXchange Partnership, DXP465 CCRI; prepared at the request of Kamehameha Schools

Note 1: In this context, a class is a group of students who graduated from high school together; the year refers to when the class graduated from high school.

Note 2: These data represent students who finish their two-year degree within three years.

Note 3: Regional data refer to where the student is enrolled or graduated from, rather than where they live.

- For the Hawai'i total, 15 percent of Native Hawaiians in the class of 2014 graduated from a two-year college within three years of first enrolling.
- Among Native Hawaiians in the high school class of 2014, the Maui region had the highest college completion rate (22 percent), followed by Honolulu (19 percent).
- The Windward region had the lowest proportion of college completion among Native Hawaiians (7 percent)—a rate that is 8 percentage points lower than the Hawai'i total.

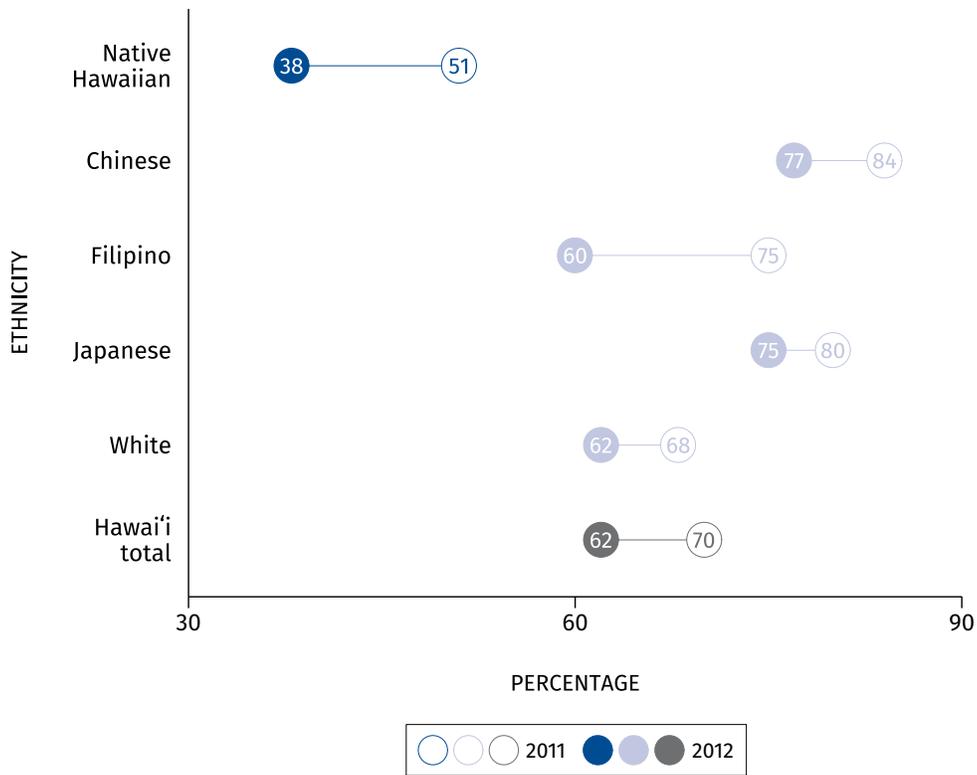
### Four-Year Colleges and Universities

Completion rates at four-year institutions include students who complete a bachelor's degree in six years or less. Owing to limitations on the availability of data for classes of students with six years of data, college completion rates for four-year colleges and universities are based on the high school graduating classes of 2011 and 2012.

Similar to the two-year college completion data, Native Hawaiian public high school graduates attending four-year institutions had the lowest six-year completion rates for the classes of 2011 and 2012 (fig. 3.81).

**FIGURE 3.81** College completion rates at four-year colleges

[as a percentage of public school graduates who enrolled in college in the first fall after high school graduation, by ethnicity, Hawai'i, high school classes of 2011 and 2012]



Data source: Hawai'i Department of Education, Hawai'i Data eXchange Partnership, DXP465 CCRI; prepared at the request of Kamehameha Schools

Note 1: In this context, a class is a group of students who graduated from high school together; the year refers to when the class graduated from high school.

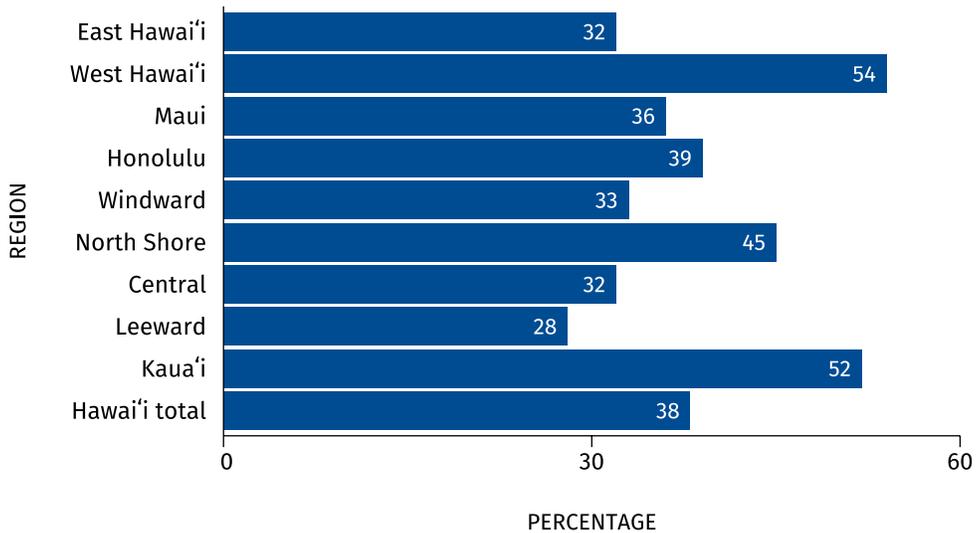
Note 2: These data represent students who finish their four-year degree within six years.

- For the Hawai'i total, 70 percent of students in the high school graduating class of 2011 earned their four-year college degree within six years, compared with 62 percent among the class of 2012.
- All ethnicities in the high school graduating class of 2011 had a higher rate of college completion, compared with the class of 2012.
- Rates of college completion for Native Hawaiians in the high school graduating classes of 2011 and 2012 were lower than the Hawai'i total.

#### FOUR-YEAR COLLEGES—REGIONAL HIGHLIGHTS

The proportion of Native Hawaiians who completed college within six years differs across regions for the graduating class of 2012. Completing a four-year college degree in six years was more likely for Native Hawaiians who graduated from public schools in the West Hawai'i and Kaua'i regions than elsewhere, with rates surpassing 50 percent. By comparison, the Hawai'i total for college completion among Native Hawaiians was 38 percent. Native Hawaiian students in the North Shore region also showed a higher-than-average rate of college completion (45 percent). Four-year college completion rates were relatively low among Native Hawaiians in the Leeward region (fig. 3.82).

**FIGURE 3.82** Native Hawaiian college completion rates at four-year colleges—regional comparison  
[as a percentage of Native Hawaiian public school graduates who enrolled in college in the first fall after high school graduation, by region, Hawai'i, high school class of 2012]



Data source: Hawai'i Department of Education, Hawai'i Data eXchange Partnership, DXP465 CCRI; prepared at the request of Kamehameha Schools

Note 1: In this context, a class is a group of students who graduated from high school together; the year refers to when the class graduated from high school.

Note 2: These data represent students who finish their four-year degree within six years.

Note 3: Regional data refer to where the student is enrolled or graduated from, rather than where they live.

- For the Hawai'i total, nearly two-fifths (38 percent) of Native Hawaiians who graduated from high school in 2012 and enrolled in college in the first fall after high school earned a college degree within six years.
- Among Native Hawaiian students in the class of 2012, West Hawai'i had the highest proportion of college completion (54 percent), followed closely by Kaua'i (52 percent).
- Leeward had the lowest college completion rates (28 percent) among Native Hawaiians in the class of 2012.

## Educational Outcomes by School Concentration of Native Hawaiians

In this section, we summarize findings throughout this chapter on a variety of educational outcomes by school concentration of Native Hawaiian students. School concentration of Native Hawaiians refers to the proportion of the schools' student body that is Native Hawaiian. Schools where Native Hawaiian students constitute less than 25 percent of the student population are labeled "Low." Those where Native Hawaiians constitute 25 to 50 percent of the student population are labeled "Moderate," and schools in which Native Hawaiians make up more than half of the student population are labeled "High."

Examining educational outcomes based on a school's concentration of Native Hawaiian students is one way of drawing attention to environments and systems in which students learn, rather than focusing only on individual student outcomes. Similarly, an analysis of the concentration of poverty—though not within the scope of this publication—can point to additional systemic forces that affect students and families. For example, previous studies demonstrate that areas with a high concentration of Native Hawaiians tend to be lower on the spectrum of economic capital and are associated with lower student achievement (Kana'iaupuni, Malone, and Ishibashi 2005; Kamehameha Schools 2014).

**TABLE 3.6** Summary of educational outcomes by school concentration of Native Hawaiian students, 2018–2019

		School concentration of Native Hawaiian students			*Schools with high concentrations of Native Hawaiian students generally have...
		Low	Moderate	High	
STUDENT NEED	Economic disadvantage** as a percentage of students in Hawai'i public schools	44%	57%	78%	↑ percentages of economically disadvantaged students
	Special education enrollment as a percentage of students in Hawai'i public schools	9%	11%	14%	↑ percentages of students enrolled in special ed.
HUMAN RESOURCES	Average number of principals in 5 years avg. number of principals/school from 2014–18	1.5	1.6	1.5	no difference in number of principals in 5 years
	Student-to-teacher ratio	17:1	16:1	14:1	↓ student-to-teacher ratios
	Teacher experience: 5+ years at same school as a percentage of all teachers in Hawai'i public schools	60%	56%	52%	↓ percentages of teachers with 5-year tenure
	Teacher experience: Avg. years of teaching	14 years	13 years	12 years	teachers with fewer average years of experience
	Teachers with advanced degrees as a percentage of all teachers in Hawai'i public schools	38%	37%	36%	slightly lower percentages of teachers with advanced degrees
	Teachers with emergency credentials as a percentage of all teachers in Hawai'i public schools	4%	5%	10%	↑ percentages of teachers with emergency credentials
ACADEMIC PROFICIENCY	Language arts proficiency*** as a percentage of test takers in Hawai'i public schools	56%	46%	30%	↓ percentages of students meeting language arts proficiency
	Mathematics proficiency*** as a percentage of test takers in Hawai'i public schools	47%	37%	23%	↓ percentages of students meeting mathematics proficiency
STUDENT PERSISTENCE	Chronic absenteeism*** as a percentage of students in Hawai'i public schools	16%	24%	34%	↑ percentages of chronically absent students
	Retention in grade*** as a percentage of students in Hawai'i public schools	2%	2%	3%	slightly higher percentages of students retained in grade

\* Compared with schools that have low concentrations of Native Hawaiian students.

\*\* Data come from 2015–16.

\*\*\* Data come from 2016–17.

Note 1: The concentration of Native Hawaiian students, relative to the schools' total student population, is indicated by three levels tabulated specifically for this publication: Low: < 25%, Moderate: 25 to 50%, High: > 50%.

Note 2: The data presented are descriptive; tests for statistical significance were not conducted.

Our foregoing examination of educational well-being explores school environments and various aspects of student-level contexts and outcomes. While considerable data are presented, we acknowledge critical missing variables such as spirituality, cultural identity, and the use of Hawaiian culture-based educational approaches. Overall, notable improvements in school environments—especially those associated with teacher experiences and credentials—have occurred in recent decades. At the student level, many indicators of educational well-being, over time or by cohort, demonstrate movement in a positive direction for Native Hawaiian learners. However, relative to their peers of other ethnic groups, school-age Native Hawaiians continue to experience gaps in academic achievement, postsecondary preparation, and college milestones.

## CONCLUSION

“I ulu no ka lāla i ke kumu—*Branches grow because of the trunk*” (Pukui 1983, 137). Kānaka Maoli believe that without our kūpuna (ancestors), none of us would be here. Like outstretched branches, each generation is an extension of a sturdy trunk and strong roots. In a similar way, school-age years are foundational for a successful, well-adjusted life because of the significant personal, social, and cognitive development that occurs during the first decades of a child’s life.

Between the ages of five and seventeen, keiki spend as much time in class as they do with their family, making schools especially influential. In addition to developing students’ academic skills, schools contribute to the socioemotional development of youth. School environments matter; they can be nurturing or alienating, inclusive or exclusive. Increasingly, teachers and administrators are embracing tenets of progressive education and acknowledging historical trauma. For Indigenous peoples, school is not merely a place where we learn about social justice, it is where we seek it out.

Reviewing available data, we find a mix of gains and challenges for school-age Native Hawaiians. On the positive side, Kānaka Maoli continue to live rich, spiritual, and cultural lives—with greater access to cultural knowledge and practices than in the past. School-age Native Hawaiians are also more physically active, relative to their peers, and tend to rely on a strong network for social support. At the same time, Kanaka Maoli youth are more likely than their peers to live in poverty, experience suicidal thoughts, and realize lower educational attainment, all of which limit future prospects.

It is unacceptable that Native Hawaiian learners disproportionately suffer from poor educational outcomes. It is also unacceptable to view this situation through an “education only” lens. Instead, educational well-being must be examined within Hawai‘i’s unique historical and political context. Doing so reveals structural issues of disenfranchisement, inequity, and racism that must be confronted. Making this shift requires bold leadership, new ideas, and more holistic indicators for youth development. The recent expansion of Hawaiian culture-based education is a promising trend that puts us on a brighter path forward.





## Methods, Data Sources, and Definitions

Our story of Native Hawaiian well-being is woven from a wellspring of diverse perspectives informed by literature and research, community ‘ike (knowledge), and a wide array of national and local data sources. Because *Ka Huaka‘i 2021* is produced from multiple methodologies, an understanding of the context and limitations of the data is paramount. This section provides an overview of the nuances, constraints, and decisions relevant to how data in this volume were collected, analyzed, and interpreted.

Most of the data presented in *Ka Huaka‘i 2021* are drawn from conventional data sources that are routinely collected and maintained by government-funded entities. As such, these sources generally espouse Western worldviews and tend to exclude perspectives that are imperative to understanding, supporting, and measuring Indigenous well-being (e.g., aspects of spirituality, cultural connectedness, relations to ‘āina, etc.). This context is crucial to keep in mind when reviewing the data. We also underscore the critical need to expand the ways in which measures of well-being for Native Hawaiians and Indigenous peoples are conceptualized and collected—both at the individual level and, perhaps more importantly, at the community level.

While the data presented in *Ka Huaka‘i 2021* have been vetted for accuracy, there is no warranty that this volume is error free. We further recognize that analyses and discussions are inherently limited by the types of data made available on Native Hawaiians and well-being. In this section, we first present a list of data sources used in *Ka Huaka‘i 2021*, with brief explanations about each one.<sup>1</sup> We then list definitions and key terms used throughout the volume, along with specific methodology notes for certain topics.

### DATA SOURCES

For each data source listed below, we indicate how the data were handled. For example:

- *As is*: We reported the data as provided—from online sources or via special request—without any manipulation.
- *Combined*: We aggregated data from existing sources, without any manipulation other than combining datasets or data points.
- *Modified*: We modified existing data by running unique comparisons and analyses.
- *Created*: We created new datasets and analyses from various sources and internal studies.

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<sup>1</sup>The data sources listed in this section refer specifically to data included in the narrative, tables, and charts in *Ka Huaka‘i 2021*. The data sources do not include reports, literature, and research cited throughout the publication.

## Hawai'i Department of the Attorney General

*Review of Uniform Crime Reports (years 2015 and 2016 combined), Crime Prevention and Justice Assistance Division, Research and Statistics Branch.*

*Data were combined.*

*Juvenile Delinquency Trends in Hawai'i: Data Book for 2007–2016, Juvenile Justice Information System, Crime Prevention and Justice Assistance Division.*

*Data were reported as is.*

## Hawai'i Department of Education

Hawai'i Data eXchange Partnership, DXP465 CCRI, 2011–2014; tabulations were prepared at the special request of Kamehameha Schools.

*Data were modified and created. Separate variables were created and used to run tabulations by race/ethnicity, region, and college institution.*

Hawai'i Data eXchange Partnership, DXP469 9th Grade Cohorts, 2013–2017; tabulations were prepared at the special request of Kamehameha Schools.

*Data were modified and created. Separate variables were created and used to run tabulations by race/ethnicity and region.*

Hawai'i Data eXchange Partnership, DXP469 cross-section, 2013–2017; tabulations were prepared at the special request of Kamehameha Schools.

*Data were modified and created. Separate variables were created (e.g., chronic absenteeism) and used to run tabulations by race/ethnicity, region, and school concentration of Native Hawaiian students.*

*School Status and Improvement Report, 2002, 2012, and 2018*

*Data were combined and created. A separate variable was created and used to run tabulations by school concentration of Native Hawaiian students.*

## Hawai'i Department of Health

### HAWAI'I BEHAVIORAL RISK FACTOR SURVEILLANCE SYSTEM

Hawai'i Health Data Warehouse. See below for various combinations of years, based on tabulations of data from the Hawai'i Behavioral Risk Factor Surveillance System (BRFSS).

*Data were reported as is. Combining of data years was done by the Hawai'i Health Data Warehouse.*

- 2013 (years 2011 to 2013 combined) and 2016 (years 2014 to 2016 combined)
- 2014 (years 2012 to 2014 combined)
- 2014 (years 2013 to 2014 combined) and 2016 (years 2015 to 2016 combined)
- 2015 (years 2011, 2013, 2015 combined)
- 2016 (years 2011 to 2016 combined)
- 2016 (years 2013 to 2016 combined)

### HAWAI'I SCHOOL HEALTH SURVEY: YOUTH TOBACCO SURVEY MODULE

Hawai'i Health Data Warehouse, Hawai'i Department of Health and Hawai'i Department of Education, 2015.

*Data were reported as is.*

### HAWAI'I SCHOOL HEALTH SURVEY: YOUTH RISK BEHAVIOR SURVEY MODULE

Hawai'i Health Data Warehouse, Hawai'i Department of Health and Hawai'i Department of Education. See below for various combinations of years, based on tabulations of data from the Hawai'i School Health Survey: Hawai'i Youth Risk Behavior Survey (YRBS) module.

*Data were reported as is. Combining of data years was done by the Hawai'i Health Data Warehouse.*

- 2013 (years 2011, 2013 combined)
- 2015 (years 2013, 2015 combined)
- 2017 (years 2015, 2017 combined)

## PREGNANCY RISK ASSESSMENT MONITORING SYSTEM

Hawai'i Department of Health, Family Health Services Division, Maternal and Child Health Branch, 2011 (years 2009 to 2011 combined).

*Data were reported as is.*

## VITAL STATISTICS

Hawai'i Health Data Warehouse, Office of Health Status Monitoring, *Vital Statistics Report* 2011 (years 2007 to 2011 combined), 2015, 2016 (years 2012 to 2016 combined), and 2018; tabulations based on the 2015 report were prepared at the special request of Kamehameha Schools.

*Some data were reported as is, and some data were modified; modification included normalizing the data to make comparisons by race/ethnicity.*

## Hawai'i Department of Human Services

Audit, Quality Control and Research Office, *Statistical Report on Child Abuse and Neglect in Hawai'i*, 2011 and 2018 (2011 report includes data recorded in 2010).

*Data were modified; modification included normalizing the data to make comparisons by race/ethnicity.*

Benefit, Employment, and Support Services, 2015 to 2017; tabulations were prepared at the special request of Kamehameha Schools.

*Data were combined.*

## US Census Bureau

Census 2000, Summary File 4.

*Data were combined and modified; modification included normalizing the data to make comparisons.*

Census 2010, Summary File 2.

*Some data were reported as is, and some data were created; creation included the development of new variables to run projections of the Native Hawaiian population.*

2006–2010 American Community Survey, Selected Population Tables.

*Data were combined and modified; modification included normalizing the data to make comparisons.*

2011–2015 American Community Survey, Selected Population Tables.

*Data were combined and modified; modification included normalizing the data to make comparisons.*

2013–2017 American Community Survey, Public Use Microdata Sample (PUMS) 5-year file.

*Data were created. Several variables were created for analyses (e.g., income designations).*

2006 to 2017 American Community Survey, Public Use Microdata Sample (PUMS) 1-year files

*Data were created. PUMS 1-year files were combined and re-weighted to form three-year moving averages. Several variables were created for analyses (e.g., family types).*

2013–2017, 2009–2013, and 2005–2009 American Community Survey Public Use Microdata Sample 5-year files.

*Data were created. Several variables were created for analyses (e.g., migration status).*

Estimates of the Components of Resident Population Change 2011 to 2018, US Census Bureau, Population Division.

*Data were reported as is.*

## **University of Hawai‘i Cancer Center**

*Hawai‘i Cancer at a Glance, 2009–2013, Hawai‘i Tumor Registry.*

*Data were reported as is.*

## **University of Hawai‘i System**

Institutional Research and Analysis Office; data prepared at the special request of Kamehameha Schools.

*Some data were reported as is, and some data were modified and created. Modification included normalizing trend data in UH enrollment to make comparisons. Creation included in-house calculations of average retention and completion rates (e.g., across all students, across all females, across all males, across all Native Hawaiians, across the UH system, etc.).*

Institutional Research and Analysis Office, Office of Human Resources Data Warehouse.

*Data were reported as is.*

## DEFINITIONS AND KEY TERMS

Definitions and key terms are presented in order of prominence in *Ka Huaka'i*. The first entry, “Native Hawaiian and Other Major Ethnicities,” is of particular importance for this volume and includes not only definitions but also certain parameters that different data sources consider when defining race and ethnicity.

### Native Hawaiian and Other Major Ethnicities

Where possible, *Ka Huaka'i 2021* presents data by five race/ethnicity categories: Native Hawaiian, Chinese, Filipino, Japanese, and White. These categories are representative of the major races/ethnicities in Hawai'i and are commonly used in statistical reports produced by other state institutions.

While race/ethnicity categories differ slightly depending on the data source (see list below for nuances), **Native Hawaiian** (with uppercase “N”) generally refers to any individual who can trace their genealogy to the original inhabitants (or their descendants) of the Hawaiian Islands, regardless of blood quantum or racial/ethnic identity. Native Hawaiians are also referenced throughout this publication as “Kānaka Maoli,” “Kānaka 'Ōiwi,” or simply “Kānaka” and “'Ōiwi.”

## CENSUS

Beginning in 2000, the US Census Bureau allowed for multiple race/ethnicity reporting, which permitted a more inclusive definition of race/ethnicity. Two main census conventions are relevant to our analysis for reporting the various combinations of race/ethnicity: “alone” and “alone or in combination.” The “alone” population includes individuals who reported only one race/ethnicity. The “alone or in combination” population includes those who reported only one race/ethnicity and those who reported two or more races/ethnicities. *Ka Huaka'i 2021* uses the “alone or in combination” categories for Native Hawaiian, Chinese, Filipino, and Japanese races/ethnicities. When possible, the “alone or in combination” category is used for non-Hispanic Whites as well.

## AMERICAN COMMUNITY SURVEY—PUBLIC USE MICRODATA SAMPLE

The American Community Survey's Public Use Microdata Sample (PUMS) was used to create a proxy variable for race/ethnicity to approximate counts in the 2000 and 2010 censuses. In our analyses, Native Hawaiian, Chinese, Filipino, and Japanese races/ethnicities include all individuals who reported being of each respective race or ancestry, regardless of the combination of races or ancestries the individual reported. However, the White category includes only those individuals who reported being of the White race alone or in combination and were not Hispanic—ancestry was not used to determine race/ethnicity.

The 5-year and 1-year files differ in their estimates of Native Hawaiians due to the “Native Hawaiian alone or in combination with one or more other races” variable, which is not available for all years in the 1-year PUMS files.

Consistent with the methodology in *Ka Huakaʻi 2014*, we determine the race/ethnicity of households by the race/ethnicity of all members of the household. For the purposes of identifying Native Hawaiian households, any household where a Native Hawaiian resides is considered a Native Hawaiian household. This method is more inclusive and accurate in its approach to describing the household characteristics of the populations residing within these households, as opposed to determining the household’s race/ethnicity based on the race/ethnicity of the head of household—a method that was used in *Ka Huakaʻi 2005*.

Because each household can potentially be identified with multiple races/ethnicities, these groups are not mutually exclusive. For instance, a household with a Chinese head of household, a Hawaiian spouse, and Chinese/Hawaiian children is counted as a Native Hawaiian household and a Chinese household.

## AMERICAN COMMUNITY SURVEY—SELECTED POPULATION TABLES

When comparing regional differences using American Community Survey data, the Selected Population Tables were used. These summary tables contain race/ethnicity options similar to those utilized in the census. In such cases, our comparisons look only at Native Hawaiians in Hawaiʻi and include all those who reported being Native Hawaiian alone or in combination with any other race/ethnicity.

There are several instances where we compare data from the American Community Survey—Selected Population Tables with data from Census 2000, Summary File 4. These two data sources are derived from different survey methods. The US Census Bureau urges caution when comparing Census 2000 data with American Community Survey data.

Other races/ethnicities with sizable populations in Hawaiʻi that are part of the Hawaiʻi total but not specifically called out include Other Pacific Islander, Korean, Black or African American, and Hispanic-White.

## HAWAIʻI DEPARTMENT OF THE ATTORNEY GENERAL

Local crime data come from the Crime Prevention and Justice Assistance division within the Hawaiʻi Department of the Attorney General. In *Ka Huakaʻi 2021*, race and ethnicity data are presented using categories relevant to Hawaiʻi: Native Hawaiian, Chinese, Filipino, Japanese, and White.

Regarding ethnicity data extracted from the juvenile arrests and in cases where a juvenile came from more than one ethnic group, up to five ethnic groups for each juvenile could be recorded. Juveniles who were designated as solely “Hawaiian,” as well as those designated “Hawaiian” with any other ethnic group, were categorized into a single “Hawaiian/part-Hawaiian” group.

## HAWAI'I DEPARTMENT OF EDUCATION

Race/ethnicity reporting in the Hawai'i Department of Education—which draws from data collected via Hawai'i Data eXchange Partnership—differs from census and ACS reporting in that it relies on parent-reported identification of a student's “primary” race/ethnicity.<sup>2</sup> This means that categories for Native Hawaiian, Chinese, Filipino, Japanese, and White are mutually exclusive and should be taken as a lower-bound estimate of these populations.

The Native Hawaiian figures in this volume combine both Native Hawaiian and part-Hawaiian designations. The Native Hawaiian designation also includes any student whose parent “ever” reported Native Hawaiian—not just those who reported Native Hawaiian in a given year.

## HAWAI'I DEPARTMENT OF HEALTH

### ***Behavioral Risk Factor Surveillance System***

The Behavioral Risk Factor Surveillance System (BRFSS) is a nationwide Centers for Disease Control and Prevention survey that collects data on public health. Individual states are able to add to the survey to meet state needs. Race/ethnicity data collection and reporting have changed over the years in the BRFSS administered in Hawai'i.

The most recent change occurred in 2018. Prior to that year, response options for ethnicity were not the same year to year. However, the BRFSS coordinator would apply an algorithm to create a single race/ethnicity for each respondent. In 2018, the response options changed to mirror national standards, which offer less race detail. Consequently, 2018 and later data are not comparable with BRFSS data from previous years.

In *Ka Huaka'i 2021*, we report data up to 2016 and use the pre-2018 definitions of race/ethnicity. Caution should be exercised if comparing data in this volume with current BRFSS data. For more information on these changes and race/ethnicity categorization, see <http://hhdw.org/wp-content/uploads/HHDW-Race-Ethnicity-Documentation-Report.pdf>.

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<sup>2</sup> Starting in 2011, two-part race/ethnicity reporting was required, allowing multiple-race reporting. However, all data in *Ka Huaka'i 2021* are based on the students' primary race.

### ***Vital Statistics***

The Hawai'i Department of Health uses a classification hierarchy when reporting vital statistics by race/ethnicity. This results in all race/ethnicity categories being mutually exclusive. In any case, for example, where Native Hawaiian is reported as a race/ethnicity—whether alone or in combination with another race/ethnicity—the race/ethnicity of that individual is reported exclusively as Native Hawaiian. Similarly, if a non-White race/ethnicity is reported with White, then that individual is reported exclusively as the non-White race/ethnicity. If there are more than one non-White race/ethnicity reported, then the first non-White race/ethnicity indicated is the reported race/ethnicity. Therefore, estimations for Chinese, Filipino, Japanese, and White races/ethnicities should be viewed as lower-bound estimates. The race/ethnicity of children is based on that of the father, or on the race/ethnicity of the mother if the father's race/ethnicity is unknown.

### ***Youth Risk Behavior Survey***

The Youth Risk Behavior Survey (YRBS) is a national survey that uses respondents' self-reported information as a basis for its race/ethnicity data. Similar to the BRFSS, individual states using the YRBS may add to the survey questionnaire. For Hawai'i, this means allowing options for the major race/ethnicities within the state. Our calculations are based on tabulations obtained from the Hawai'i Department of Health's Hawai'i Health Data Warehouse, which identifies all students who self-identified as Native Hawaiian, including students who reported being part-Hawaiian.

## HAWAII DEPARTMENT OF HUMAN SERVICES

The Hawai'i Department of Human Services' State Audit, Quality Control and Research Office houses child abuse and neglect data. Race/ethnicity is reported as the primary category of which the individual identifies himself or herself as a member, or of which the parent identifies the child as a member (i.e., race/ethnicity are mutually exclusive). *Ka Huaka'i 2021* reports data for individuals reporting Hawaiian/Part Hawaiian, Chinese, Filipino, Japanese, and White.

## HAWAII DEPARTMENT OF PUBLIC SAFETY

The Hawai'i Department of Public Safety Corrections Division collects and maintains incarceration data. All race/ethnicity data are self-reported by detainees. To retain consistency among data sources, *Ka Huaka'i 2021* provides data for individuals reporting Hawaiian/Part Hawaiian, Chinese, Filipino, Japanese, and White. Race/ethnicity are mutually exclusive.

## UNIVERSITY OF HAWAII SYSTEM

Race/ethnicity student data are self-reported via the University of Hawaii (UH) System Application form for prospective college students. The system utilizes the same categorization as the Integrated Postsecondary Education Data System, the core postsecondary education data collection program under the National Center for Education Statistics. There are nine race options and twenty-three ethnicity options, including categories for mixed-races, no data, etc. *Ka Huaka'i 2021* reports UH data for Native Hawaiian, Chinese, Filipino, Japanese, and White categories.

In the event a student selects multiple races/ethnicities, UH follows a "prioritization" system, in which race/ethnicity is determined based on the following priority order: Black or African American; Hawaiian/Part Hawaiian; Hispanic; American Indian or Alaskan Native; Samoan; Filipino; Remaining races; Mixed race. For example, if a student selects Filipino, Hawaiian/Part Hawaiian, and Mixed race, they will be categorized as Hawaiian/Part Hawaiian.

Native Hawaiian students also include those who indicate Hawaiian ancestry on their application (as well as those who either did not answer the ancestry question or answered in the negative but who indicated Hawaiian ethnicity).

Race/ethnicity faculty data, which are self-reported and maintained under UH's Office of Human Resources Data Warehouse, are determined following UH-Equal Employment Opportunity priorities. Similar to the way UH categorizes students, if an individual selects more than one ethnicity, their ethnicity is determined based on the following priority order: Black or African American; Hawaiian/Part Hawaiian; Hispanic; American Indian or Alaskan Native; Samoan; Filipino; Remaining races; Mixed race.

## Regions

*Ka Huaka'i 2021* presents two different regional perspectives:

- Nine geographic regions, identified by Kamehameha Schools (KS). *Ka Huaka'i 2021* is the first in its series to include data disaggregated by KS regions.
- County divisions, identified by the US Census Bureau.

## KAMEHAMEHA SCHOOLS REGIONS

Nine regions were designated by Kamehameha Schools in 2015 as part of its commitment to serve the lāhui via community-based approaches.

1. East Hawai'i (Hilo, Puna, and Ka'ū)
2. West Hawai'i (Kona, Kohala, and Hāmākua)
3. Maui (Maui, Moloka'i, and Lāna'i)
4. Windward O'ahu (Ko'olau)
5. Honolulu O'ahu (Kona)
6. North Shore O'ahu (Waialua)
7. Central O'ahu ('Ewa)
8. Leeward O'ahu (Wai'anae Coast)
9. Kaua'i (Kaua'i and Ni'ihau)

Regions were identified based on the following considerations: Hawai'i DOE complexes, complex areas, and complex area superintendents; type and identity of communities; and proximity to existing KS and external resources and programs.

### ***KS Regions and Hawai'i DOE Data***

In this publication, all Hawai'i DOE data that are disaggregated by KS regions in Chapter 3 represent regions of the *school* in which a student was enrolled and/or from which a student graduated. The regions do not necessarily represent regions in which a student resides or lives. See [table 3.4](#) in Chapter 3 for a crosswalk between KS regions, Hawai'i DOE regions, and Hawai'i DOE complex areas.

## CENSUS COUNTY DIVISIONS

*Ka Huaka'i 2021* presents data disaggregated by US Census county divisions for Hawai'i:

1. Hawai'i county
2. Honolulu county
3. Kaua'i county (includes Ni'ihau)
4. Maui county (includes Kaho'olawe, Lāna'i, and Moloka'i)

## Family Structure

Throughout *Ka Huaka'i 2021*, we use a variety of similar but distinct terms to refer to family structure. For example, families, households, and family households are all used as units of analysis, depending on the data source. All data on family types were collected via the US Census Bureau and are based on answers to questions on biological sex and relationship that were asked of all respondents.

### FAMILY

A family refers to two or more people who share a relationship through marriage, birth, or adoption. All people in a household who are related to the householder are regarded as members of his or her family. When families are identified as the unit of analysis, our analysis examines all families in households, not just the primary or main family.

### HOUSEHOLD

A household refers to the physical structure of the housing unit and all persons residing within that structure.<sup>3</sup> Not all households contain families, since a household may be comprised of a group of unrelated people or of one person living alone. When households are identified as the unit of analysis, our analysis examines the primary or main family in a household.

The ethnicity of a household is defined by all members of the household. A household can have more than one ethnicity, and ethnicity categories are not mutually exclusive. *Native Hawaiian households* are determined using the race and ancestry reported by each individual; to be as inclusive as possible, a household is counted as a Native Hawaiian household if any member within the household self-reports as being Native Hawaiian.

### HOUSEHOLDER

The householder (sometimes referred to as “head of household”) refers to the person whose name is on the housing unit owned or rented (or maintained). If there is no such person, any adult member is considered the householder, excluding roomers, boarders, or paid employees. If the house is owned or rented jointly by a married couple, the householder may be either spouse.

*Native Hawaiian householder* refers to when the householder self-reports their race as Native Hawaiian.

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<sup>3</sup> A group quarters residence (e.g., a dormitory) is not considered a household.

## FAMILY HOUSEHOLD

A family household is any household in which a family resides. In addition to the family itself, family households sometimes include other residents who are not members of the family (i.e., those who are related by blood or marriage). When family households are identified as the unit of analysis, our analysis examines the primary or main family in a family household.

Types of families and family households are further distinguished as follows:

- **Married-couple family**—a family in which the householder and their spouse are listed as members of the same household. Married-couple families may or may not have children. Beginning with the 2013 data, married-couple families include same-sex couples who are married.
- **Single female family**—a family with a female householder living with one or more family members who is not a spouse by marriage. For example, a single female living with her parent(s), children, and/or grandchildren.
  - **Single-mother family**—a family with a female householder living with her own children ages zero to seventeen and no spouse by marriage is present. Single-mother families are a subset of single-female families.
- **Single-male family**—a family with a male householder living with one or more family members who is not a spouse by marriage. For example, a single male living with his parent(s), children, and/or grandchildren.
  - **Single-father family**—a family with a male householder living with his own children ages zero to seventeen and no spouse by marriage is present. Single-father families are a subset of single-male families.

## SUBFAMILY

Subfamilies are families that do not maintain their own household but live in a household where the householder or householder's spouse is a relative.

## CHILD

A child includes a son or daughter by birth, a stepchild, or adopted child of the householder, regardless of the child's age or marital status. The category excludes sons-in-law, daughters-in-law, and foster children.

- Biological son or daughter—The son or daughter of the householder by birth.
- Adopted son or daughter—The son or daughter of the householder by legal adoption. If a stepson or stepdaughter has been legally adopted by the householder, the child is then classified as an adopted child.
- Stepson or stepdaughter—The son or daughter of the householder through marriage but not by birth, excluding sons-in-law and daughters-in-law. If a stepson or stepdaughter of the householder has been legally adopted by the householder, the child is then classified as an adopted child.

## NONFAMILY

A nonfamily refers to a person who either lives alone or shares a home with people to whom they are not related by marriage, birth, or adoption (i.e., they do not live with a family, as defined above). An example would be a person living with unrelated roommates.

## NONBIOLOGICAL CAREGIVER

A nonbiological caregiver is the head of a household with a minor child who does not reside with his/her own parents, and whose relationship to the head of household is that of a grandchild, sibling, in-law, other relative, foster child, or other nonrelative.

## Income Designations

Four income categories are used in *Ka Huaka'i 2021*: poverty, low income, gap, and livable income. These categories are based on common definitions for poverty and low income and previous research on livable income.

The four income categories represent poverty-to-income ratios for families or households. Poverty-to-income ratios are calculated by taking the total family income from the past twelve months and dividing by the poverty threshold appropriate for the individual's family size and composition. The four income categories are calculated as:

- Poverty—the poverty-to-income ratio is less than or equal to 100
- Low income—greater than 100 and less than or equal to 185
- Gap—greater than 185 and less than or equal to 300
- Livable income—greater than 300

## POVERTY

Poverty levels are determined by the poverty guidelines set forth by the US Department of Health and Human Services for Hawai'i. Poverty guidelines are used to determine financial eligibility for certain federal programs. The guidelines are adjusted for different family sizes and for the cost of living in Hawai'i.<sup>4</sup>

The US Census Bureau takes several economic variables into account when classifying households that experience poverty. In terms of income, the 2020 poverty threshold for a family of four (with two children younger than age eighteen) is about \$26,000 a year. The US Census Bureau does not differentiate thresholds geographically.

Poverty guidelines differ from poverty thresholds, which were used in *Ka Huaka'i 2005*. The poverty threshold is updated by the US Census Bureau and is used for statistical purposes to determine the number of individuals living in poverty. The measure is adjusted for different family sizes.

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<sup>4</sup> For more information on poverty guidelines and thresholds, see <http://aspe.hhs.gov/POVERTY/faq.cfm#differences>.

## LOW INCOME

Low-income levels were determined using the poverty guidelines set forth by the US Department of Health and Human Services for Hawai'i. Low income is defined as income between 101 and 185 percent of the poverty guideline. The Hawai'i Department of Human Services uses 185 percent of the poverty guideline as the cutoff for eligibility for many of its income subsidy programs.

## GAP GROUP

The gap group includes households whose income is less than the livable income standard but more than 185 percent of the poverty guideline (i.e., "low income"). "Gap" suggests that these households fall into a category of having too much money to receive public assistance but not enough money to live comfortably.

## LIVABLE INCOME

Livable income is defined as annual income required to provide the basic necessities for a comfortable life (based on the concept of living wage). To determine a suitable unit of measurement for economic well-being, the Economic Policy Institute (EPI) developed a calculator for estimating livable income. The livable income formulas were used in *Ka Huaka'i 2014* and were a modified version of the methods used by EPI's 2013 Family Budget Calculator (Economic Policy Institute 2018). In accordance with EPI's process, we incorporated multiple sources of information about the costs of housing, food, childcare, transportation, healthcare, other necessities, and taxes to create livable income estimates. Data used to determine livable income standards were collected from the US Department of Housing and Urban Development, US Department of Agriculture's Center for Nutrition Policy and Promotion, Child Care Aware of America, Internal Revenue Service, US Department of Health and Human Services, Bureau of Labor Statistics, and the Tax Foundation. ACS 1-year PUMS data were used in the final analysis to determine the proportion of the population that met the livable income standard.

In addition to the EPI's adjustments for family structure and region of residence, we further customized livable income estimates for each household based on household size, number and age of children, travel time to work, and family type. As a result, households of the same size can have different thresholds for livable income based on their unique attributes. Based on the livable income research conducted for *Ka Huaka'i 2014*, the poverty-to-income ratio of 300 as a cutoff for livable income was determined to be an acceptable proxy for standard reporting and is used in *Ka Huaka'i 2021*.

## Public K–12 Education—Hawai‘i DOE

### SCHOOL YEARS

For all Hawai‘i DOE figures in this volume, the years displayed on the x axis represent the end of a given school year. For example, 2017 refers to school year 2016–17. This also applies to cohort data.

### SCHOOL CONCENTRATION OF NATIVE HAWAIIAN STUDENTS

This variable was created by Kamehameha Schools via a special data request from the Hawai‘i DOE. The concentration of Native Hawaiian students, relative to the schools’ total student population, is indicated by three levels:

- Low: less than 25 percent of the school’s student population is Native Hawaiian.
- Moderate: 25 to 50 percent of the school’s student population is Native Hawaiian.
- High: more than 50 percent of the school’s student population is Native Hawaiian.

### ECONOMIC DISADVANTAGE

Economic disadvantage is a classification the Hawai‘i DOE uses as an indicator of school-community poverty. This indicator includes students whose families meet certain income qualifications (e.g., eligibility requirements for free and reduced lunch) and helps administrators determine levels of need for students (Hawai‘i Department of Education 2020a).

It is likely that the definition of economic disadvantage has fluctuated over time. For example, in school year 2015–16, the economic disadvantage count for Hawai‘i DOE data reporting included all students enrolled in schools participating in the Community Eligibility Provision (CEP). This included all schools in the Moloka‘i Complex, Linapuni Elementary, and Mountain View Elementary. All students enrolled in a CEP school received free meals regardless of their family’s income (Hawai‘i Department of Education 2019).

### CHRONIC ABSENTEEISM

Chronic absenteeism is when a student is absent from school for fifteen or more days in a school year, for any reason. In *Ka Huaka‘i 2021*, chronic absenteeism is calculated based on raw attendance counts for each student and may differ slightly from official Hawai‘i DOE chronic absenteeism rates owing to additional circumstances considered by Hawai‘i DOE when calculating rates.

## AP AND DUAL CREDIT ENROLLMENT

For the purposes of *Ka Huaka'i 2021*, AP enrollment counts include enrollment in any AP course. Dual credit enrollment counts include enrollment in any dual credit program (Running Start, Early College, and/or Jump Start) during high school.

## HIGH SCHOOL DROPOUT

Dropout refers to high school students who have not returned to school and have either officially exited as “dropouts” or have an enrollment status that is undetermined (Hawai'i Department of Education 2020a). Dropout data presented in *Ka Huaka'i 2021* account for students who formally withdrew from school, as well as those who stopped attending without any formal notification.

## TIMELY HIGH SCHOOL COMPLETION

Timely high school completion, or on-time graduation, refers to satisfying all high school graduation requirements within four years of beginning high school.

## HAWAI'I DOE—COHORTS OF HIGH SCHOOL STUDENTS

Five cohorts of Hawai'i DOE high school students are analyzed in Chapter 3 to explore the following topics: AP and Dual credit enrollment, high school dropout, and timely high school completion. These high school cohorts include students who began high school in ninth grade and were expected to graduate four years later. Each cohort is identified by the anticipated year of graduation:

- 2013 cohort—entered high school in 2009, anticipated graduation in 2013
- 2014 cohort—entered high school in 2010, anticipated graduation in 2014
- 2015 cohort—entered high school in 2011, anticipated graduation in 2015
- 2016 cohort—entered high school in 2012, anticipated graduation in 2016
- 2017 cohort—entered high school in 2013, anticipated graduation in 2017

## HAWAI‘I DOE—CLASSES OF HIGH SCHOOL STUDENTS

Four classes of Hawai‘i DOE high school students are examined in the “College Completion” section of Chapter 3. These classes differ from the cohorts mentioned above and refer to a group of students who graduated from high school together in a given year and enrolled immediately in college. The four classes are as follows:

- Class of 2011—graduated from high school in 2011
- Class of 2012—graduated from high school in 2012
- Class of 2013—graduated from high school in 2013
- Class of 2014—graduated from high school in 2014

Immediate enrollment refers to students who enrolled in college in the first fall after high school graduation. For students at two-year colleges, we examine three-year graduation rates (150 percent completion rates). For students at four-year colleges, we examine six-year graduation rates (150 percent completion rates).

It is possible that some students may have transferred from one institution to another within the timeframe of our analysis (e.g., transferred from a two-year institution to another two-year institution, or from a two-year institution to a four-year institution, or from a four-year institution to another four-year institution). However, because our analysis was unable to discern which students transferred and where they ultimately earned their degree, two-year college completion percentages for those who transfer from two-year to four-year institutions might be slightly lower than actual percentages.

## Postsecondary Education—University of Hawai‘i

### FIRST FALL ENROLLMENT

Similar to the Hawai‘i DOE college completion data, all UH student cohort enrollment percentages are based on incoming first-year, first-time fall semester enrollment.

### RETENTION RATES

We examine one-year retention rates for student cohorts in the UH system. One-year retention rates represent the percentage of students who completed their first year of college and enrolled in the fall semester of their second year. One-year retention rates are commonly reported and used by universities and colleges as a metric of institutional success, given the high associations between first-year experiences and likelihood of college completion.

## COMPLETION RATES

Our data analyze three completion (graduation) rates for UH student cohorts at two-year colleges:

- **Two-year** graduation rates = satisfaction of graduation requirements for a two-year degree within *two* years (100 percent completion rates); this is generally considered timely, or on-time college completion.
- **Three-year** graduation rates = satisfaction of graduation requirements for a two-year degree within *three* years (150 percent completion rates).
- **Four-year** graduation rates = satisfaction of graduation requirements for a two-year degree within *four* years (200 percent completion rates).

Completion (graduation) rates of UH student cohorts at four-year colleges:

- **Four-year** graduation rates = satisfaction of graduation requirements for a four-year degree within *four* years (100 percent completion rates); this is generally considered timely, or on-time college completion.
- **Six-year** graduation rates = satisfaction of graduation requirements for a four-year degree within *six* years (150 percent completion rates).
- **Eight-year** graduation rates = satisfaction of graduation requirements for a four-year degree within *eight* years (200 percent completion rates).

## INSTRUCTIONAL FACULTY

Data for UH instructional faculty include persons on leave without pay. Reports prior to fall 2000 were based on data from the Office of Human Resources computer reports 1240 and 1243, which excluded persons on leave without pay.

Headcounts (i.e., number of instructional faculty) include employees in their primary position only. For example, an employee with joint appointments, whose total full-time equivalent is equal to 1.00 or greater, is counted as full time in the primary position.

## Crime

Crime data presented in this volume of *Ka Huaka'i* were derived from the Uniform Crime Reporting (UCR) program, which collects crime statistics that are comparable throughout the United States. Hawai'i's UCR program is housed in the Crime Prevention and Justice Assistance division, which collects, reviews, and reports data obtained from Hawai'i's four county police departments.

For information on offense classification and definitions, see the Crime in Hawai'i Uniform Crime Reports at <http://ag.hawaii.gov/cpja/rs/cih/>.

### MEASURING AND REPORTING CRIME

The UCR program does not measure the number of individual people arrested, as one person may be arrested several times during the year, for the same or different types of offenses. Rather, offenses and/or arrests for crimes are counted by the number of victims of the crime or the number of incidents. Additionally, a hierarchy rule is used when compiling the statistical reports. This rule limits crime and arrest counts to the most serious offense, or charge, committed within a single incident, defined as the same time and place. (The offenses of justifiable homicide, motor vehicle theft, human trafficking, and arson are exceptions to this hierarchy rule.) As a result, some crimes are underrepresented in the reports. Furthermore, it is widely acknowledged that offenses known to police are an underrepresentation of the total number of crimes committed. Thus, a truly reliable measure of total crimes committed is difficult to obtain.

### JUVENILE JUSTICE DATA

Several inherent limitations of juvenile justice data help to explain what the data in *Ka Huaka'i 2021* do and do not capture:

1. Not all crime victims report their victimization to the police. Hence, many acts of delinquency are not investigated or adjudicated.
2. Official records document only juveniles who have been "caught" and processed through the system. Juveniles who have been arrested, petitioned, adjudicated, put on probation, or incarcerated may be socially different from those who were never apprehended.
3. Official records may reflect stronger enforcement. For example, if a community or county is especially concerned about a particular type of delinquency, police and courts may act in a more aggressive and punitive manner when addressing those offenses. Shifts in enforcement can vary by time and locale.

4. Official data tend to undercount victimless crimes; for example, drug and alcohol use.
5. Official data rarely account for offenders' prior victimization, which frequently offers important reasons as to why many juveniles engage in various types of delinquency (Gove, Hughes, and Geerken 1985; Hindeland, Hirschi, and Weis 1981).

These limitations may vary from state to state and do not suggest that official justice records are faulty or misleading. Pointing out these limitations serves as a reminder that other forms of data exist that can help to augment official juvenile justice records. For example, the information presented in this report can be supplemented with youth-based self-reporting studies conducted in Hawai'i.

## Work Status

There is not an official definition of full-time work. For *Ka Huaka'i 2021*, we use the following definitions, which align with the Bureau of Labor Statistics' definitions of full-time and year-round employment:

- Full time—35 hours or more per week
- Part time—34 hours or less per week
- Full year—50 weeks or more out of the year
- Part year—49 weeks or less out of the year

## Infant Birth and Mortality Rates

Infant birth reports display the total number of births for residents of Hawai'i by state, county, infant's race/ethnicity, and birthweight in grams for the individual years 2007 to 2016. Infant mortality reports display the total number of deaths for infant (<1 year of age) residents of Hawai'i by state, county, and infant's race/ethnicity for the aggregated years 2007–16. Deaths due to HIV/AIDS are excluded.

For both reports, the data are displayed by selected dimensions and attributes. If a dimension or attribute value is unknown for a particular record, that record will not be included in the counts for that particular dimension.





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## A

- absences, student, 468–**472**, **469**
  - by school concentration of Native Hawaiian students, 470–**471**, **498**
  - by region, **472**
- abuse (*see also* domestic violence; drugs; alcohol use; substance abuse)
  - child, 71, 282–84, **283**
  - domestic, 50, 71, 72, 383
  - emotional
    - by county, **384**
  - physical, 383
    - by county, **385**
  - sexual, 72, 387
    - by county, **356**, **386**, **388**
- academic achievement, 88, 337, 449–**467**
  - changes in DOE standardized tests, 451–53, **452**
  - language arts, **452**, 453–**458**, **454**, **455**
    - by region, 457–**458**
    - by school concentration of Native Hawaiian students, 456–57, **456**, **498**
  - mathematics, **452**, 453, 458–**463**, **459**, **460**
    - by region, **463**
    - by school concentration of Native Hawaiian students, 461–63, **462**, **498**
  - science, 464–**467**, **464**, **466**
    - by region, **467**
- achievement gap, 88, 426, 457, 461, 465, **466**
- activism, 34, 74
- adults, families, and communities
  - educational well-being, 207–62
  - material and economic well-being, 88–134
  - physical well-being, 135–94
  - social well-being, 50–87
  - spiritual and emotional well-being, 195–206
- advanced placement, 483, 484–**487**, **485**
  - by region, 486–**487**
- affordable housing. *See* housing.
- ‘Aha Pūnana Leo, 76
- ‘āina, 32, 33, 45, 72, 73, 196, 197, 334, 335, 362
  - ‘āina-based education, 44
- alcohol use, 157–61, **160**, **193**, 316, 404, 406–**409**
  - by county, **158**, 318, **358**, **406**, **408**
- aloha ‘āina, 32–36, 41, 44, 264
- asset limited, income constrained, employed (ALICE), 94, 107, 290
- arrests (*see also* incarceration), 79–85; by county, **356**, **358**
  - aggravated assault, 80
    - by county, **82**, **356**
  - drug manufacturing, by county, **84**, **358**
  - juveniles (*see also* juvenile justice), 80, 355, 357
    - by county, **356**, **358**
  - robbery, 80
    - by county, 83, **356**
  - violent crime, by county, **81**, 357, **358**
- asthma, 400–**401**, 469

## B

- births (*see also* maternal characteristics; prenatal care), 22–24, **22**, **23**, 319–26
- birthweight, 319–**322**, **320**
  - by county, **322**
- infant mortality, 324–**325**
  - by county, **325**, 326
- premature, 319, 326

## C

- cancer, 177–80
  - incidence and mortality rates, **178**, **179**
- caregiving, nonparental
  - foster care, 282
  - nonbiological, **281**, 350–**352**, **351**
- charter schools (*see also* ‘Aha Pūnana Leo; Hawaiian-focused charter schools), 429, **430**
- childcare (*see also* early learning; preschools), 298, 300–03
  - by county, **310**
- childhood, early (*see also* families with children; families, with young children)
  - educational well-being, 298–311
  - material and economic well-being, 290–97
  - physical well-being, 312–26
  - social well-being, 276–89
- children, school-age (*see also* families, with children; families, with school-age children)
  - educational well-being, 423–99
  - material and economic well-being, 362–73
  - physical well-being, 390–422
  - social well-being, 341–61
  - spiritual and emotional well-being, 374–89
- civic engagement, 44, 207
- collective efficacy, 33–36, 50
- college (*see also* educational attainment; postsecondary education; University of Hawai‘i), 128, **129**
  - advanced placement (*see* advanced placement)
    - completion, 43, 103, 215–22, **216**, **220**, 491–**496**
      - by region, **217**, **218**, 221, **222**
      - two-year colleges, 491–**493**, **492**
        - by region, **493**
      - four-year colleges and universities, 494–**496**, **494**
        - by region, 495–**496**
  - enrollment (*see also* University of Hawai‘i, enrollment), 43, 208, 209, 211–**214**, **212**, **223**, 483, 491
    - by region, 213, **214**

- retention rates (see University of Hawai'i, retention rates)
  - survival rates, 223
  - working while attending, 251–**253**, **252**
  - community
    - challenges, 78–**86**
    - connections, 73, 74, 338
    - resources, 77
    - service and involvement, 75, 76
    - strengths, 72–78
  - cost of living, 89, 107, 125
  - COVID-19 pandemic, 49, 68, 98, 142
    - educational well-being, 430
    - material and economic well-being, 98, 328
    - physical well-being, 37, 142, 161, 194, 393
    - social well-being, 78, 284
    - spiritual and emotional well-being, 199
  - crime (see also arrests; incarceration; juvenile justice), 79–87
    - by region, **86**
- D**
- depression (see also suicide), 202–06, **205**, 376–**377**
    - by county, **203**, 204, **377**
  - diabetes, 164–67, **166**, **193**
    - by county, **165**
  - diaspora. See migration.
  - disabilities, 161, 180–88, **183**, **193**; by county, **181**; by region, **184**
    - ambulatory, 180, 182–83
    - cognitive, 180, 184, 185–**188**
      - by county, **186**
    - independent living, 189–**191**
      - by county, **190**
    - physical, 184
  - disease (see also cancer; diabetes; heart disease; physical health), 161–80
  - domestic violence (see also abuse), 71, 72
  - dropout. See graduation, high school; University of Hawai'i, retention rates.
  - drugs (see also alcohol; marijuana use; substance abuse)
    - abuse, 71, 320
    - manufacturing and sale, 80, 357
      - by county, **84**, **358**
    - use, **409**, 416–**418**
      - by county, **408**
  - dual credit, 483, 487–**490**, **489**
    - by region, **490**

**E**

- early learning. See childcare; preschools.
- earnings (see also income), 103–05, **104**, 107, 199
- economic disadvantage, 431–**434**, **432**
  - by region, 433–**434**
  - by school concentration of Native Hawaiian students, **498**
- educational attainment (see also college; graduation; postsecondary education; University of Hawai'i), 59, 80, 107, **144**, **149**, **152**, **153**, **156**, **160**, **163**, **166**, **168**, **175**, **176**, **183**, **188**, **191**, **193**, 199, **201**, **205**
  - earnings affected by, 43, **104**, 105
  - high school (see also graduation, high school), 59
    - of parents, effect on children, 346
    - of parents, with children, 94, 258–61, **259**, **260**, 261, 284–86, **285**, 363–**364**
- educational well-being, 15–16
  - adults, families, and communities, 207–62
  - childhood, early, 298–311
  - children, school-age, 423–99
- emotional well-being. See spiritual and emotional well-being.
- employment (see also occupations; unemployment), 97–102, **97**, **99**, **129**, 209, 291–**292**
  - by region, 100, **101**, **102**

**F**

- families (see also household; 'ohana), 213
  - challenges, 70, 71
  - income (see income, families)
  - married-couple (see parents, married-couple)
  - nonfamily, **52**, **53**
    - by region, **54**, **55**
  - single-parent (see parents, single)
  - strengths, 70
  - structure, 51–57, **52**, **55**, **56**, 277, 278–82, 286–89, 343–**352**
    - by region, **54**
    - with children, **56**, 57, 94, **351**, **365**
      - by region, **58**, **367**, **368**
    - with school-age children (see also household, with school-age children), 20, 343, **344**, **345**, **348**, **349**, **352**, **364**, **366**, **370**, **371**, **372**
    - with young children, 278, **279**, **280**, **285**, 286–89, **292**, 293, **294**, 295, **296**, **297**
      - by region, **286**, **287**
- financial aid. See preschools, financial aid; University of Hawai'i, financial aid.
- food security, 392–**394**
  - by county, **394**
- food stamps. See public assistance programs.
- foster care. See caregiving, nonparental.

## G

- gender differences
  - educational outcomes, 213, 215, 227, **228**, 229, **230**, 233–**248**, **233**, **235**, **237**, **239**, **240**, **242**, **244**, **246**
  - financial aid, **255**
  - jobs, 107
  - mortality, 21, 177, **178**, **179**
  - poverty, 108
- graduation (*see also* educational attainment)
  - college (*see* college; postsecondary education; University of Hawai‘i)
  - high school (*see also* students, public schools), 209, 468, 480–**482**, **481**
    - by region, **482**
    - dropout, 477–**479**, **478**
- grandparents (*see also* kūpuna), 46, 68–70, **69**, 270, 276, 277, 286–89, **286**, 348–**349**
  - by region, 70, **287**, **288**

## H

- Hawaiian culture-based education, 35–36, 43, 299, 336–38
- Hawaiian-focused charter schools, 43, 337, 429
- Hawaiian Home Lands, 125
- healthcare (*see also* health insurance), 137–**144**, 177
  - doctor visits, 142–**144**, **193**
    - by county, **143**
  - Native Hawaiian physicians, 142, 194
- health insurance (*see also* healthcare), 137–**141**, **138**
  - by region, 140, **141**
  - public health, **139**
- heart disease, 170, **193**
  - by county **171**
  - heart attack and stroke, 172–**176**, **175**, **193**
    - by county, 172, **173**, **174**
  - high blood pressure, 167–**168**, **193**
    - by county, **167**
  - high cholesterol, by county, **169**
- household (*see also* families; housing)
  - density, 59–**62**, **59**, **60**
    - by region, **61**, **62**
  - income (*see* income, families)
    - spent on housing, by region, **132**, **133**
  - multigenerational, **69**, **286**, **349**
  - public assistance, **117**, **118**, 119, **120**, **121**
    - by region, 122–25, **123**, **124**
  - types, by region, **54**, **55**
  - with school-age children (*see* families, with school-age children)
  - with young children (*see* families, with young children)

- housing, 125–34
  - homeownership, 125, 128, **129**
  - owner-occupancy, **126**, **127**
    - by region, **130**, **131**
  - rent, by region, **132**, **133**

## I

- incarceration, 79, 80, 85–87, 153
  - by region, **83**, **84**, **86**
- income (*see also* earnings), 89–**96**, 103, 290
  - effects on health, 144, 156, 166, 171, 182, 187, 190, **193**
  - effects on postsecondary education, 217
  - families, 88, **90**, **92**, **93**, **111**, 112, 293–**296**, **294**, 369–73, **371**, **372**
    - by region, 94–**96**, **95**, **116**
  - poverty (*see* poverty)
  - spent on rent, by region, **132**–**133**

## J

- juvenile justice, 354–61
  - arrests, 355–61
    - by county, **356**–**358**
  - delinquency, **360**

## K

- Kamehameha Schools, 75, 198, 336
  - regions, **426**
- Kū Kia‘i Mauna Kea, 33–34
- kula kaiapuni, 76, 429, **465**
  - academic achievement, 450, 451, **452**
    - language arts and mathematics, **452**
    - science, **464**, **466**
      - by region, **467**
- kūpuna (*see also* grandparents), 46, 68, **69**, 276, 348

## L

- leadership (*see also* ‘Ōiwi leadership), 75

## M

- marijuana use (*see also* drugs; substance abuse),  
404–**405**  
by region, **405, 408**
- Mālama Honua Worldwide Voyage, 34–35
- material and economic well-being, 9–10, 44  
adults, families, and communities, 88–134  
childhood, early, 290–**297**  
children, school-age, 362–73
- maternal characteristics, 313–18; by county, **314**  
age of mothers, 315–16, **315**  
births (*see* births)  
breastfeeding, 323  
postpartum depression, 323  
preconception obesity, 316  
prenatal care (*see* prenatal care)  
unintended pregnancies and abortion, 317
- Mauna Kea, 33–34
- Medicaid (*see also* health insurance; public  
assistance programs), 138, **139**
- mental health (*see also* spiritual and emotional  
well-being), 199–206, **201**  
by county, **200**
- migration, 22–26, **22, 23, 25**, 49, 73, 128, 427  
diaspora, 17, 73  
out-migration, 21, 49
- mortality rates, 22–24, **22, 23**  
cancer, 177–80, **178, 179**  
infant, 324–**325**  
by county, **325, 326**

## N

- nutrition, 145, 392–**396**  
fruits and vegetables, 145–**146, 193, 395**  
by county, **146, 396**

## O

- obesity, 145, 150–**152, 193**, 316, 402–**403**  
by county, **151, 403**
- occupations (*see also* employment), 105–07, **106**
- ‘ohana (*see also* families), 42, 50, 72, 73, 276, 341, 361
- ‘Ōiwi leadership, 74–76
- ‘ōlelo Hawai‘i, 76–77

## P

- parents (*see also* parents, single), 79, 100, 107  
educational attainment of parents with children,  
258–61, **259, 260, 363–364**  
educational attainment of, effect on children,  
153, 346  
married-couple, 51, **52, 53, 280, 345**  
by region, **54, 55**  
talk with children about risky behaviors,  
408–**409**, 415, **416, 419**  
by county, **409, 421**  
working, **292, 365–366, 365**  
by region, **367, 368**
- parents, single (*see also* parents), 63, 107, 277, 278,  
341  
single-father families, 51, **52, 53, 54, 55, 63, 280,**  
**345, 346**  
single-mother families, 51, **52, 53, 54, 55, 63–67,**  
**64, 65, 117, 122, 278, 280, 345, 346–348**  
by region, **66, 67**  
working (*see* parents, working)
- Pell grants. *See* University of Hawai‘i, financial aid.
- physical activity, 145, 147–**149, 193, 397–399**  
by county, **148, 398, 399**
- physical health, 161–**163, 193**  
by county, **162**
- physical well-being, 13–15  
adults, families, and communities, 135–94  
childhood, early, 312–26  
children, school-age, 390–422
- population characteristics, Native Hawaiian, 17–31  
adults, families, and communities, 46–49  
age distribution, **19, 20, 30**  
geographic distribution, 21  
growth, 17, **18, 273, 274**  
preschool-age, 20, **275**  
projections, 26–31, **27, 28, 274, 275, 339, 340**  
by age, **30**  
by county, **29**  
retirement age, **48**  
school-age children, 20, 339–**340**  
size, 21–24, **22**  
trends, **4, 22, 23, 25**  
working-age, 46, **47**  
young keiki, 273–76, **274**  
youth, **210**
- postsecondary education (*see also* college;  
educational attainment; University of Hawai‘i),  
103, 207–09, 223, 232  
bachelor's degree or higher, 26, 128, **129,**  
**215–218, 216**  
by region, **217, 218**  
career and technical, 209, 488  
graduate or professional school degree  
(*see also* University of Hawai‘i, degrees  
conferred), 43, 219–**222, 220**  
by region, 221–**222**

poverty (*see also* income), **92, 93**, 107–116, **109, 110**, **111**, 294–97, **294, 296, 297**, 369–73, **370**  
 by region, **96**, 112, **113, 114, 116**, 122  
 families, **92, 93, 111**, 294–297, **294, 296, 297**, 369–73, **371, 372**  
 individuals, **109, 110**  
 pregnancy. *See* births; maternal characteristics.  
 prekindergarten. *See* preschools.  
 premature births, 319, 326  
 prenatal care, 312, 316–318  
 by region, **318**  
 preschools (*see also* childcare; early learning), 76, 298–99, **307**  
 accessibility, 302, 311  
 attendance, 302, 309  
 enrollment, 271, 302, 303–308, **304, 306, 307**  
 by region, **308**  
 financial aid, 310–11  
 by county, **310**  
 teachers, 300  
 outcomes, 309  
 projections, **275**  
 public and private investments, 309–11  
 by county, **310**  
 principals  
 by school concentration of Native Hawaiian students, 439, **440, 498**  
 retention, 438, 439–440  
 prison. *See* arrests; incarceration.  
 private schools  
 enrollment, **430**  
 preschools (*see also* preschools), 302  
 public assistance programs (*see also* poverty), 107, 117–25, 369  
 by region, 122  
 food stamps, 119–22, **120, 121**  
 by region, **124**  
 income, **117**, 118–19, **118**  
 by region, **123**  
 public schools, 425; by region, **426**  
 achievement (*see* academic achievement)  
 educational outcomes by school concentration of Native Hawaiian students, 497–498  
 enrollment, 427–431, **428, 430**  
 by region, 430–431  
 preschools (*see also* preschools), 303  
 special education (*see* special education)  
 staffing (*see* teachers)  
 students (*see* students, Native Hawaiian; students, public schools)  
 Pūnana Leo. *See* ‘Aha Pūnana Leo.

## S

safety, 74  
 sexual behavior, 419–22  
 by county, **420, 421**  
 smoking, 153–57, **156, 193**, 317, 410–416  
 by county, **155**, 318, **409, 411, 413**  
 secondhand, 410, 414, 415  
 vaping, by county, **414**  
 social well-being, 8–9  
 adults, families, and communities, 50–87  
 childhood, early, 276–89  
 children, school-age, 341–61  
 special education, 435–38  
 enrollment, 435, **436**  
 by region, **437**  
 by school concentration of Native Hawaiian students, 438, **498**  
 spiritual and emotional well-being, 11–13  
 adults, families, and communities, 195–206  
 children, school-age, 374–89  
 spirituality, 196–97, 327  
 religion, 8, 11, 197  
 students, Native Hawaiian, 339, **428**  
 absences, 468–472, **469**  
 by school concentration of Native Hawaiian students, 470–471, **498**  
 by region, **472**  
 achievement (*see* academic achievement)  
 economic disadvantage, 432–33, **432**  
 by region, 433–434  
 educational outcomes, by school concentration of Native Hawaiian students, **498**  
 enrollment, by region, **431**  
 discipline, 355  
 special education (*see* special education)  
 students, public schools, 427–38  
 absences, 468–472, **469**  
 by school concentration of Native Hawaiian students, 470–471, **498**  
 by region, **472**  
 achievement (*see* academic achievement)  
 dropout, 477–479, **478**  
 by region, **479**  
 economic disadvantage, 431–434, **432**  
 by region, 433–434  
 enrollment, **428**  
 grade retention, 473–476, **474**  
 by region, **476**  
 by school concentration of Native Hawaiian students, **475, 498**  
 special education (*see* special education)  
 substance abuse (*see also* alcohol use; drugs; marijuana use), 153–61, **193**, 316–17  
 suicide (*see also* depression; mental health), 206, 376, 378–83  
 by county, **379, 381, 382**

## T

### teachers

experience and credentials, 443–49  
 by school concentration of Native Hawaiian students, 438, 443–49, **444, 445, 447, 448, 498**

preschools (*see* preschools)

representation, Native Hawaiian, 271–72, 438

student-to-teacher ratios, by school concentration of Native Hawaiian students, 441–**442, 498**

tobacco use. *See* smoking.

### trauma

cultural, 12–13, 197

historical, 78, 195, 197, 206

## U

unemployment (*see also* employment), 291

University of Hawai'i (*see also* educational

attainment; college; postsecondary education)

community colleges, 234–38, **235, 236, 237**

degrees conferred, 249–**250**

graduation, 231–**248, 233, 235, 237, 239, 240, 244, 246**

enrollment, 208, 224–31, **225, 228, 229, 230, 243**

faculty representation, Native Hawaiian, 43, 224, 256–**257, 491**

financial aid, 254–**255**

retention rates, 231–**248, 233, 235, 237, 239, 240, 242, 244, 246**



*Ka Huaka'i 2021* is a holistic assessment of education and well-being for Native Hawaiians. As an example of 'Ōiwi scholarship, this volume contextualizes recent research and data using the “Pua Model” to examine Native Hawaiian strengths and well-being in multiple dimensions: social, physical, educational, material/economic, and spiritual/emotional. 'Ike is presented at the macro level—for the lāhui and Ka Pae 'Āina Hawai'i—and by specific regions and age groups. Findings point to both positive gains and persistent challenges for Kānaka Maoli, highlighting the importance of Hawaiian culture-based education as a pathway for learners to build a bright future for generations to come.

The journey to document the educational status and well-being of Native Hawaiians began with the *Native Hawaiian Educational Assessment* in 1983 and 1993, followed by *Ka Huaka'i 2005* and *2014*.

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