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 maikaʻi ke kalo i ka ʻohā—*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, Hawaiʻi'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 Hawaiʻi 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 Aʻo (HĀ) and championed its system-wide adoption. HĀ, referring to breath, is an ʻŌiwi (Native) framework for schools, teachers, and learners "to develop the skills, behaviors and dispositions that are reminiscent of Hawaiʻi's unique context, and to honor the qualities and values of the Indigenous language and culture of Hawaiʻi" (Hawaiʻi Department of Education, n.d.[d]). Instilling a deep commitment to Hawaiʻi within all learners is one of the Hawaiʻi DOE's "Five Promises" highlighted in the 2030 Promise Plan (Hawaiʻi 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, ʻohana (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 ʻōlelo Hawaiʻi [Hawaiian language] and ʻike Hawaiʻi [Hawaiian knowledge] foundation" (Kanaeokana 2017).

Growth of Hawaiian culture-based education across Hawaiʻi's k–12 system coincides with other significant trends. Increased threats to our environment and anxiety over food security fuel concern for Hawaiʻi's ecological health. ʻĀina (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 ʻāina-based programs reinforcing the value of mālama ʻāina (land stewardship) among school-age and adult learners (Blaich 2003; hoʻomanawanui 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 ʻohana and ʻohana uplifting communities. A persistent obstacle, however, is that while these stories are unfolding across our ʻāina, 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 Hawaiʻi DOE—as Hawaiʻi'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 Hawaiʻi.

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 Hawaiʻi 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, Keahiolalo, 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; Kanaʻiaupuni, 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 (Kanaʻiaupuni, 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).

Cultural connectedness promotes resilience, self-esteem, and positive educational outcomes and serves as a protective factor against trauma, depression, discrimination, substance abuse, and alcoholism.

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; Kanaʻiaupuni, 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 (Kanaʻiaupuni, 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).

Student engagement and belonging are improved when Native Hawaiian culture-based education practices are used (Dee and Penner 2017; Kanaʻiaupuni, 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 (Kanaʻiaupuni, 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 Hawaiʻi, 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 (Kanaʻiaupuni, 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-Kaʻōpua 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 Hawaiʻi’s education system, forging innovative community–school partnerships and contributing leadership and support for social movements such as Mauna Kea and Mālama Honua.

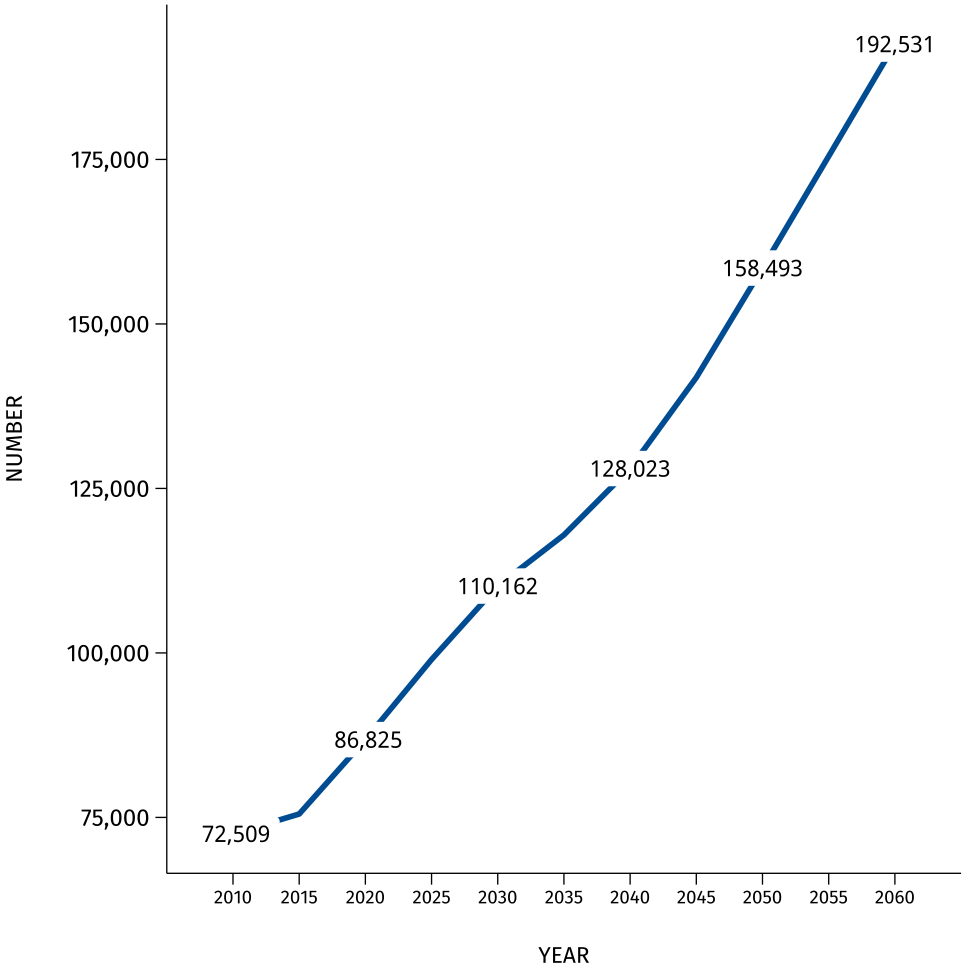
POPULATION— SCHOOL-AGE CHILDREN

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 Hawaiʻi
[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 ʻohana. ʻOhana 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. ʻOhana serves as a key social institution for our keiki, our culture, and our traditions; within the ʻohana grow the foundations for learning and socialization.

As keiki develop, the ʻohana 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 ʻohana. For Native Hawaiians, ʻohana is more than a physical familial structure—it is the very preservation of Hawaiian identity and culture (Kanakaʻole 2010; Kanaʻiaupuni 2004).

The changing dynamics of ʻohana 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 Hawaiʻi, 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 (Waldfogel, 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 ʻohana 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 moʻopuna (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 Hawaiʻi, 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

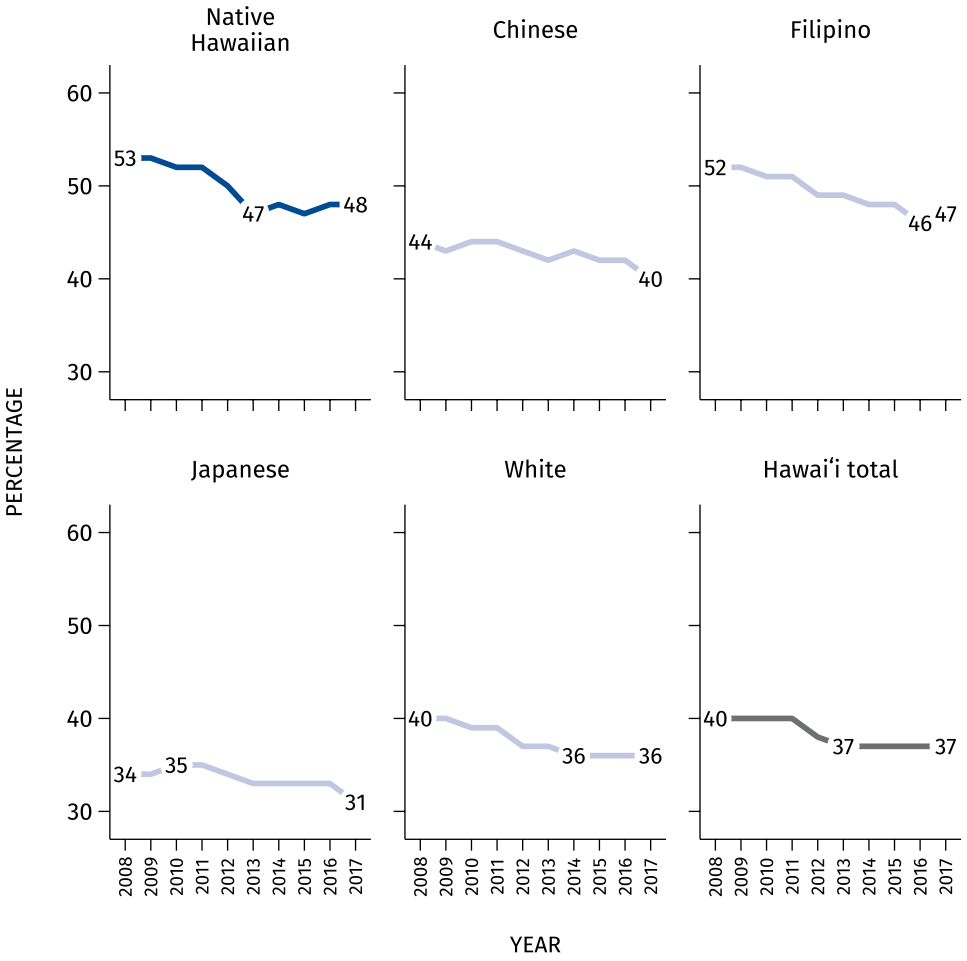
Conditions in the family home impact child well-being (Blackwell 2010). Information about children's family structure may provide a rough indicator of the stability of the home environment (i.e., low-conflict, low-stress, quality time with adults, etc.). In this section, we examine the composition of 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,[1] 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).

[1] 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, Hawaiʻi, 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.

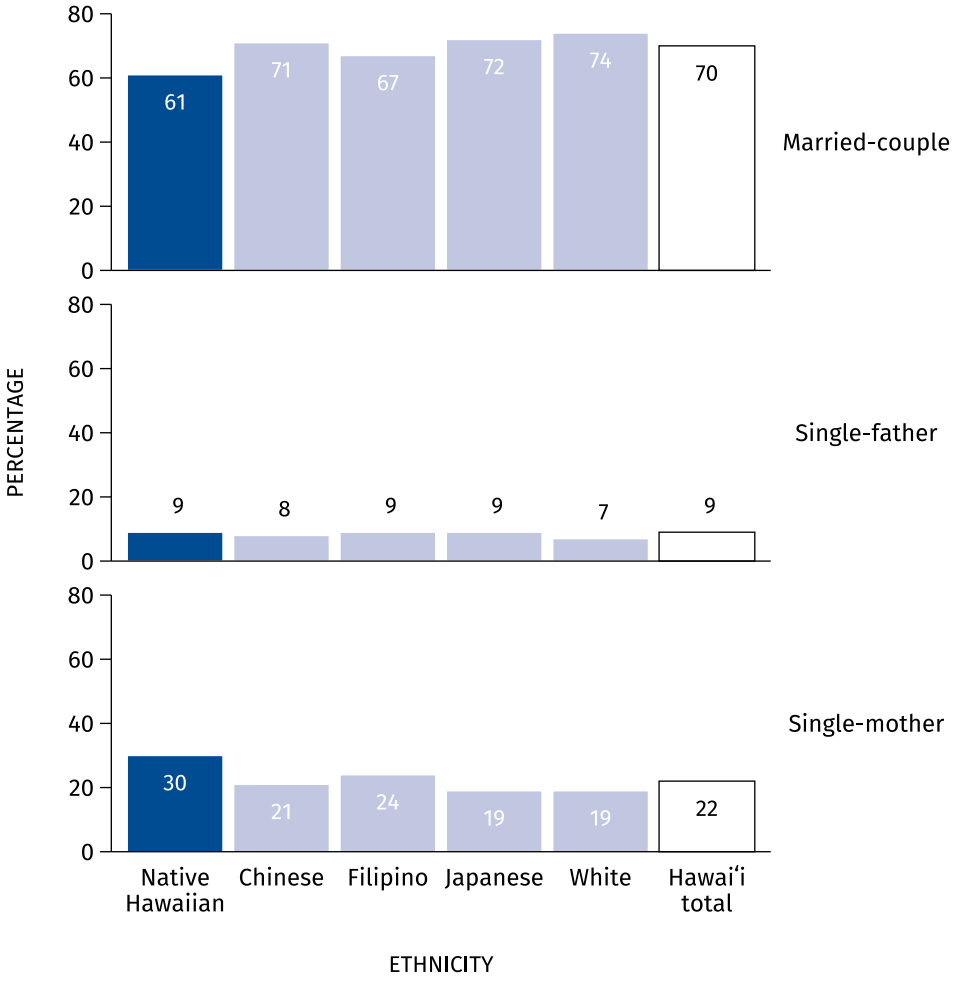
Note 2: The designation "White" in this chart refers to non-Hispanic Whites, alone or in combination with other ethnicities, as defined by the American Community Survey.

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 seventeen decreased among all major ethnicities in Hawaiʻi.
- Looking at Hawaiʻi'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 Hawaiʻi and higher than the Hawaiʻi total (22 percent).
- Conversely, 61 percent of Native Hawaiian school-age children live in married-couple families, compared with the Hawaiʻi 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 Huakaʻi* we present data on single-mother families. Reasons for this include:

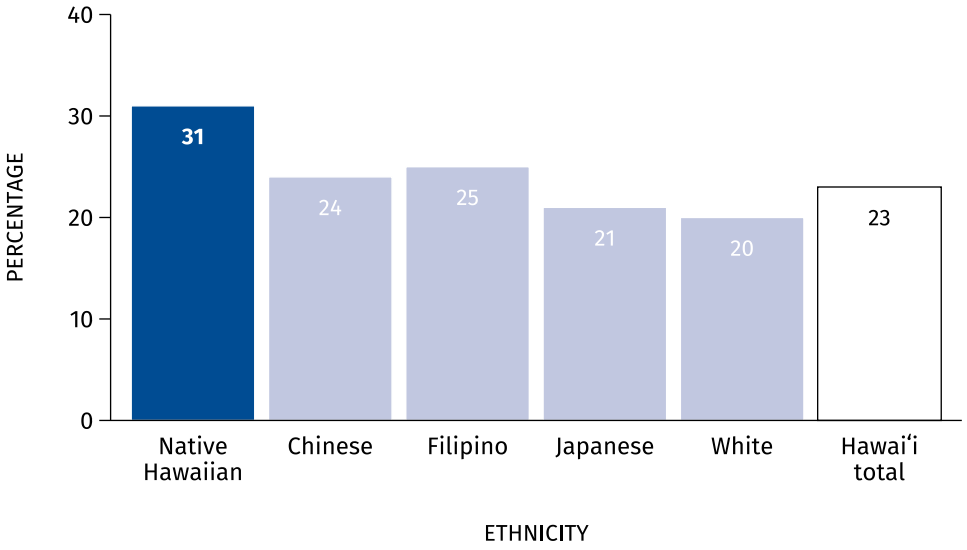
1. Most research and scholarship on single parenthood has focused on mothers (Lancet Public Health 2018).
2. Most custodial parents, or parents who share a home with a child and who generally have legal custody of a child, are mothers. In 2018, for example, 80 percent of 12.9 million custodial parents 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, Hawaiʻi, 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.

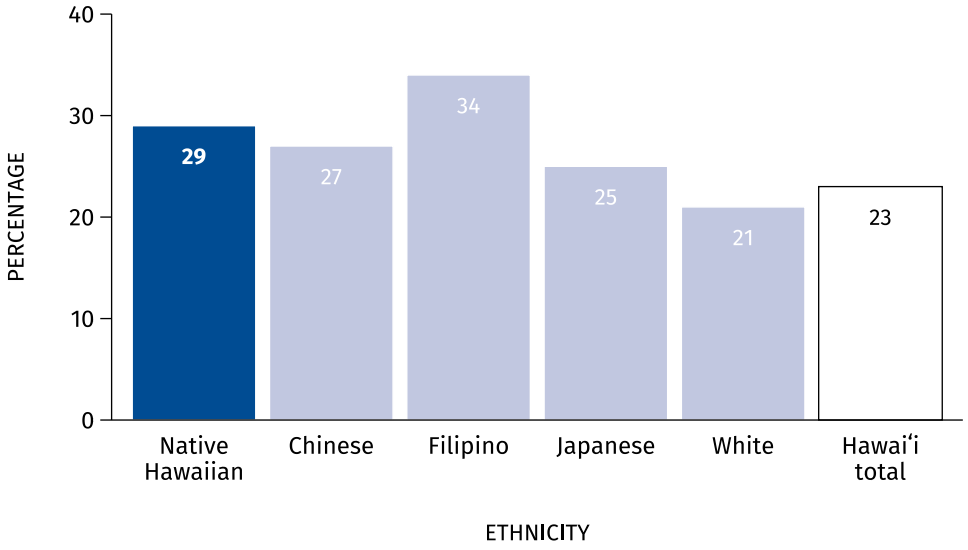
- Among Native Hawaiian families with school-age children, 31 percent are single-mother families, compared with the Hawaiʻi total of 23 percent—a difference of 8 percentage points.
- Among the major ethnicities in Hawaiʻi, White and Japanese families with school-age children have the lowest proportion 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 moʻopuna 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 moʻopuna to listen and perpetuate cultural and ʻohana 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.

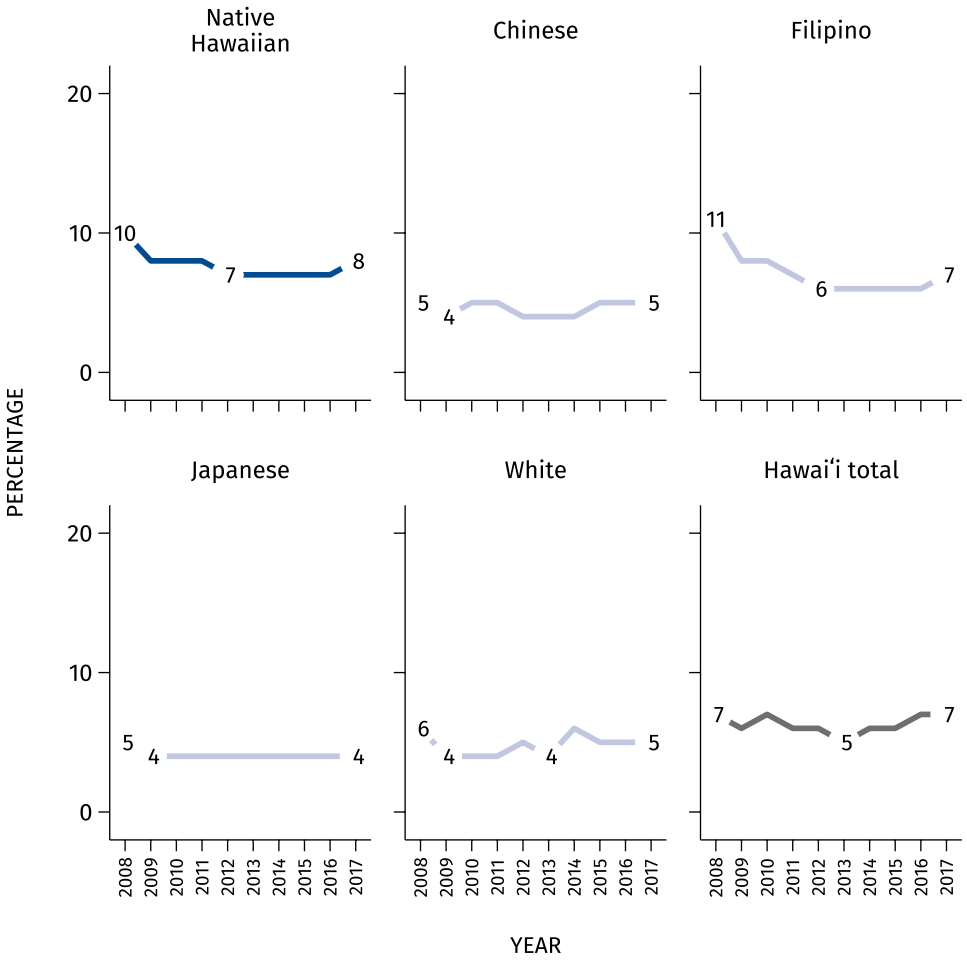
- For the Hawai‘i total, nearly one-quarter (23 percent) of households with school-age children have a grandparent living in the household.
- Among Native Hawaiian households with school-age children, 29 percent have a grandparent living in the household—6 percentage points higher than the Hawai‘i total.
- 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 ʻohana shared the responsibility of raising children. In this practice, both siblings and cousins are considered brothers and sisters; parents, aunts, and uncles are mākua; 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 mākua 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

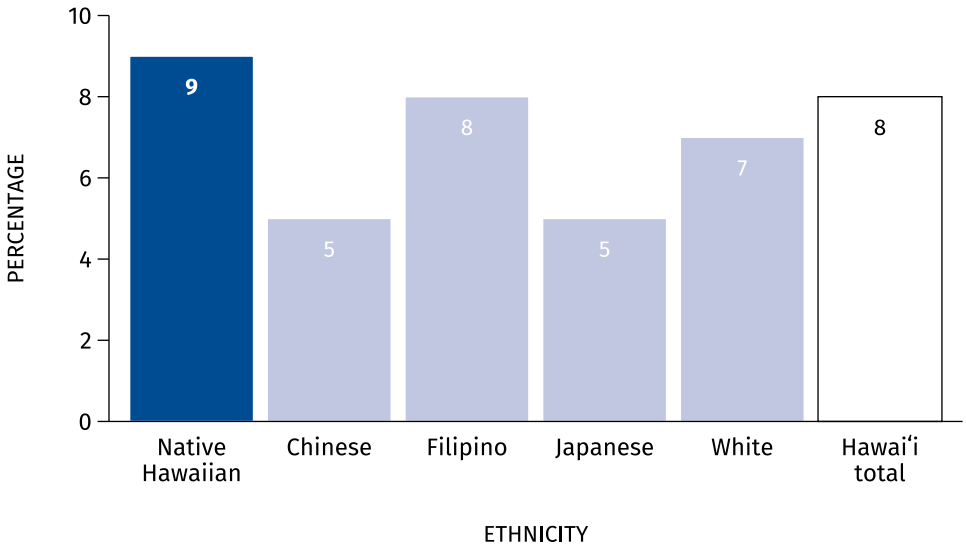
Note 1: The designation "White" in this chart refers to non-Hispanic Whites, alone or in combination with other ethnicities, as defined by the American Community Survey.

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, Hawaiʻi, 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 Hawaiʻi'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 Hawaiʻi 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 ʻāina, 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 (Kanaʻiaupuni, 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 Hawaiʻi, this situation disproportionately affects Native Hawaiian youth and adults, who are overrepresented in the criminal justice system.

In the Hawaiʻi 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 (Hawaiʻi 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 Hawaiʻi. Native Hawaiian youth had the second-highest arrest rates for larceny-theft (47 per 10,000) statewide, 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, Hawaiʻi, 2016]

County	Ethnicity	Aggravated Assault	Arson	Burglary	Larceny/ Theft	Motor Vehicle Theft	Murder	Rape	Robbery
Hawaiʻi 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
Kauaʻi 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), Hawaiʻi 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, Hawaiʻi, 2016]

County	Ethnicity	Violent Crime	Property-related	Drug manufacturing/sale	Drug Possession	Alcohol-related	Other	Status
Hawaiʻi 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
Kauaʻi 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

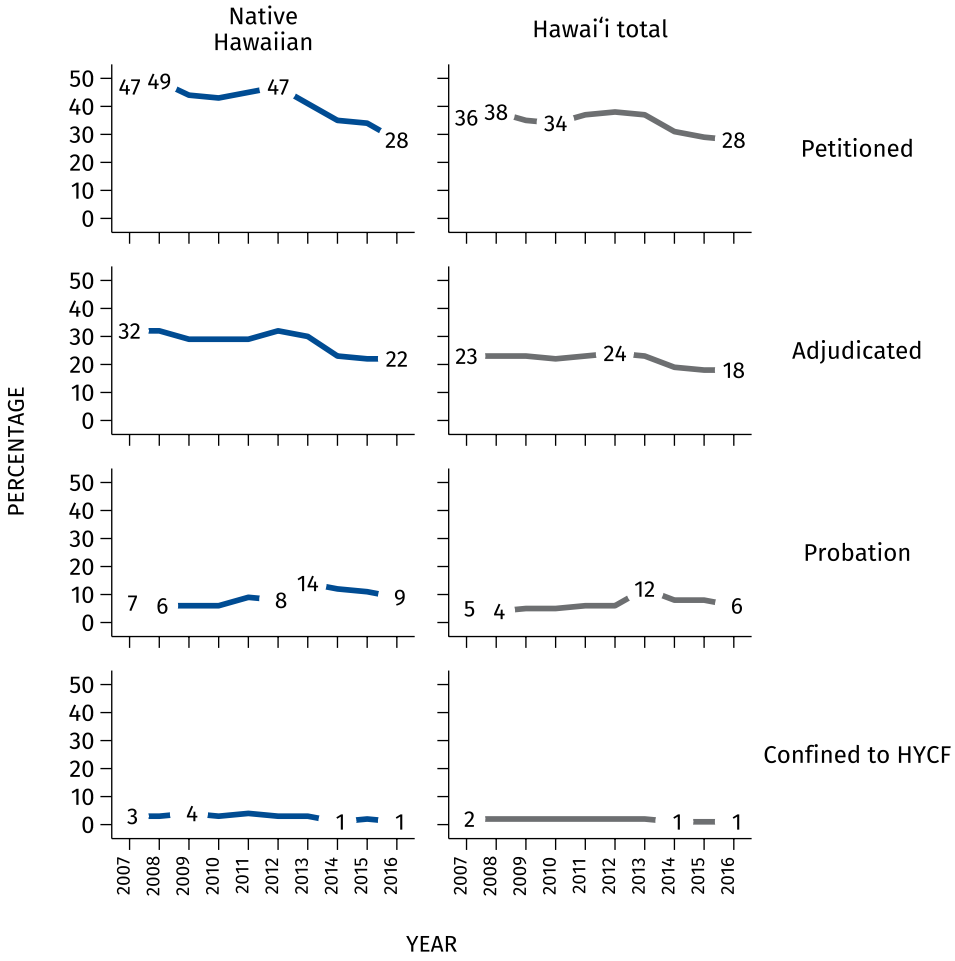
Data source: A Review of Uniform Crime Reports (years 2015 and 2016 combined), Hawaiʻi Department of the Attorney General, Crime Prevention and Justice Assistance Division, Research and Statistics Branch

- 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 Hawaiʻi, 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 Hawaiʻi 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, Hawaiʻi, 2007 to 2016]



Data source: Juvenile Justice Information System, Crime Prevention and Justice Assistance Division, Department of the Attorney General, State of Hawaiʻi, 2018. Juvenile Delinquency Trends in Hawaiʻi: 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 ʻohana 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 ʻohana a keiki’s first kumu. And as noted in the research, the significance of ʻohana 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, ʻohana and community experiences set the path for learning in life. “ʻIke aku, ʻike mai, kōkua aku, kōkua mai; pela iho la ka nohona ʻohana—*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 ʻāina, ʻohana, and moʻokūʻauhau (genealogy), which are intrinsically linked. Our kūpuna and cultural practices are rooted in the understanding that the health of the ʻāina is a reflection of the health of its people.

With care of our lands, water, and resources, in return, the ʻāina provides crops, shelter, tools, medicine, and clothing. This sentiment is captured in the famous Hawaiian proverb, "He aliʻi ka ʻāina; he kauwā ke kanaka—*The land is a chief; man is its servant*" (Pukui 1983, 62). ʻĀina exists, breathes, provides, and nourishes so long as humans need it, care for it, and work it to live. This ʻōlelo noʻeau 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 ʻohana 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 (Kanaʻiaupuni 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.

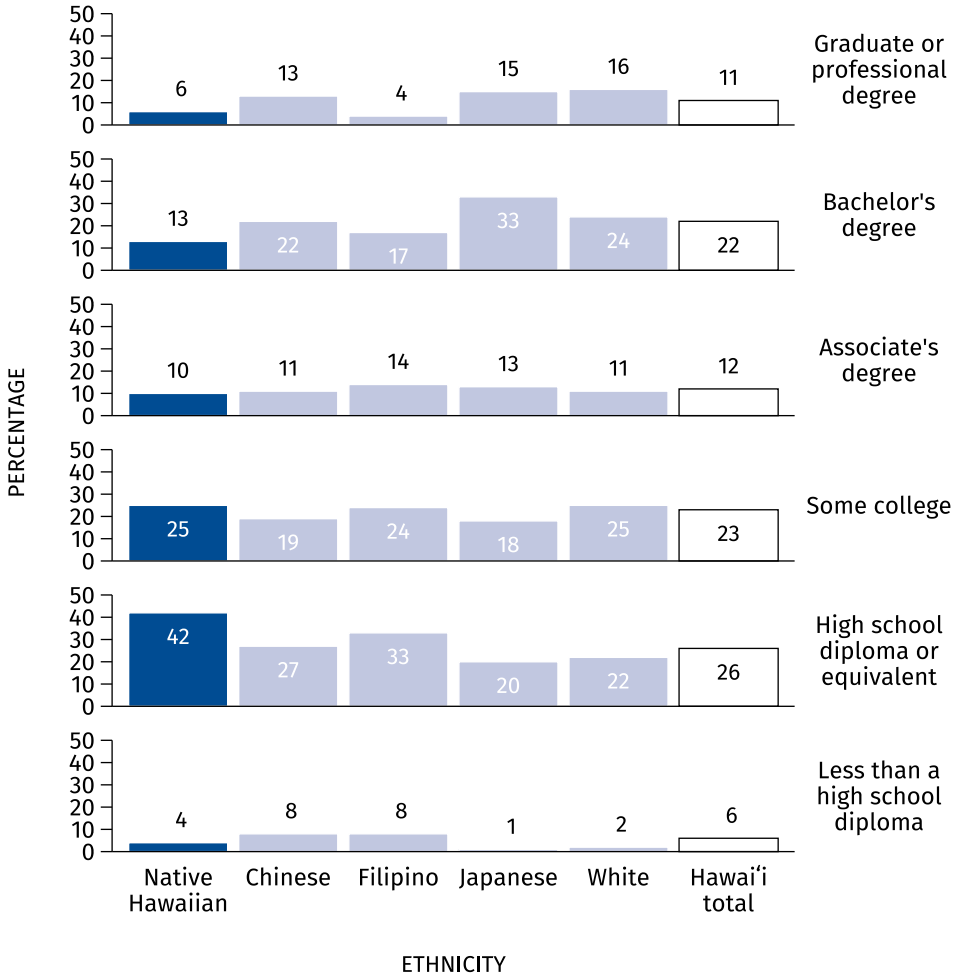
In the narrative that follows, we present the details on families with school-age children, focusing on parental education and employment (including having one parent working in the labor force), and family income and poverty.

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 Hawaiʻi 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, Hawaiʻi, 2017]



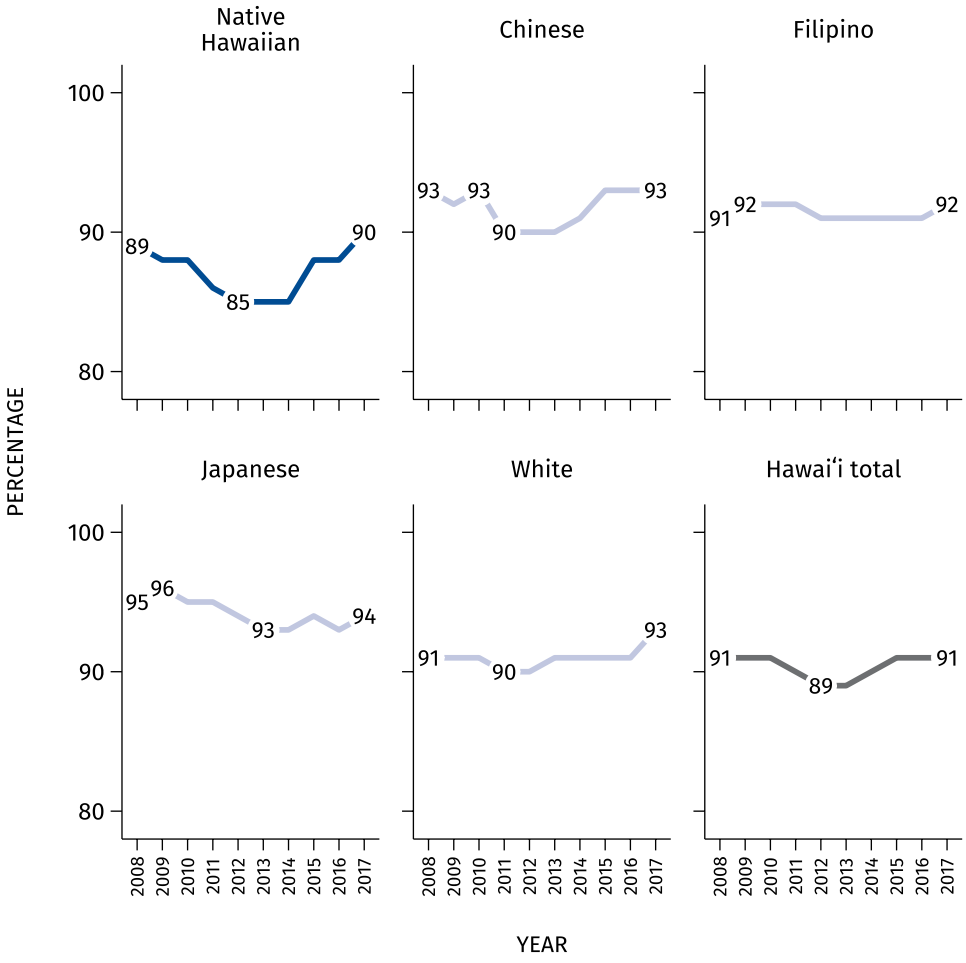
Data source: US Census Bureau, American Community Survey, Public Use Microdata Sample 5-year file

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 Hawaiʻi 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 Hawaiʻi.

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.

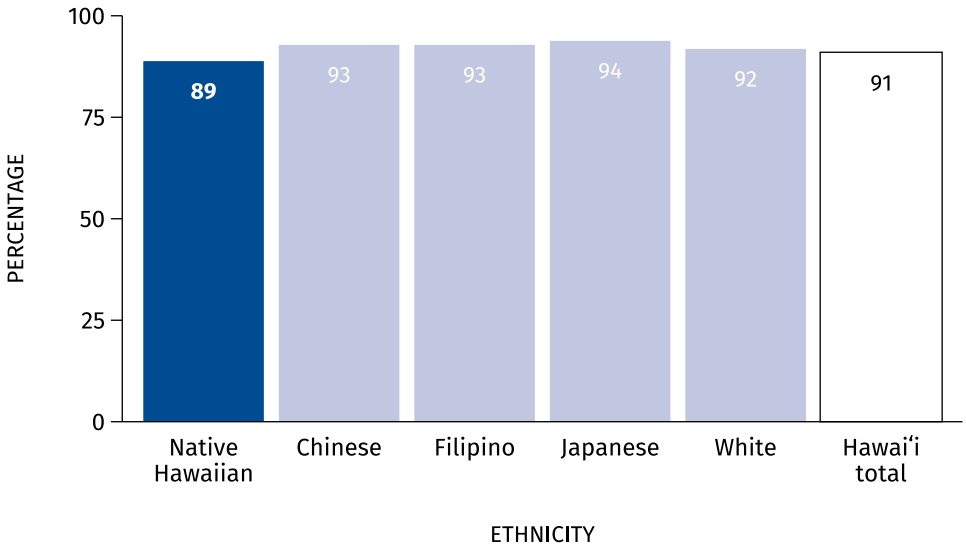
Note 2: The designation "White" in this chart refers to non-Hispanic Whites, alone or in combination with other ethnicities, as defined by the American Community Survey.

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 Hawaiʻi'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 Hawaiʻi'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 Hawaiʻi 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 Hawaiʻi 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, Hawaiʻi, 2017]



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

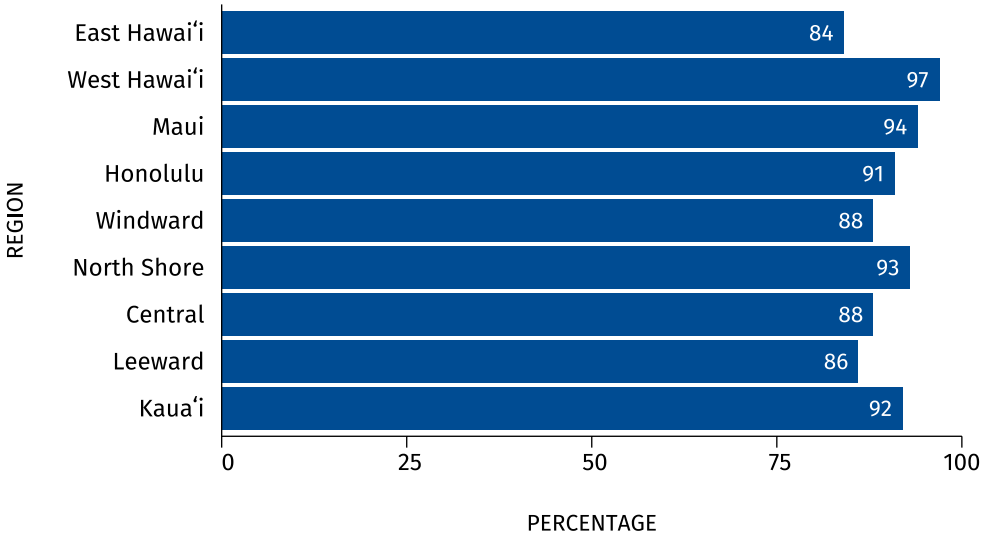
Note 1: The designation "White" in this chart refers to non-Hispanic Whites, alone or in combination with other ethnicities, as defined by the American Community Survey.

- Among Native Hawaiian children ages five to seventeen, 89 percent have at least one working parent—a percentage similar to the Hawaiʻi total (91 percent).
- Compared with other school-age children in Hawaiʻi, 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

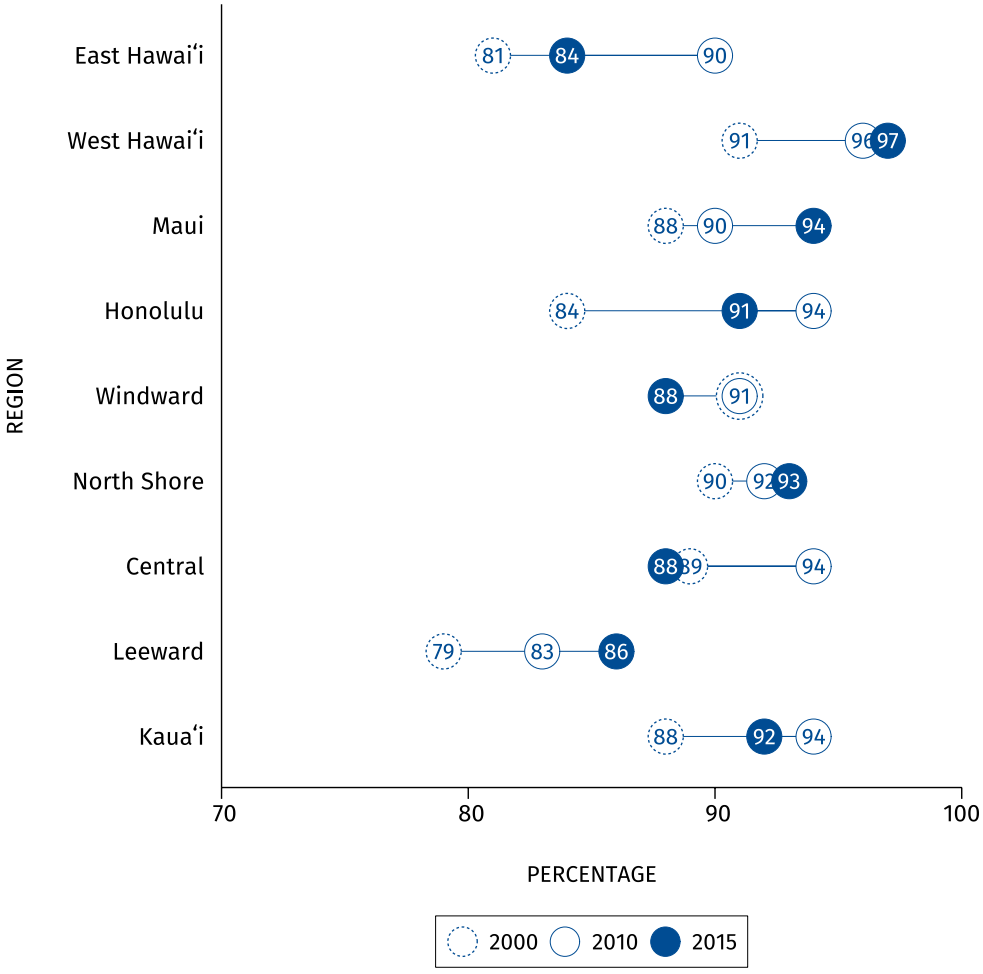
Note 1: Children, in this context, refers to "own children," which are defined as children ages 17 and younger who have never married and are sons or daughters by birth, marriage, or adoption.

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 Hawaiʻi, Honolulu, and Kauaʻi 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, Hawaiʻi; 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).

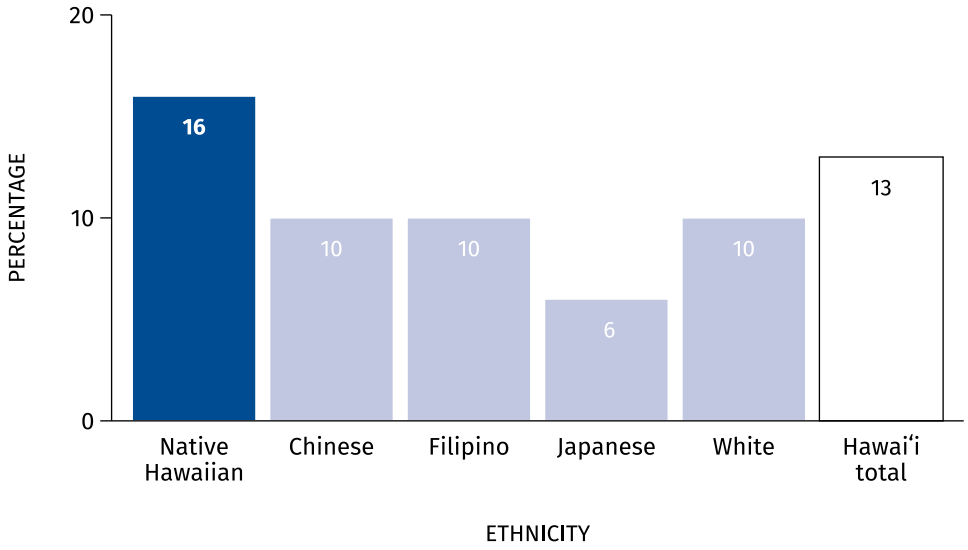
State efforts assist low-income families with children ages eighteen and younger by subsidizing costs for childcare, before- and after-school programs, and preschools and by providing families with guidance, information, and referrals to community resources. Among families that utilize these services, 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, Hawaiʻi, 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.

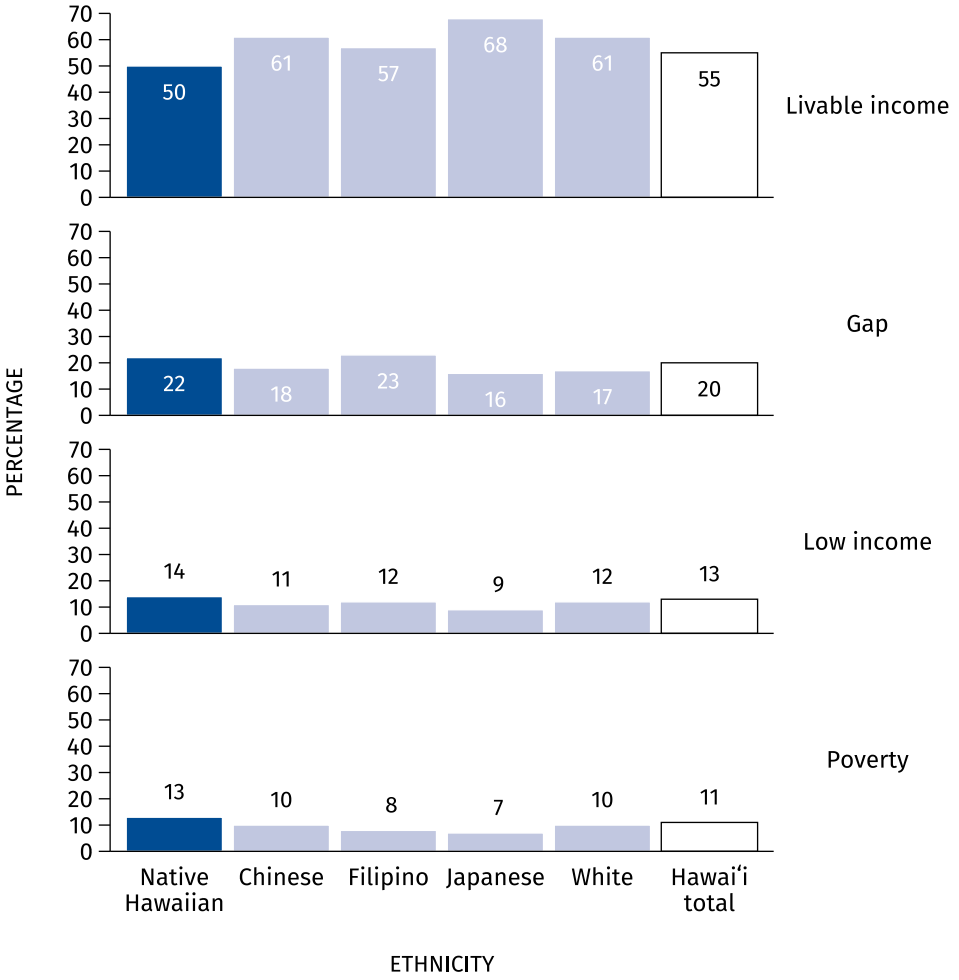
Note 2: These calculations exclude people who are institutionalized, in military group quarters, in college dormitories, and unrelated individuals younger than age fifteen.

- Approximately one in six Native Hawaiian school-age children (16 percent) is in poverty—the highest rate in Hawaiʻi.
- School-age Japanese children have the lowest poverty rate (6 percent) among the major ethnicities in Hawaiʻi.
- 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 ʻohana. 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]



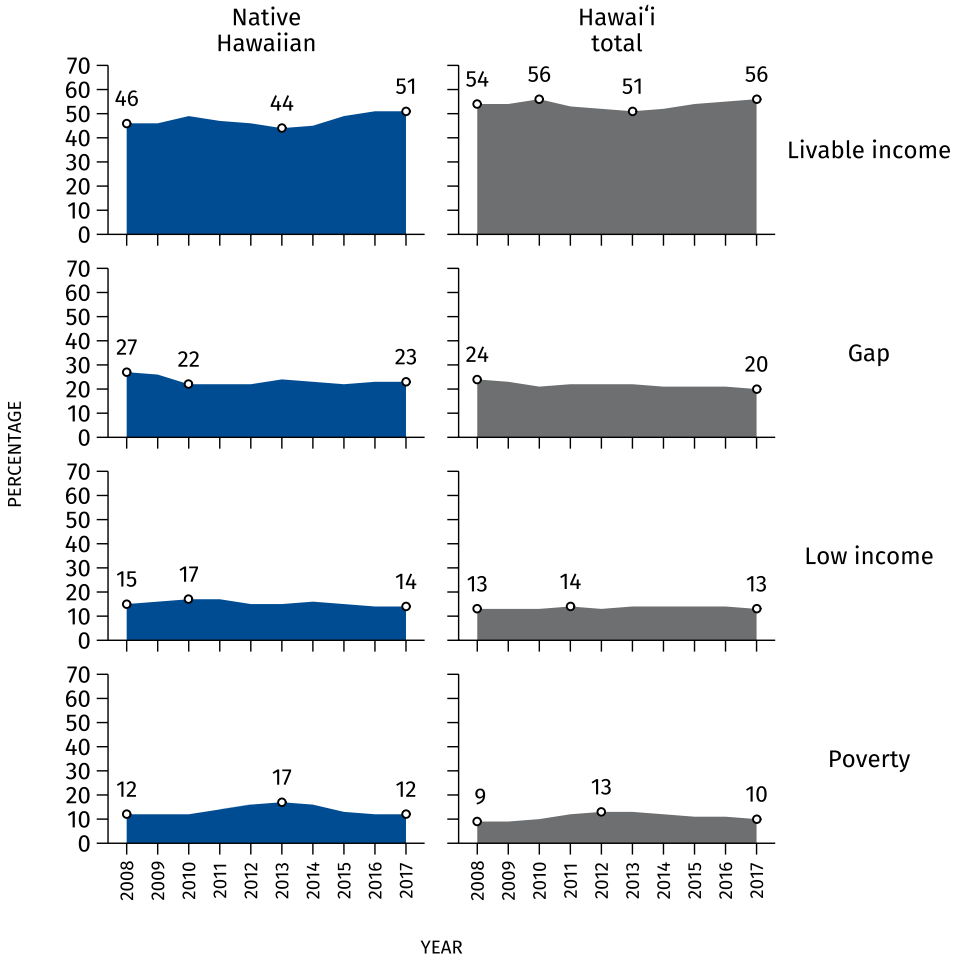
Data source: US Census Bureau, American Community Survey, Public Use Microdata Sample 5-year file

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 Hawaiʻi total, Hawaiʻi, 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 Peʻa (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 ʻohana. 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.

ʻO ka ikaika o ka manaʻo me ke kino—*Be strong in mind and body*. This ʻōlelo noʻeau 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 hoʻolaka (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 kaiapuni, 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 ʻōlelo Hawaiʻi and ʻŌiwi cultural practices encourage school-age learners to explore and strengthen their sense of belonging to Hawaiʻi and to other Native Hawaiians.

Like culture itself, spirituality and the ability to positively manage one's emotions must be learned. While the ʻohana 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 (Kanaʻiaupuni, 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 Hawaiʻi 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

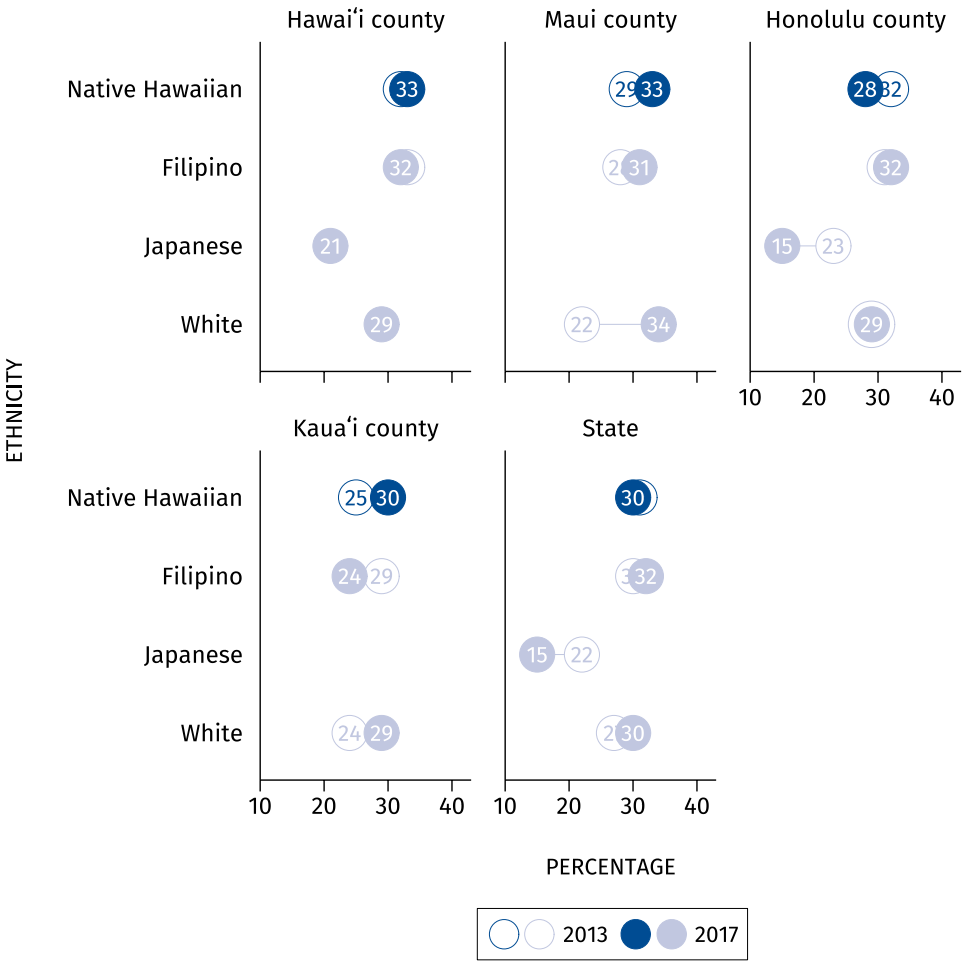
Statistics reveal the United States is experiencing a mental health crisis. Depressive disorders and suicide are on the rise, especially among youth ages sixteen to twenty-four. The Cigna US Loneliness Index indicates that nearly half of all Americans sometimes or always feel lonely or left out. Adults 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 Hawaiʻi, 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 Hawaiʻi, Japanese students are the least likely to be depressed (22 percent). At the county level, from 2013 to 2017, Maui and Kauaʻi 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 Hawaiʻi, 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.

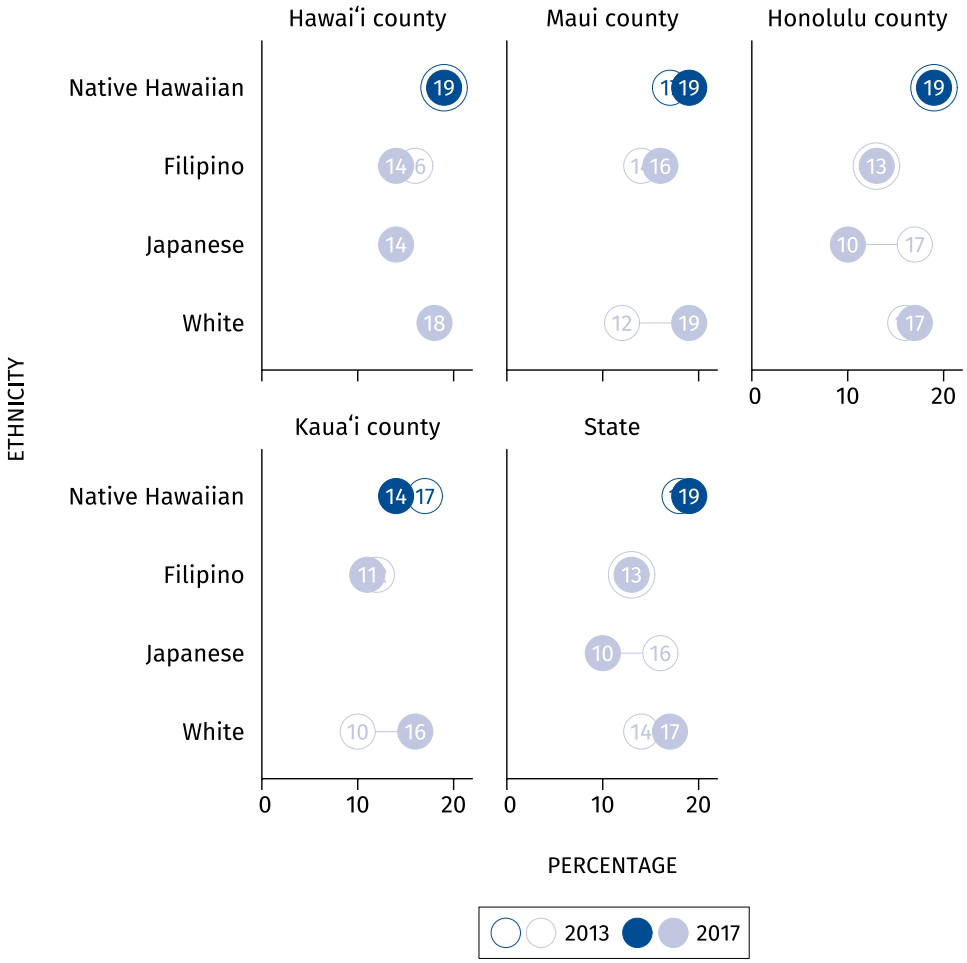
- Native Hawaiian high schoolers in Maui and Kaua'i counties were more likely to be depressed in 2017 than they were in 2013.
- Native Hawaiian middle schoolers in Honolulu county—and at the state level—were more likely to be depressed in 2017 than they were in 2013 (not shown).
- Compared with other 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, Hawaiʻi 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 Hawaiʻi 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.

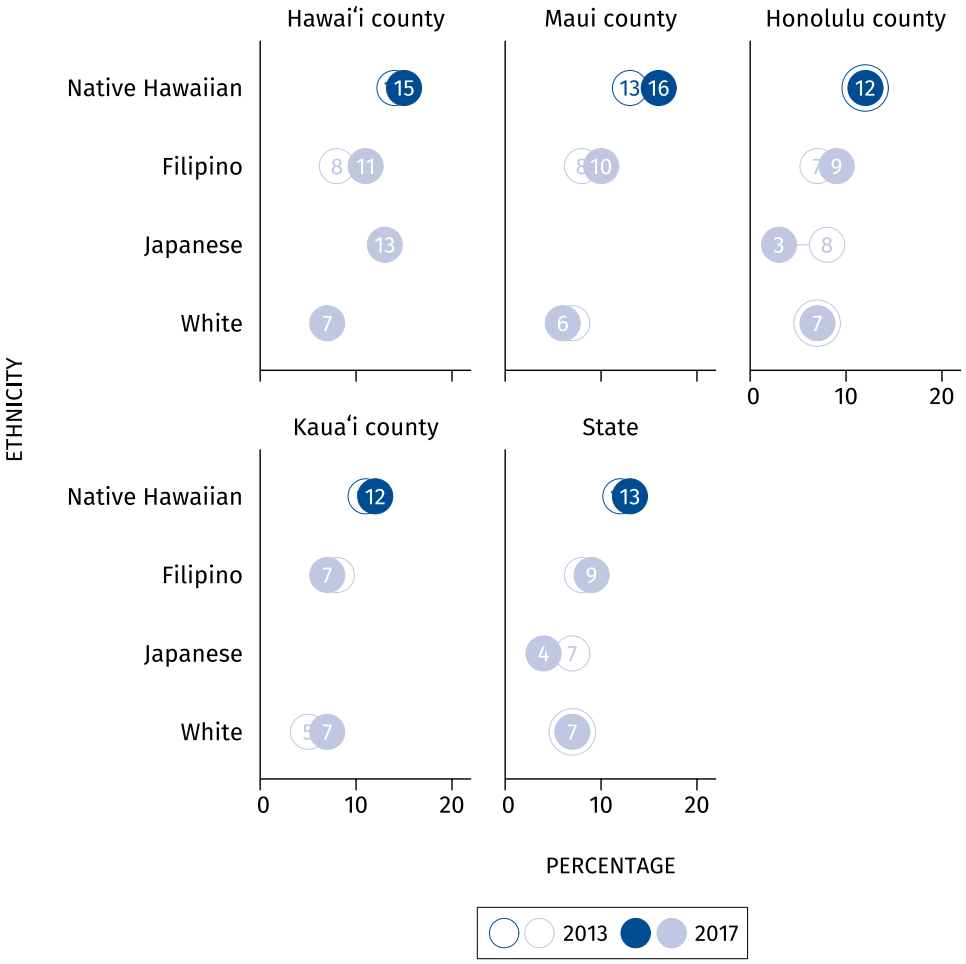
Note 2: Missing circles indicate data that are unavailable, not applicable, or suppressed due to small sample size.

- 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 Hawaiʻi. 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.

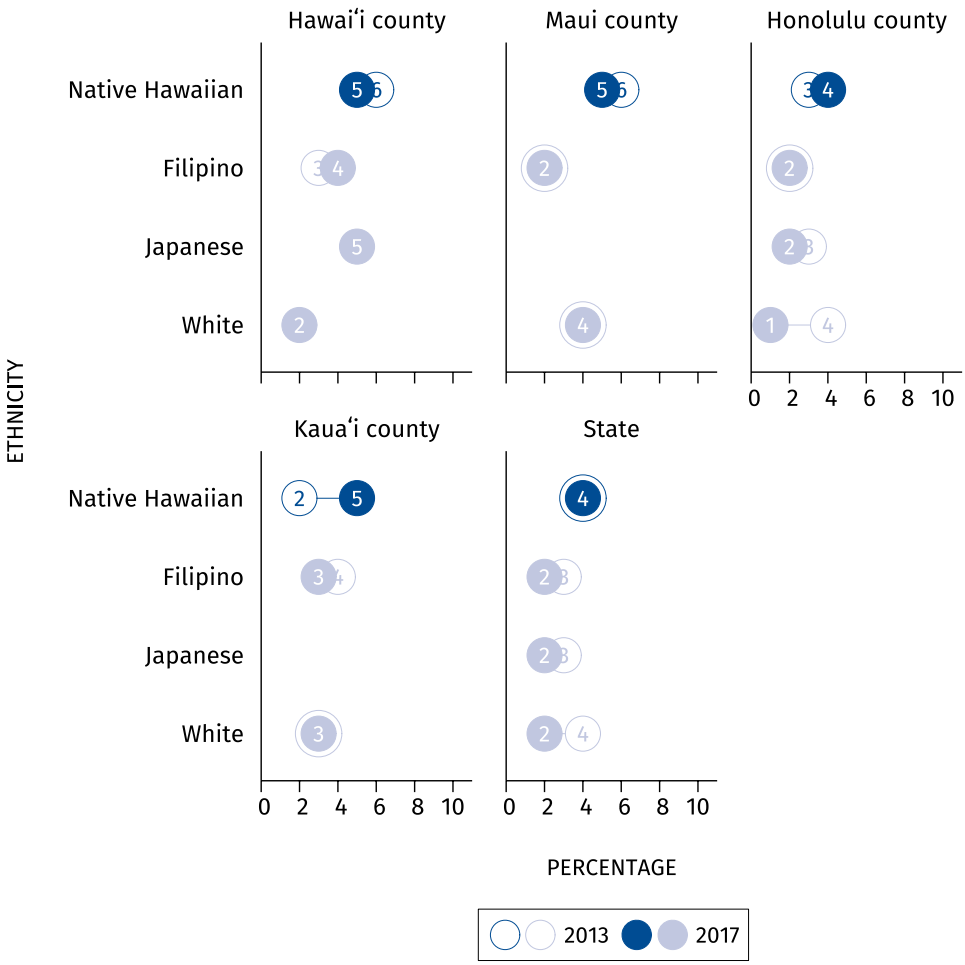
Note 2: Missing circles indicate data that are unavailable, not applicable, or suppressed due to small sample size.

- 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 Hawaiʻi 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. Kauaʻi 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, Hawaiʻi, 2013 and 2017]



Data source: Hawaiʻi Youth Risk Behavior Survey, 2013 (years 2011, 2013 combined) and 2017 (years 2015, 2017 combined), Hawaiʻi Department of Health and Hawaiʻi 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.
- Kauaʻi 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.

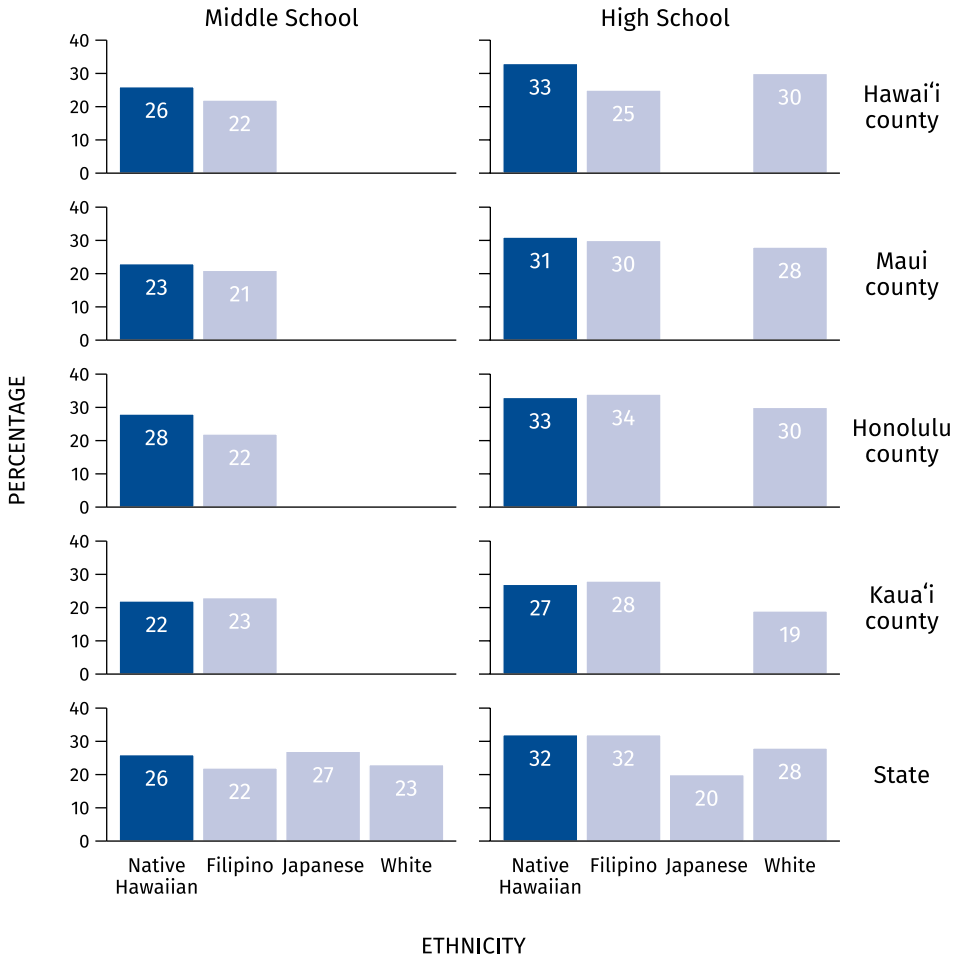
Emotional, Physical, and Sexual Abuse

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 ʻōpio (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, Hawaiʻi, 2017]



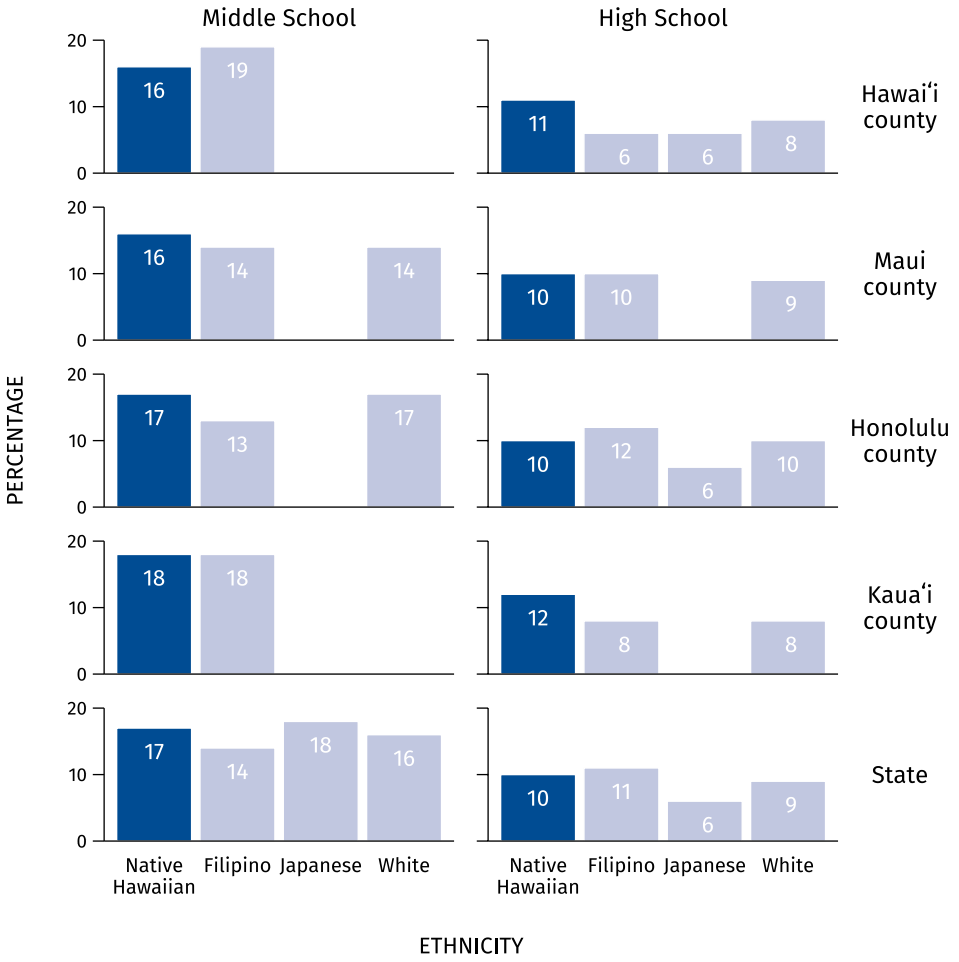
Data source: Hawaiʻi Youth Risk Behavior Survey, 2017 (years 2015, 2017 combined), Hawaiʻi Department of Health and Hawaiʻi Department of Education

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 Hawaiʻi 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]



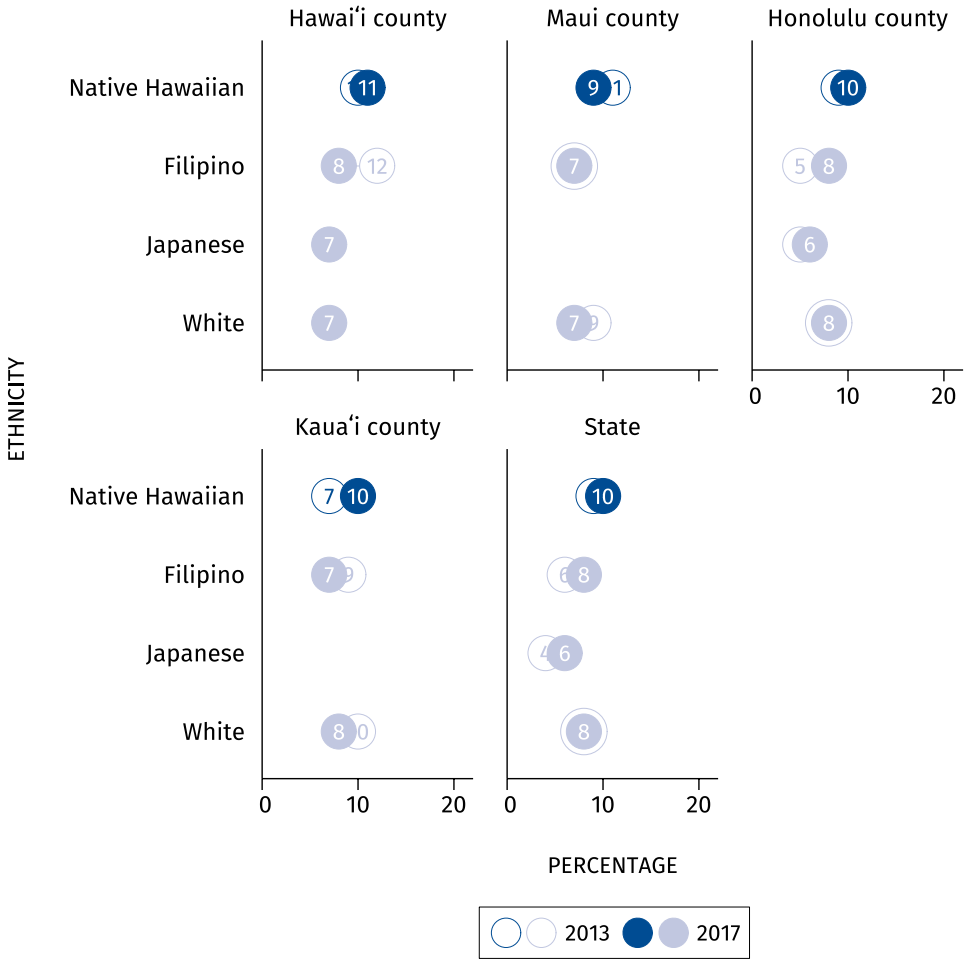
Data source: Hawai'i Youth Risk Behavior Survey, 2015 (years 2013, 2015 combined), Hawai'i Department of Health and Hawai'i Department of Education

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, Hawaiʻi, 2013 and 2017]



Data source: Hawaiʻi Youth Risk Behavior Survey, 2013 (years 2011, 2013 combined) and 2017 (years 2015, 2017 combined), Hawaiʻi Department of Health and Hawaiʻi Department of Education

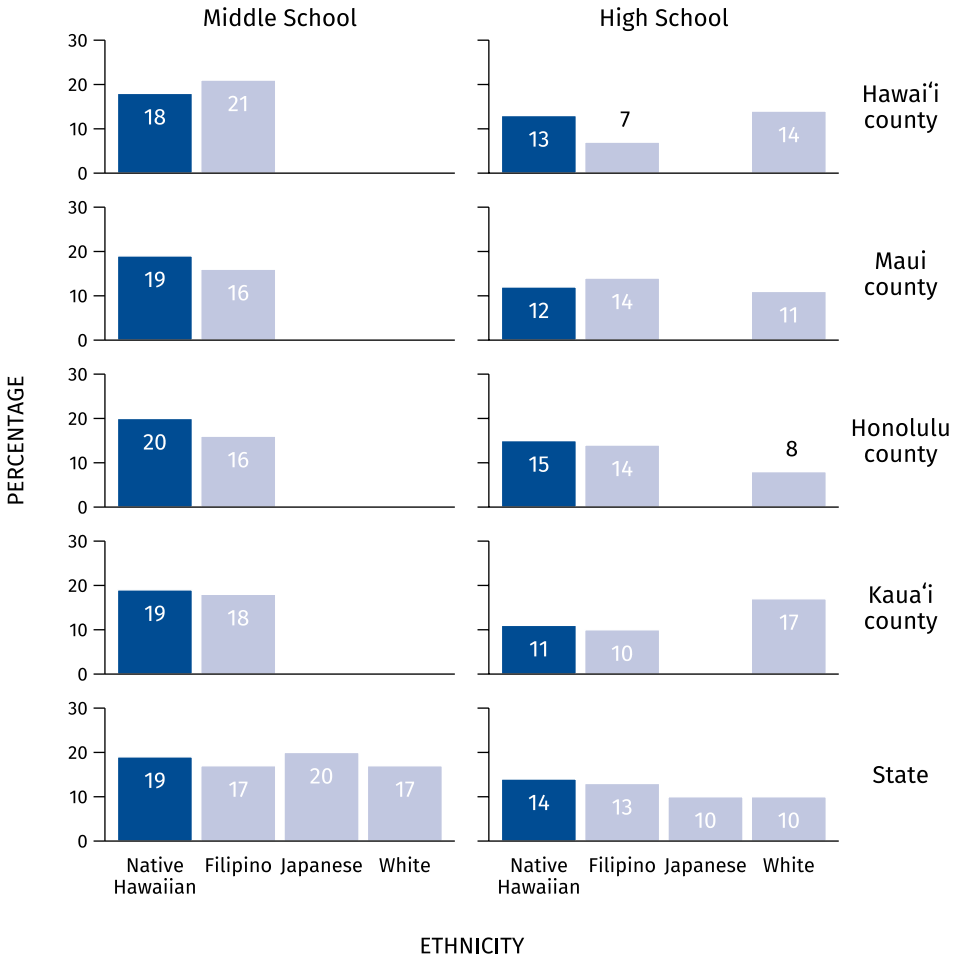
Note 1: This chart includes overlapping and sometimes obscured data points. The most recent data points are all visible; older data points that are not discernible suggest little or no change over time.

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 Kauaʻi 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, Hawaiʻi, 2015]



Data source: Hawaiʻi Youth Risk Behavior Survey, 2015 (years 2013, 2015 combined), Hawaiʻi Department of Health and Hawaiʻi 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).

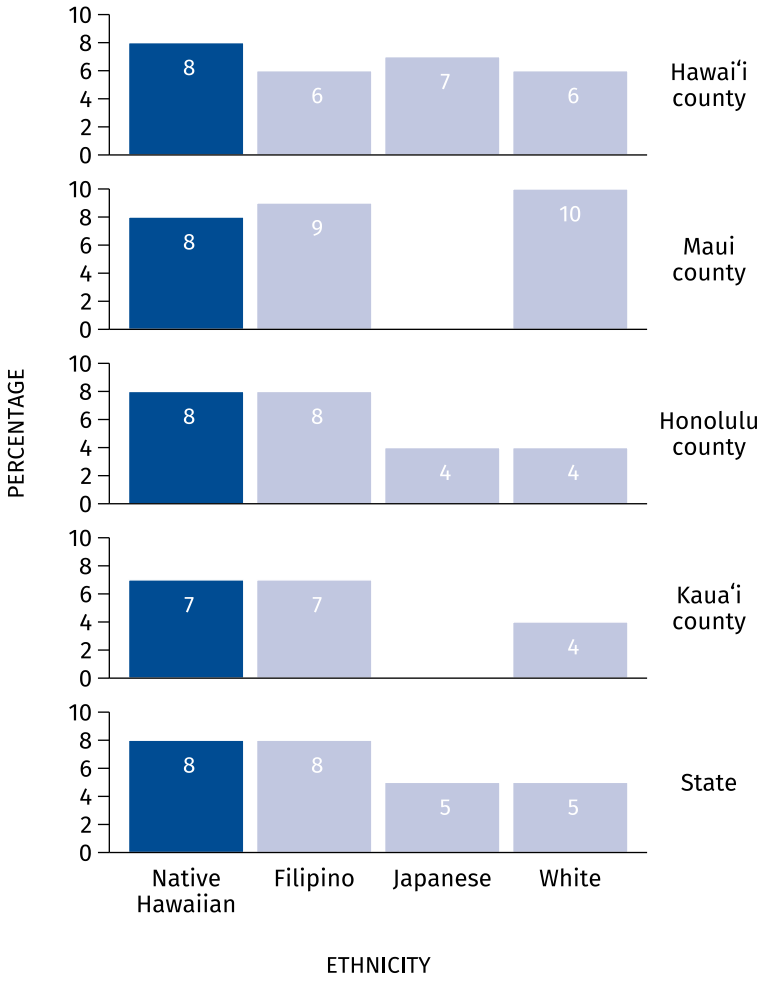
Meeting the nutritional needs of vulnerable children mitigates health and educational disparities that can have long-term impacts (Dunn et al. 2020). Furthermore, the negative impact of food insecurity on children and adult health is likely underestimated rather than overestimated (Gundersena and Kreider 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 Hawaiʻi 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 ʻŌiwi 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, Hawaiʻi, 2017]



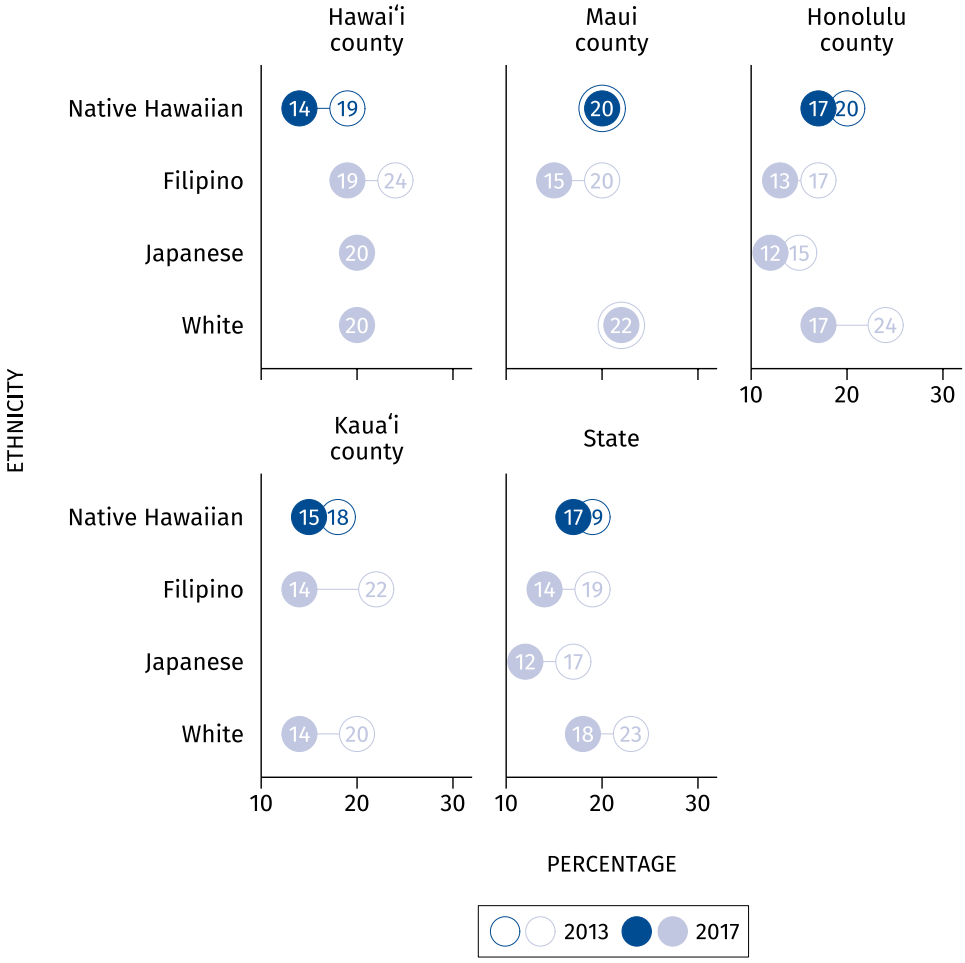
Data source: Hawaiʻi Youth Risk Behavior Survey, 2017 (years 2015, 2017 combined), Hawaiʻi Department of Health and Hawaiʻi Department of Education

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, Hawaiʻi, 2013 and 2017]



Data source: Hawaiʻi Youth Risk Behavior Survey, 2013 (years 2011, 2013 combined) and 2017 (years 2015, 2017 combined), Hawaiʻi Department of Health and Hawaiʻi 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 Hawaiʻi county was significant.

PHYSICAL ACTIVITY

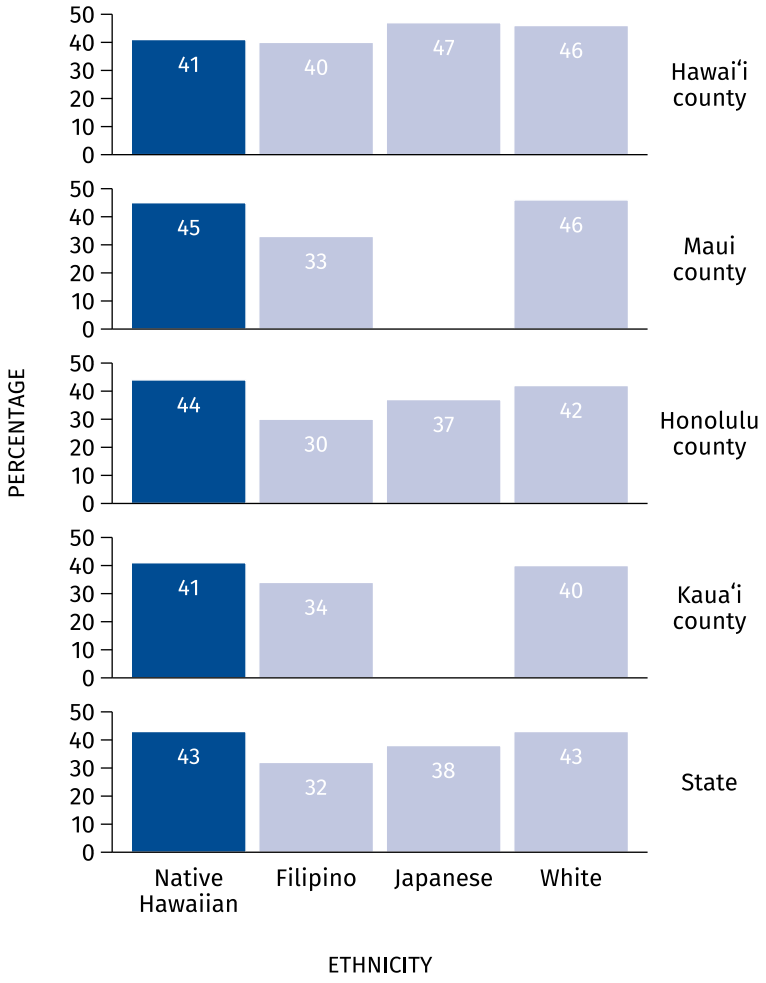
Regular physical activity benefits all aspects of students' lives. Students who are physically active tend to perform better academically in school through enhanced brain function, cognition, and classroom behavior (Singh et al. 2012); however, more research is needed to understand the relationship between 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, Hawaiʻi, 2015]



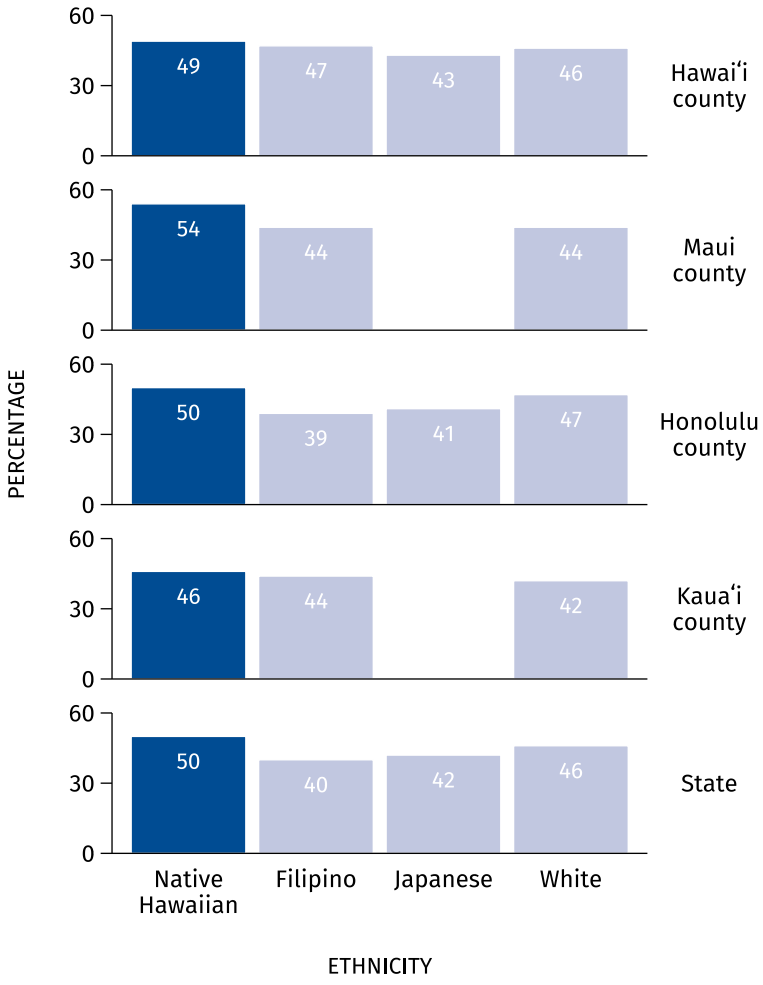
Data source: Hawaiʻi Youth Risk Behavior Survey, 2015 (years 2013, 2015 combined), Hawaiʻi Department of Health and Hawaiʻi Department of Education

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 Hawaiʻi and Kauaʻi (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

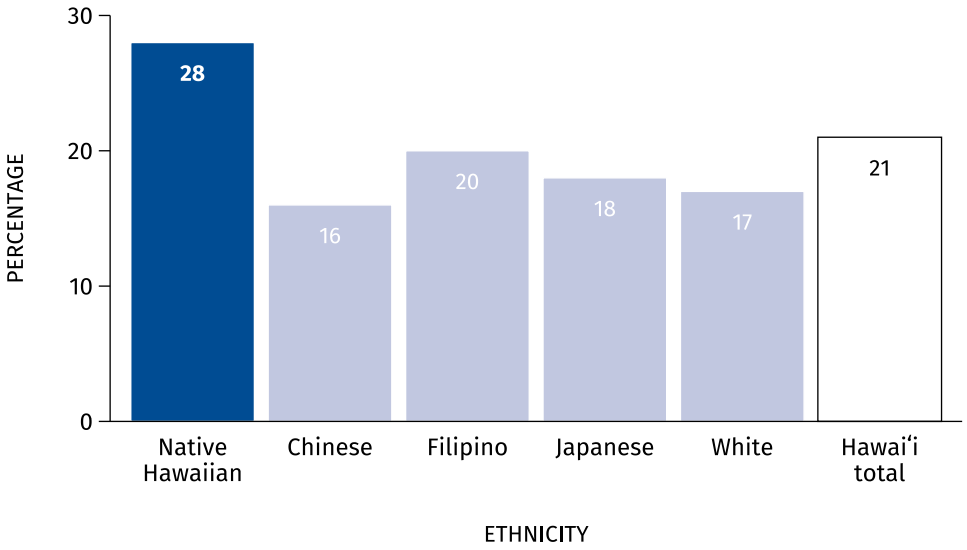
For school-age keiki, health conditions can play a large role in their ability to learn and develop successfully. Poor nutrition, lack of immunizations, and underlying medical issues can make it difficult for students to keep pace with their peers. Chronic health conditions such as asthma and obesity 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 Hawaiʻi, 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).

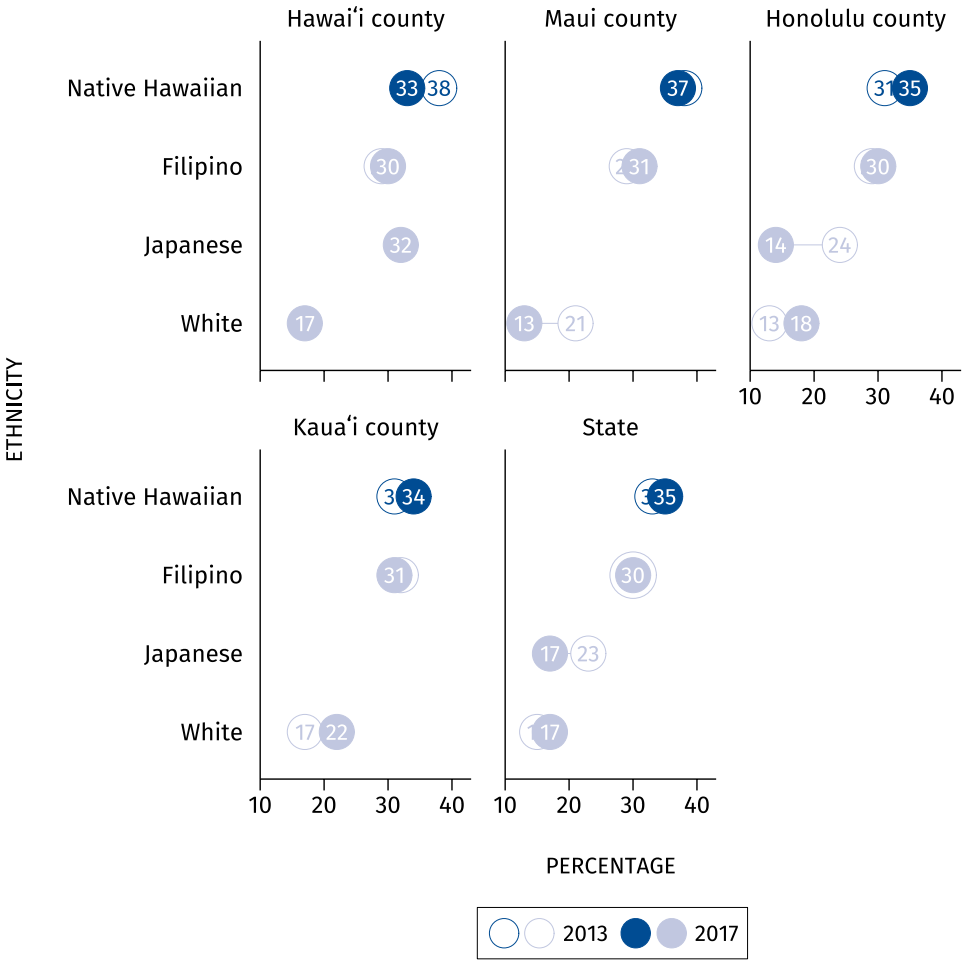
CHILDHOOD OBESITY

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 Hawaiʻi 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.

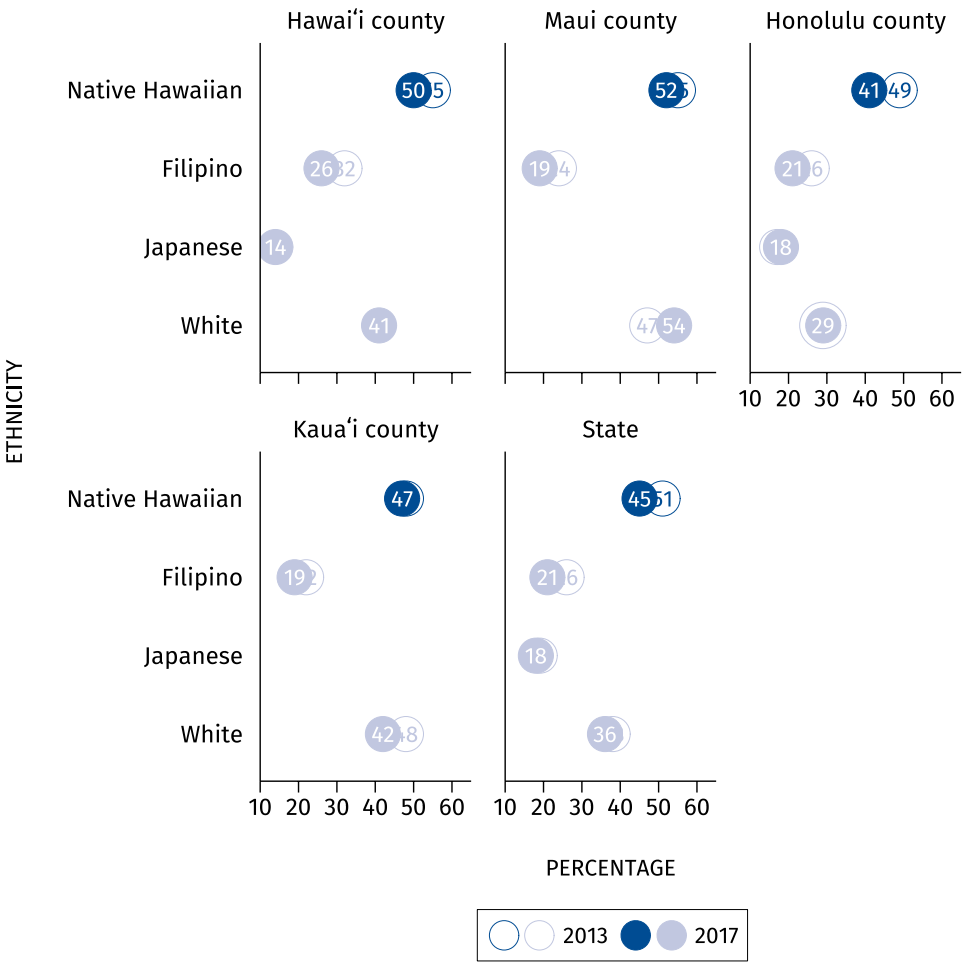
MARIJUANA AND ALCOHOL USE

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

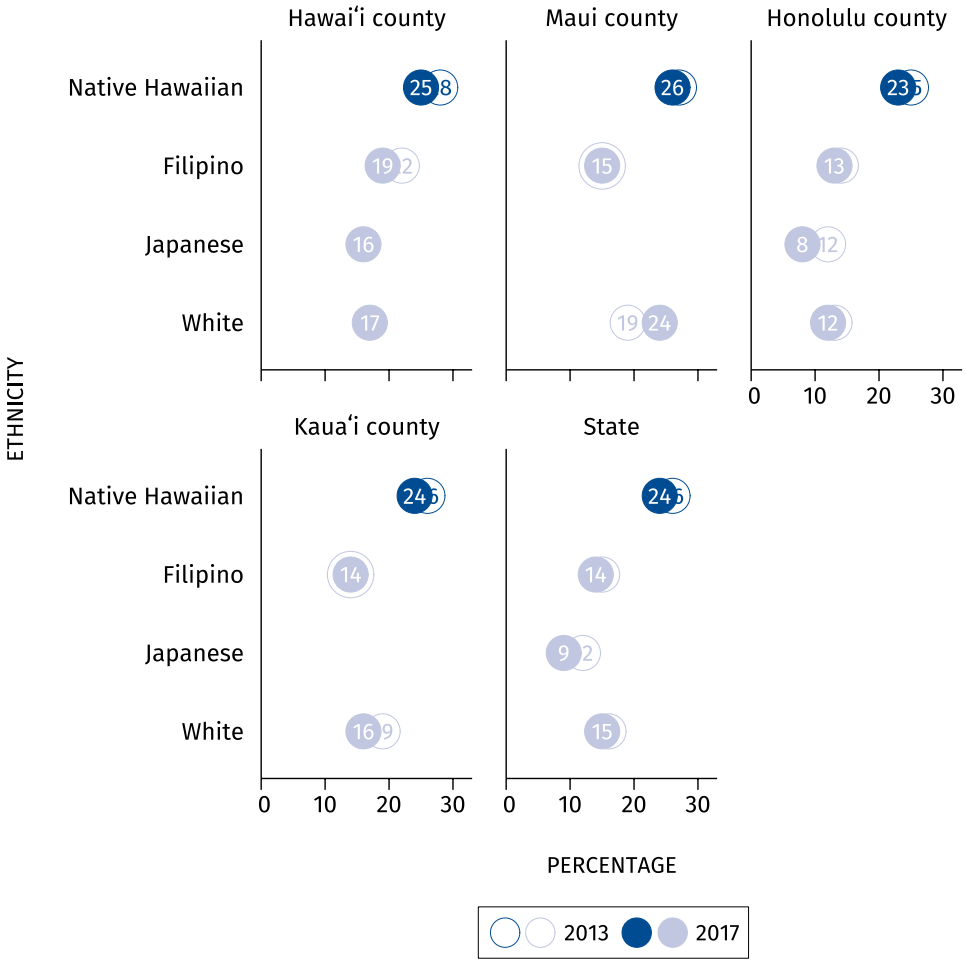
Note 1: This chart includes overlapping and sometimes obscured data points. The most recent data points are all visible; older data points that are not discernible suggest little or no change over time.

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 Hawaiʻi 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, Hawaiʻi, 2013 and 2017]



Data source: Hawaiʻi Youth Risk Behavior Survey, 2013 (years 2011, 2013 combined) and 2017 (years 2015, 2017 combined), Hawaiʻi Department of Health and Hawaiʻi 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.

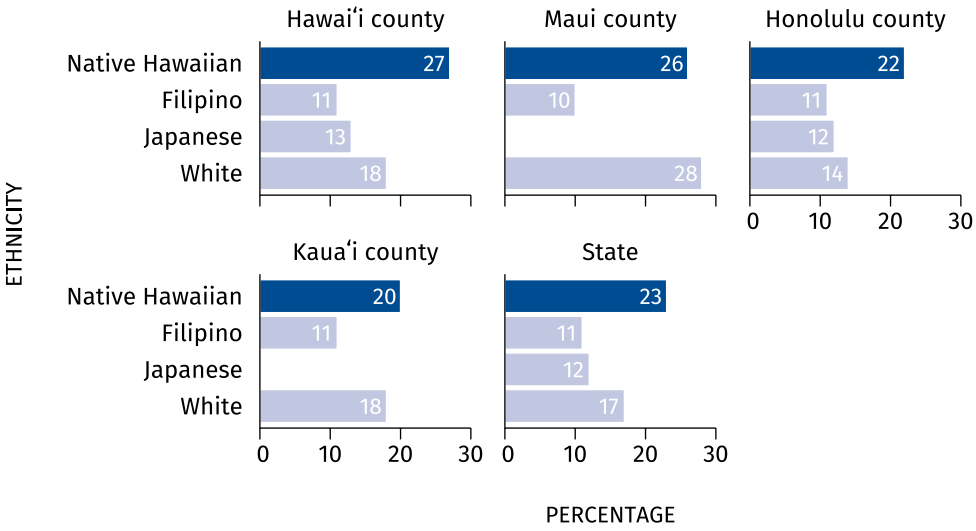
Note 2: Missing circles indicate data that are unavailable, not applicable, or suppressed due to small sample size.

- 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, Hawaiʻi, 2017]



Data source: Hawaiʻi Youth Risk Behavior Survey, 2017 (years 2015, 2017 combined), Hawaiʻi Department of Health and Hawaiʻi 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 Hawaiʻi 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 Hawaiʻi and Kauaʻi 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

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.

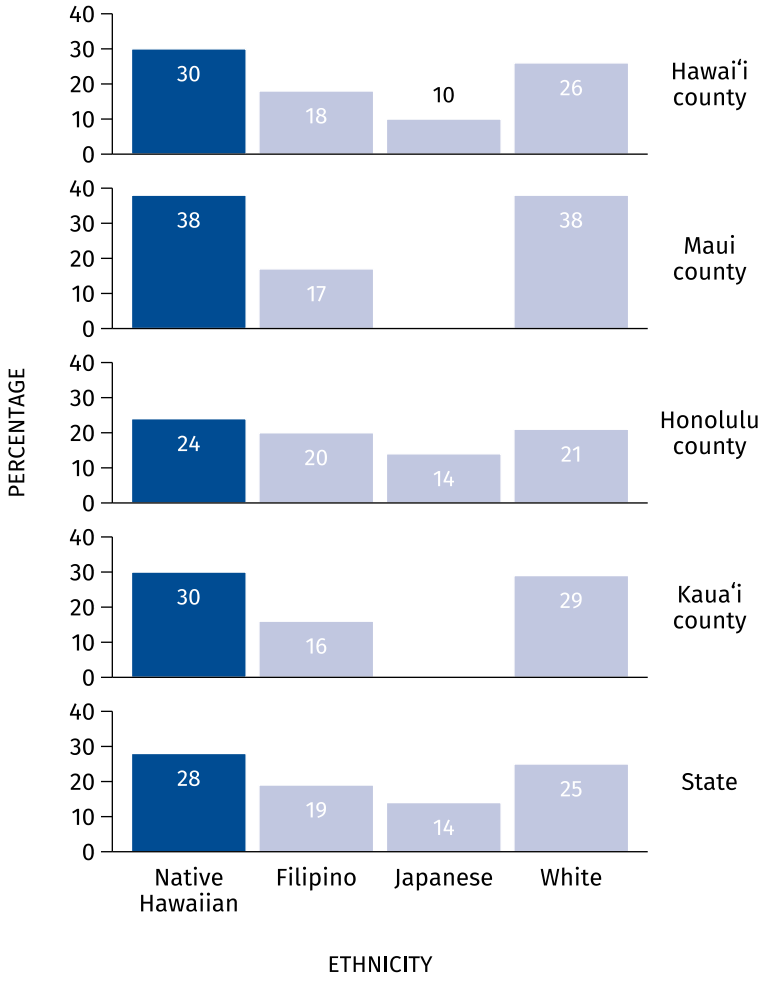
- In Honolulu county and at the state level, Native Hawaiian high schoolers are significantly more likely than middle schoolers (not shown) to talk to a parent or other adult about the dangers of alcohol, tobacco, or drugs.
- In Hawai'i and Kaua'i counties, the proportion of high school students who 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 Hawaiʻi 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 Hawaiʻi 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 Hawaiʻi 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

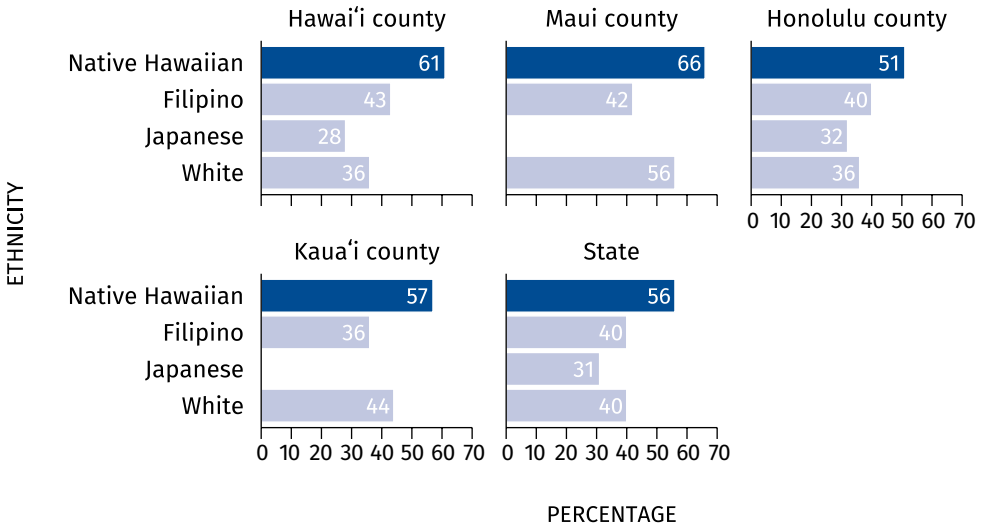
Note 1: This chart includes overlapping and sometimes obscured data points. The most recent data points are all visible; older data points that are not discernible suggest little or no change over time.

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, Hawaiʻi, 2017]



Data source: Hawaiʻi Youth Risk Behavior Survey, 2017 (years 2015, 2017 combined), Hawaiʻi Department of Health and Hawaiʻi 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).

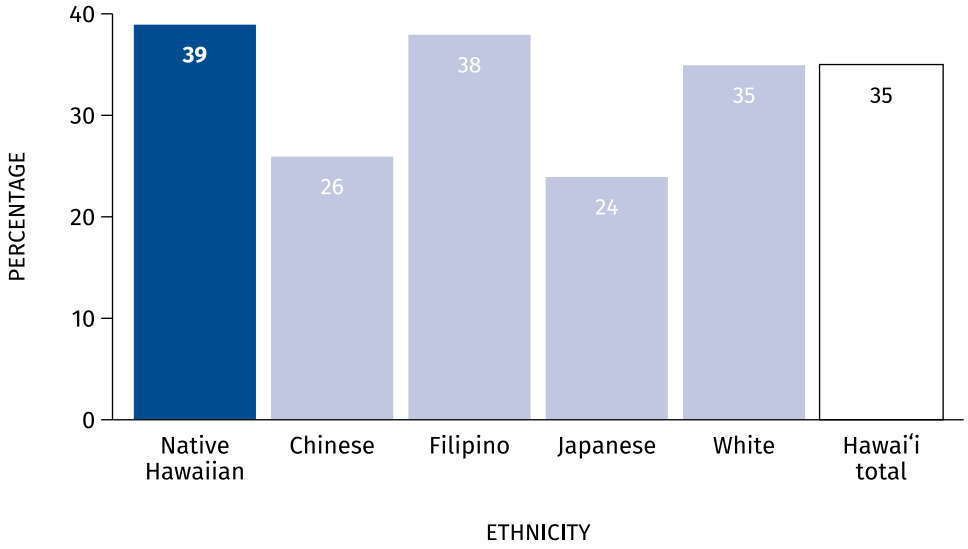
The majority of Native Hawaiian middle and high school students think that secondhand smoke is harmful. Among those who have smoked in the past thirty days, 82 percent think secondhand smoke is harmful, a rate similar to the Hawaiʻi total of 80 percent. This rate increases among those who have never smoked, with 93 percent of Native Hawaiian middle and high school students reporting that secondhand smoke is harmful, a rate similar to the Hawaiʻi 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, Hawaiʻi, 2015]



Data source: Hawaiʻi Department of Health, Hawaiʻi School Health Survey: Youth Tobacco Survey Module, Hawaiʻi 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 Hawaiʻi'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, Hawaiʻi, 2017]

	Hawaiʻi county		Maui county		Honolulu county		Kauaʻi county		Hawaiʻi total	
	2017	Change from 2013	2017	Change from 2013	2017	Change from 2013	2017	Change from 2013	2017	Change from 2013
NATIVE HAWAIIAN HIGH SCHOOL STUDENTS										
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
NATIVE HAWAIIAN MIDDLE SCHOOL STUDENTS										
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: Hawaiʻi Youth Risk Behavior Survey, 2013 (years 2011, 2013 combined) and 2017 (years 2013 [for Hallucinogens and Heroin only], 2015, 2017 combined), Hawaiʻi Department of Health and Hawaiʻi Department of Education

—: no significant change

From 2013 to 2017, Native Hawaiian high schoolers in Kauaʻi 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 (Neppl, 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).

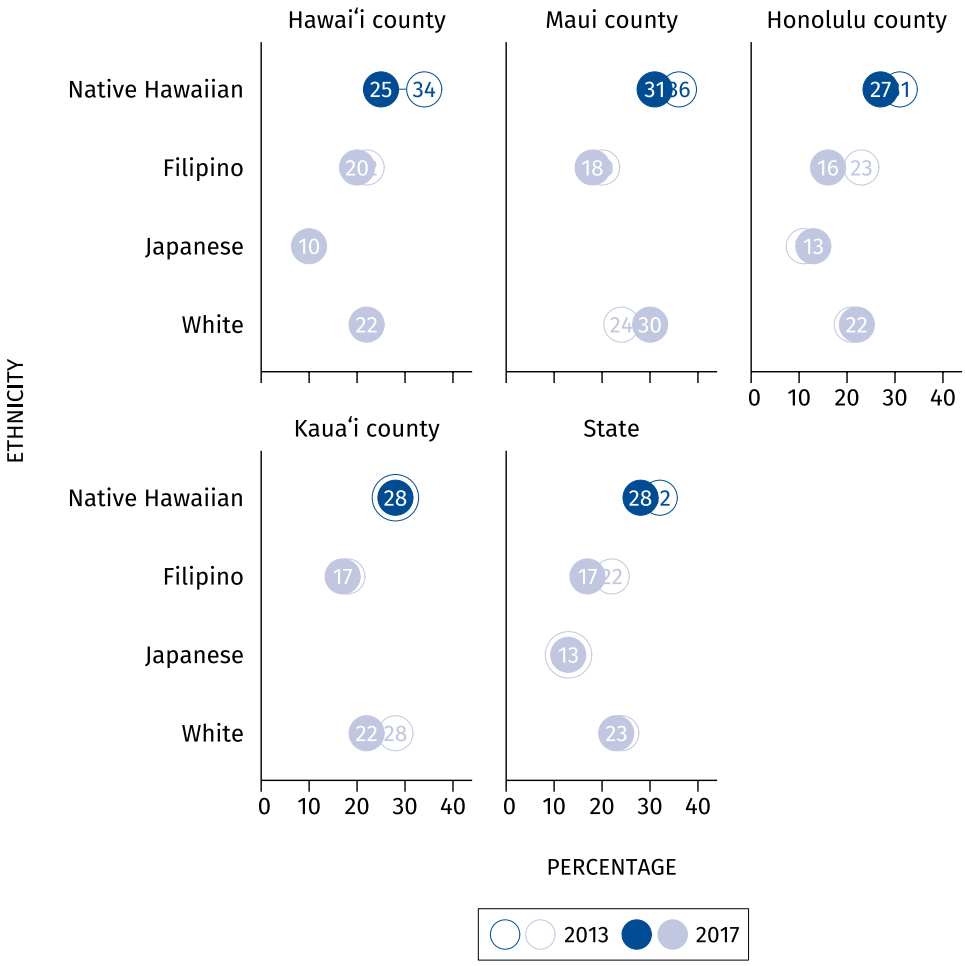
The prevalence of Native Hawaiian high schoolers who are sexually active decreased across Hawai'i, declining from 32 to 28 percent between 2013 and 2017.

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, Hawaiʻi, 2013 and 2017]



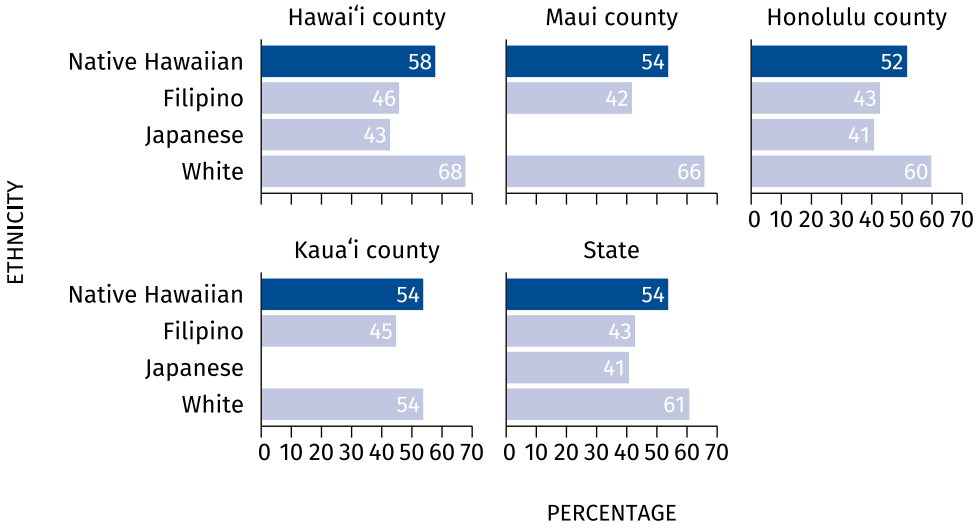
Data source: Hawaiʻi Youth Risk Behavior Survey, 2013 (years 2011, 2013 combined) and 2017 (years 2015, 2017 combined), Hawaiʻi Department of Health and Hawaiʻi Department of Education

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 aʻo a mālama, a e ʻoi mau ka naʻauao" (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, "ʻAʻohe pau ka ʻike i ka hālau hoʻokahi" (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 ʻŌiwi perspective, sources of knowledge are not limited to formal teachers or people. Kumu can also include spiritual forces, ʻāina, hōʻailona (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 ʻōlelo Hawaiʻi, accelerated by Hawaiian studies programs in the University of Hawaiʻi system, provided not only more encouragement for culturally grounded educational approaches, but also cohorts of fluent ʻōlelo Hawaiʻi educators. The advent of ʻAha 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* (Kawaiʻaeʻa mā 2018) and the Hawaiʻi Department of Education's HĀ (Hawaiʻi Department of Education, n.d.[d]) continue to resonate with and inform audiences of all types across Hawaiʻi. 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 (Kanaʻiaupuni, Ledward, and Malone 2017), while a longitudinal study examined factors influencing reading scores among Native Hawaiian and other students in Hawaiʻi schools over time (Singh 2013).

Based on the holistic model of *Ka Huakaʻi*, 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 (Kawaiʻaeʻa 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 ʻohana 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.[2] 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.[3] Table 3.4 shows the alignment of Kamehameha Schools regions, Hawai'i DOE regions, and Hawai'i DOE complex areas.

[2] 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.

[3] 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, Hawaiʻi DOE regions, and Hawaiʻi DOE complex areas

Kamehameha Schools region	Hawaiʻi DOE region	Hawaiʻi DOE complex area
East Hawaiʻi	East Hawaiʻi	Hilo-Waiākea
		Kaʻū-Keaʻau-Pāhoa
West Hawaiʻi	West Hawaiʻi	Honokaʻa-Kealakehe-Kohala-Konawaena
Kauaʻi	Kauaʻi-Niʻihau	Kapaʻa-Kauaʻi-Waimea
Maui	Maui, Molokaʻi, Lānaʻi	Baldwin-Kekaulike-Maui
		Hāna-Lahainaluna-Lānaʻi-Molokaʻi
Central	ʻEwa Oʻahu	Aiea-Moanalua-Radford
		Campbell-Kapolei
		Pearl City-Waipahu
Honolulu	Kona Oʻahu	Farrington-Kaiser-Kalani
		Kaimukī-McKinley-Roosevelt
Windward	Koʻolau Oʻahu	Castle-Kahuku
		Kailua-Kalāheo
North Shore	Waialua Oʻahu	Leilehua-Mililani-Waialua
Leeward	Waiʻanae Oʻahu	Nānākuli-Waiʻanae

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 (Kanaʻiaupuni, 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 Hawaiʻi 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.[4] Out of Hawai‘i’s largest ethnic groups,[5] three out of five saw decreases in the number of students attending public schools. Recent data from 2019 show that Native Hawaiians[6] 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).

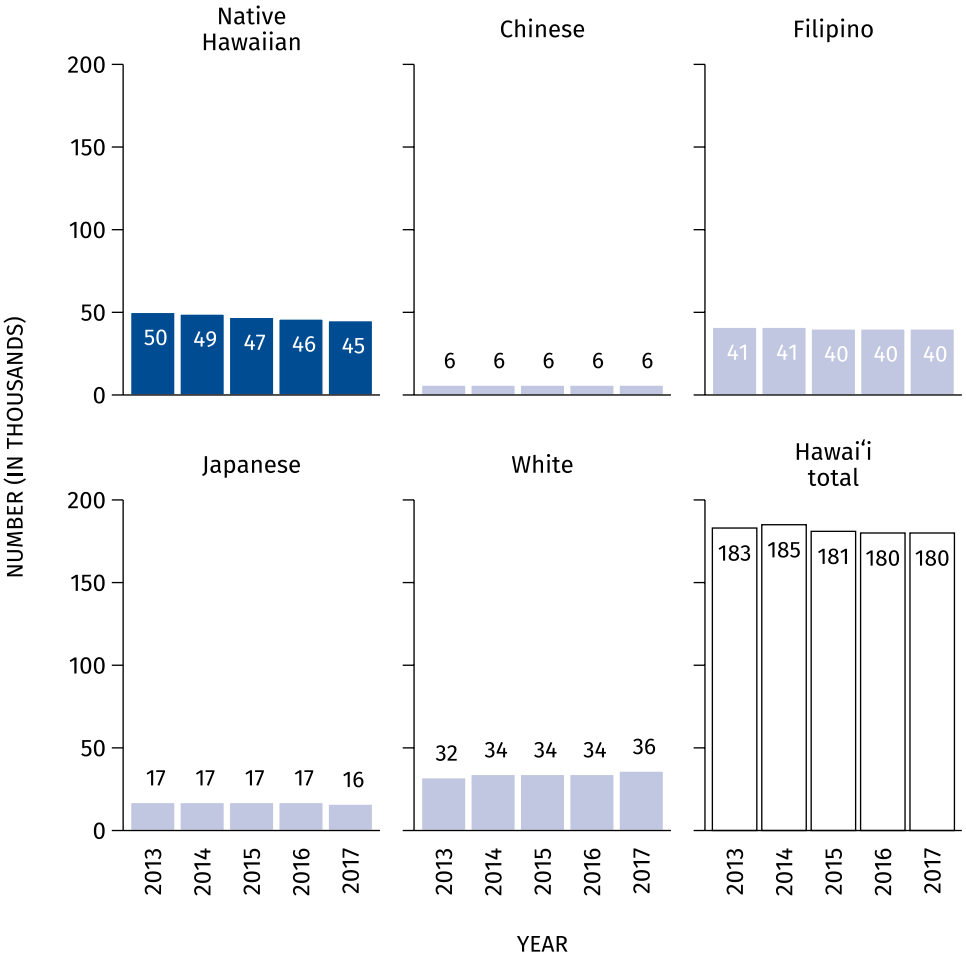
One possible explanation for shifts in enrollment might involve migration rates. Over the past decade in Hawai‘i, Whites had the highest positive net migration rate, meaning more people coming into, rather than moving away from, Hawai‘i. The opposite pattern was observed for Native Hawaiians, who are 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).

[4] 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.

[5] 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.

[6] 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 Hawaiʻi public schools
[by ethnicity, Hawaiʻi, 2013 to 2017]



Data source: Hawaiʻi Department of Education, Hawaiʻi 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 Hawaiʻi public schools ranged from 180,000 to 185,000.
- All of Hawaiʻi'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 ʻōlelo 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 Hawaiʻi, 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

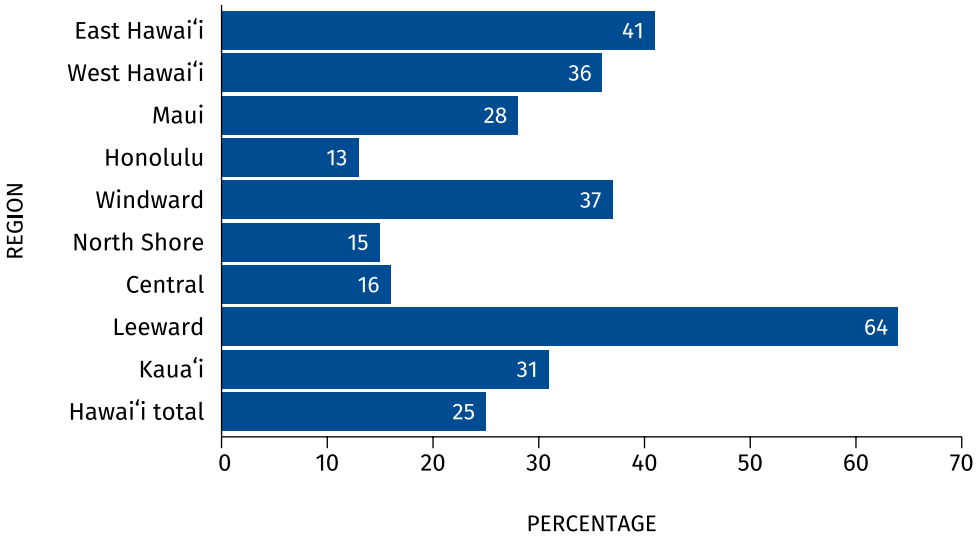
Note 1: The years displayed represent the end of a given school year: e.g., 2017 refers to school year 2016–17.

The COVID-19 pandemic has raised considerable implications for school enrollment. For example, between July and September of 2020, the Hawaiʻi 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 Hawaiʻi 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.

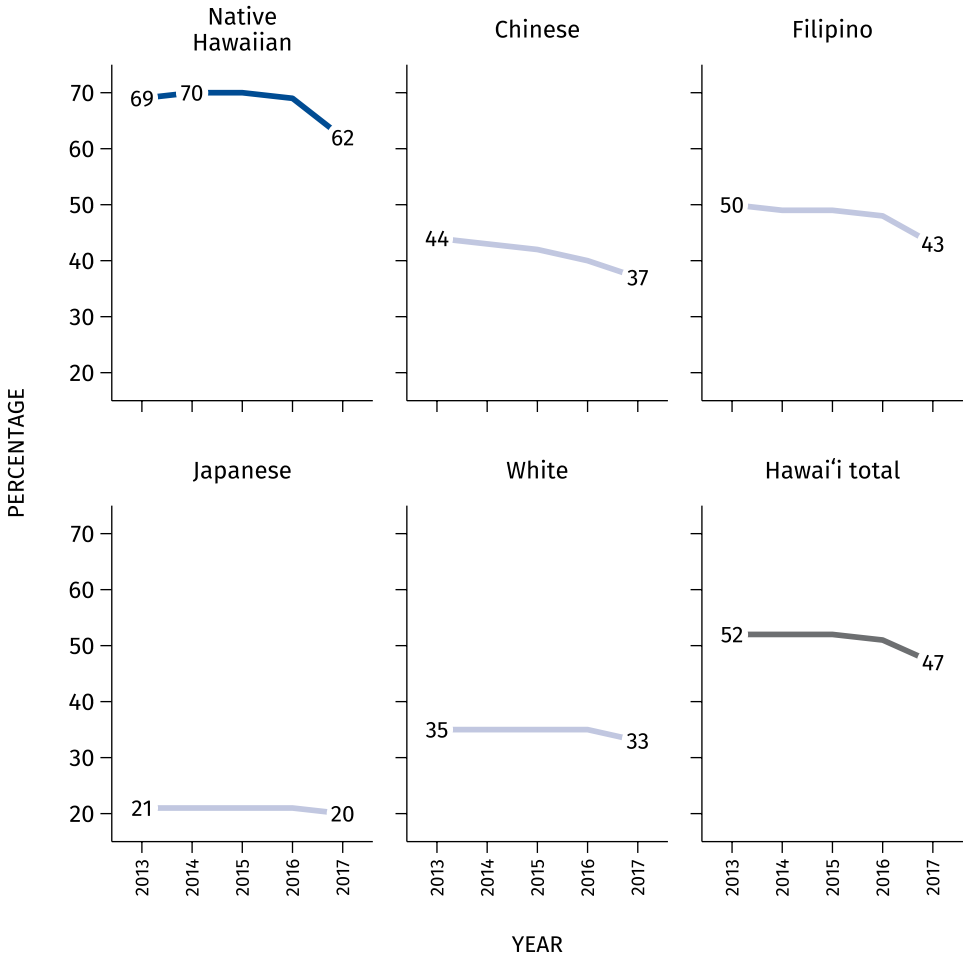
- Across regions, the proportion of Native Hawaiian enrollment—as a percentage of the total public school enrollment in each region—is highest in Leeward (64 percent).
- Compared with other regions, Honolulu has the smallest proportion of Native Hawaiians enrolled in public schools (13 percent).

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 Hawaiʻi, 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 Hawaiʻi trended downward from 2013 to 2017, they remained highest among Native Hawaiian learners: In 2017, 62 percent of all Native Hawaiian students in Hawaiʻi public schools were economically disadvantaged—15 percentage points higher than the Hawaiʻi 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, Hawaiʻi, 2013 to 2017]



Data source: Hawaiʻi Department of Education, Hawaiʻi 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.

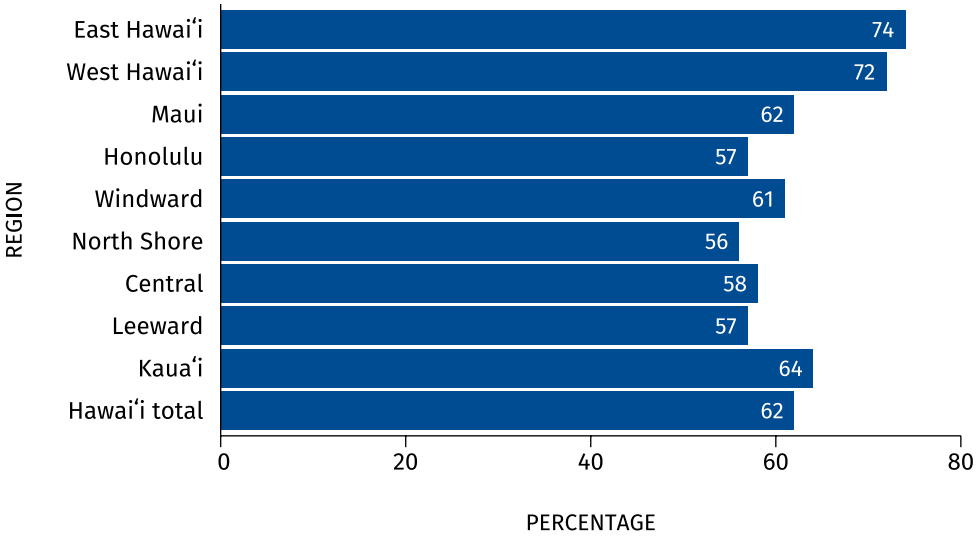
Note 2: Data labels are presented for the first and last points, the maximum and minimum points, and some inflection points where the trend changes.

- 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 Hawaiʻi total.
- Based on the Hawaiʻi total, about half of all public school students in Hawaiʻi, 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 Hawaiʻi (74 percent) and West Hawaiʻi (72 percent) having notably higher percentages. This is consistent with findings showing that East Hawaiʻi 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, Hawaiʻi, 2017]



Data source: Hawaiʻi Department of Education, Hawaiʻi 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 Hawaiʻi (74 percent) and West Hawaiʻi (72 percent).
- The North Shore region has the lowest percentage of Native Hawaiian students who face economic strain (56 percent).

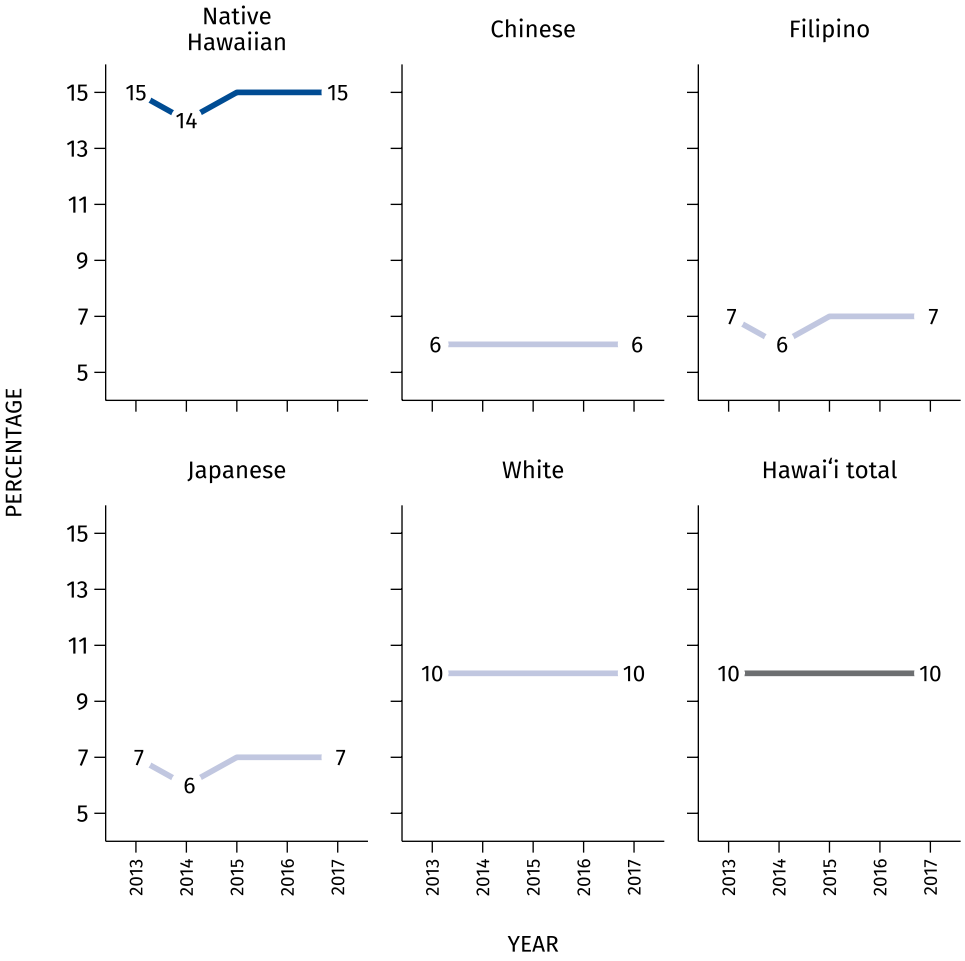
Given the relatively higher rates of poverty among Native Hawaiian families with children, it is unsurprising that schools with higher concentrations of Native Hawaiian students also have higher rates of students facing economic disadvantage (see table 3.6). In 2017, among schools with low concentrations 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, Hawaiʻi, 2013 to 2017]



Data source: Hawaiʻi Department of Education, Hawaiʻi 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.

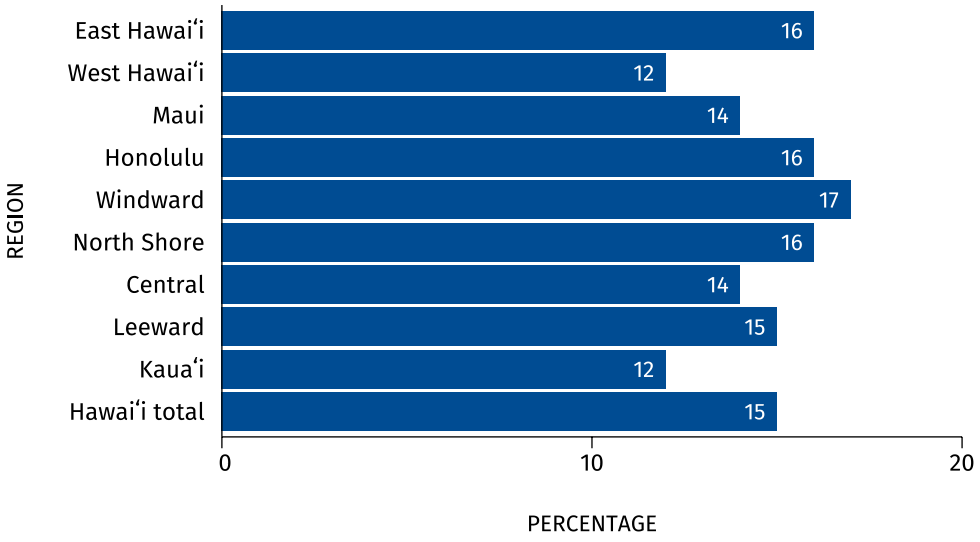
Note 2: Data labels are presented for the first and last points, the maximum and minimum points, and some inflection points where the trend changes.

- 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 Hawaiʻi total.
- For the Hawaiʻi 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).

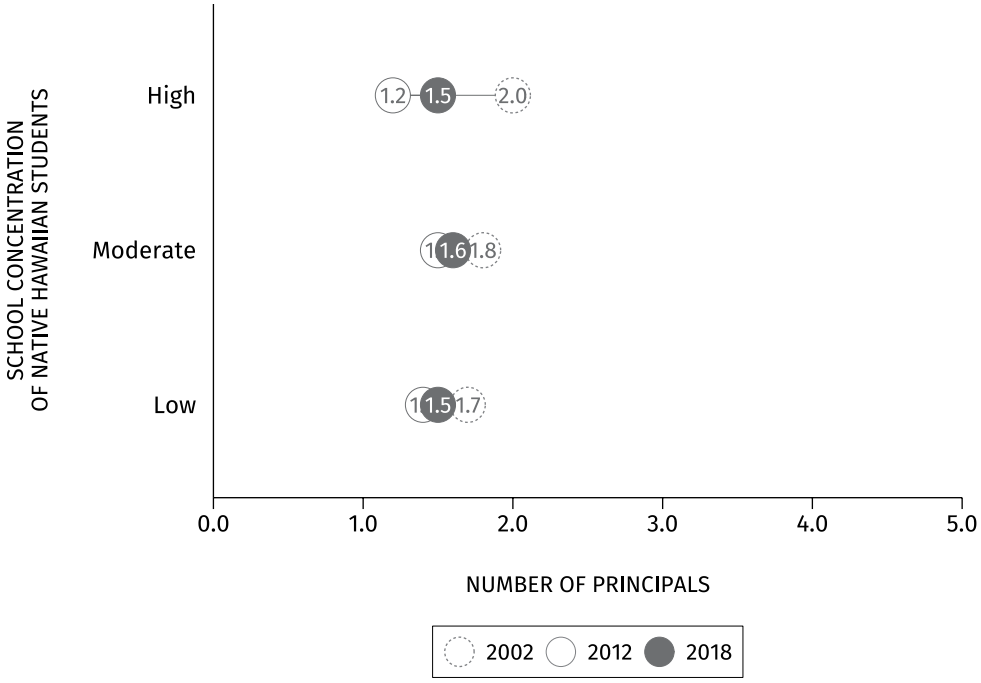
In previous decades, many schools with high concentrations of Native Hawaiian students employed disproportionately more emergency hires and fewer teachers with advanced degrees, while also experiencing greater teacher and principal turnover (Kanaʻiaupuni, Malone, and Ishibashi 2005; Kamehameha Schools 2014). Furthermore, despite the fact that Native Hawaiians make up almost one-fourth of the student population in the Hawaiʻi DOE system, only 10 percent of Hawaiʻi DOE teachers are Native Hawaiian—less than the percentage of teachers who identify as Caucasian (25 percent), Japanese (23 percent), and Other (25 percent) (Hawaiʻi 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, Hawaiʻi; 2002, 2012, and 2018]



Data source: Hawaiʻi 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, Hawaiʻi 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, Hawaiʻi 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, Hawaiʻi 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

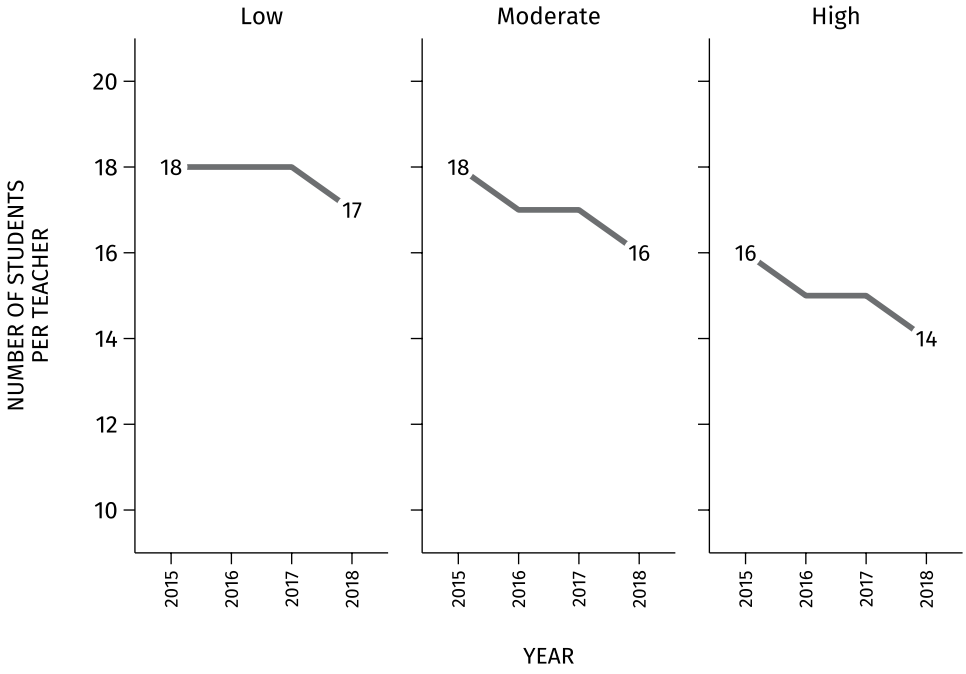
Student-to-teacher ratios are considered valuable measures of school environments by many principals, teachers, and parents. Despite an abundance of research on student-to-teacher ratios, scholars have reported mixed findings or difficulty in establishing causal links between class size and student learning (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, Hawaiʻi, 2015 to 2018]



Data source: Hawaiʻi 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.

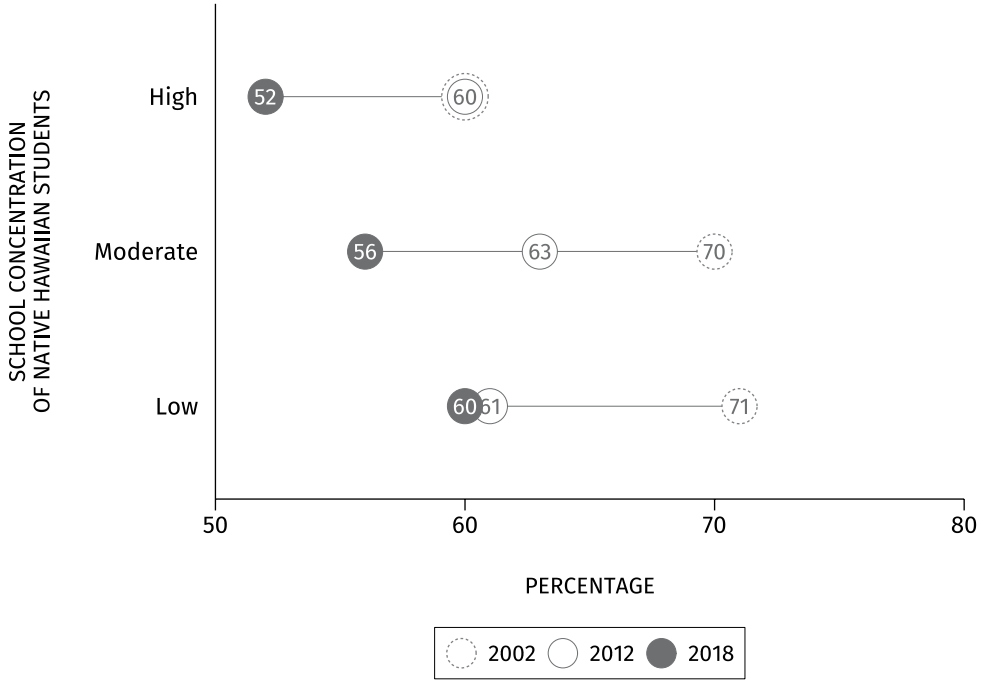
TEACHER EXPERIENCE AND CREDENTIALS

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, Hawaiʻi; 2002, 2012, and 2018]



Data source: Hawaiʻi 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%.

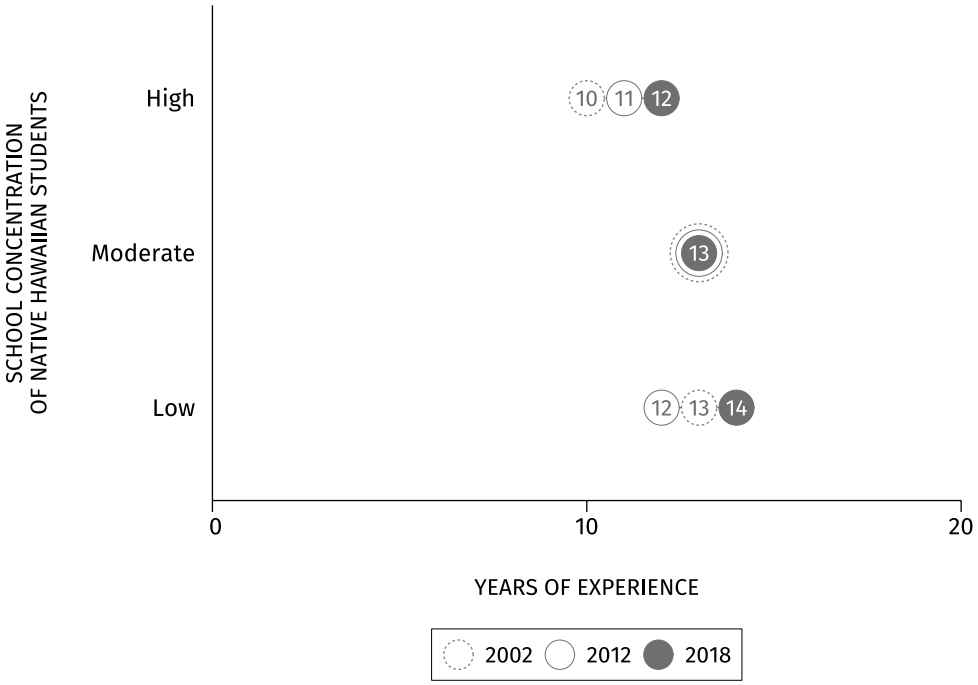
- Among public schools with low, moderate, and high concentrations of Native Hawaiian students, there was a decrease between 2002 and 2018 in the percentage of teachers with five or more years of experience at the same school.
- Public schools with higher concentrations of Native Hawaiian students generally 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 Hawaiʻi 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%.

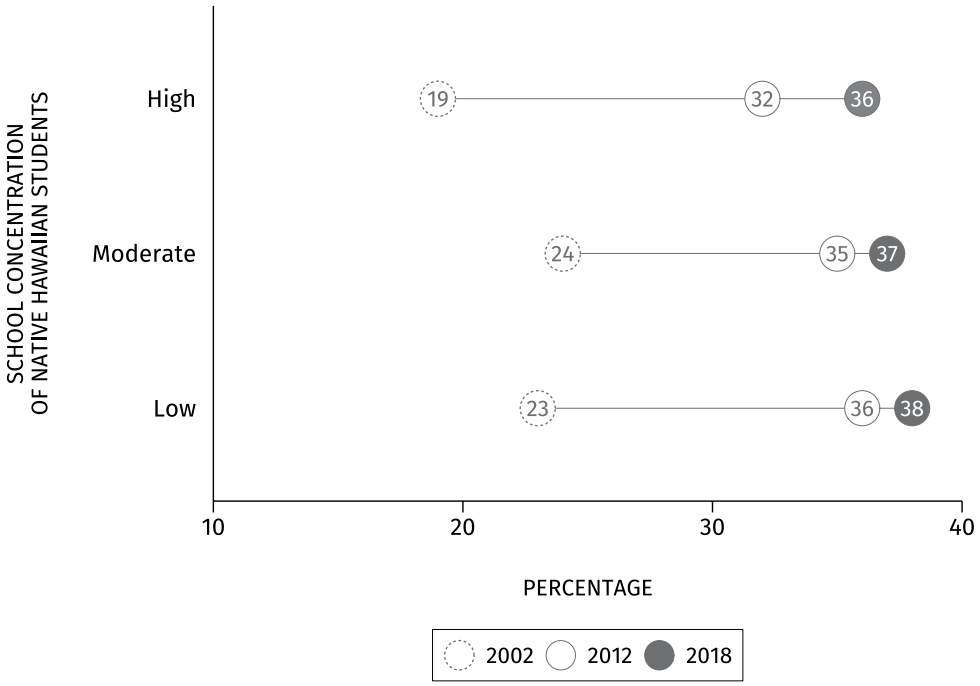
- In 2018, teachers at schools with a low concentration of Native Hawaiian students had an average of 14 years of teaching experience, compared with 13 years among teachers in schools with moderate concentrations of Native Hawaiian students and 12 years for high-concentration schools.
- Over time, schools 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 Hawaiʻi DOE does not require teachers to obtain an advanced degree for licensure (Hawaiʻi Department of Education, n.d.[c]).

In 2018, the rates of Hawaiʻi 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%.

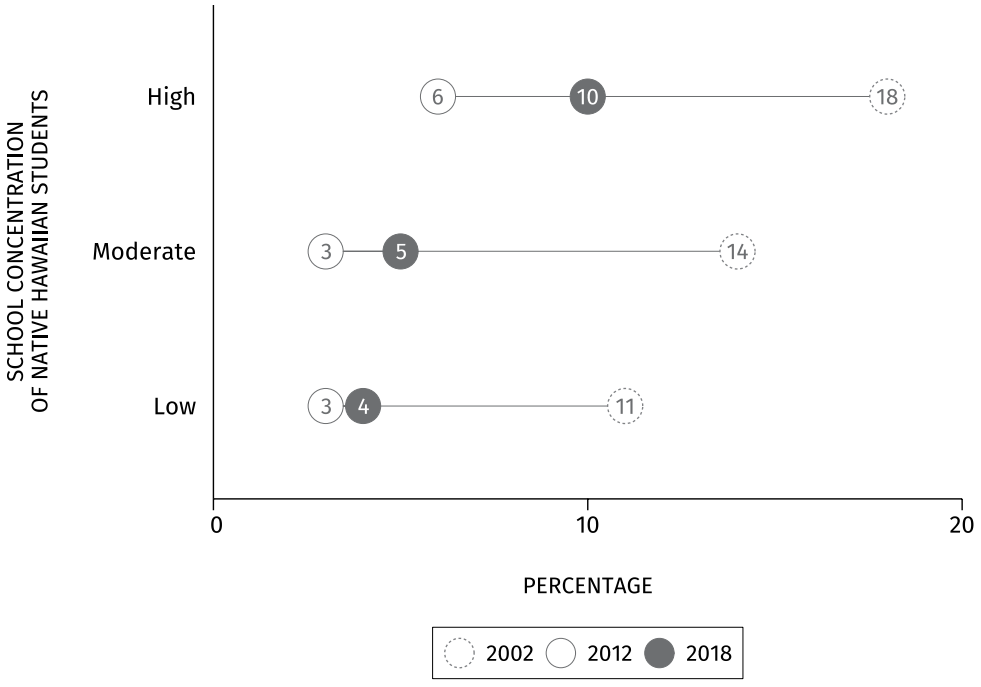
- The proportion of teachers with advanced degrees was substantially higher in 2018 than in 2002, regardless of the schools' concentration of Native Hawaiian students.
- In 2018, 36 percent of Hawai'i public school teachers in schools with a high concentration of Native Hawaiian students had advanced 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 Hawaiʻi, 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 Hawaiʻi DOE reinforces these findings. For example, complex areas such as Hāna–Lahainaluna–Lānaʻi–Molokaʻi, Honokaʻa–Kealakehe–Kohala–Konawaena, and Nānākuli–Waiʻanae 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–Waiʻanae, 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, Hawaiʻi; 2002, 2012, and 2018]



Data source: Hawaiʻi 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; Kanaʻiaupuni, 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 Hawaiʻi'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[7] 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 Hawaiʻi public schools from 2015 to 2017. These include the following tests:

- Smarter Balanced Assessment (SBA) for language arts and mathematics from 2015 to 2017
- Hawaiʻi State Assessment (HSA) for science from 2015 to 2017
- Alternative assessments[8] offered from 2015 to 2017
- Kaiapuni Assessment of Education Outcomes (KĀʻEO), 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 Hawaiʻi DOE and partners support Native Hawaiian learners to increase proficiency rates and reduce achievement gaps.

[7] Science proficiency data are unavailable.

[8] Although alternative assessments and the KĀʻEO assessments are included in our data, the HSA and SBA account for a vast majority of standardized tests administered.

HAWAIʻI 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 Hawaiʻi 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 Hawaiʻi 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 Hawaiʻi DOE implemented new Hawaiʻi Common Core Standards that defined "what students should understand and be able to do at each grade level" (Hawaiʻi Department of Education Offices, What it is, what it is not, n.d.[b]). Hawaiʻi 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 Hawaiʻi 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 Hawaiʻi 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 Hawaiʻi DOE adopted the Next Generation Science Standards (NGSS), and individual schools began to align and implement NGSS standards to existing HSA tests (Hawaiʻi Department of Education, n.d.[e]). A science bridge assessment was planned for spring 2020 but was postponed due to the COVID-19 pandemic.

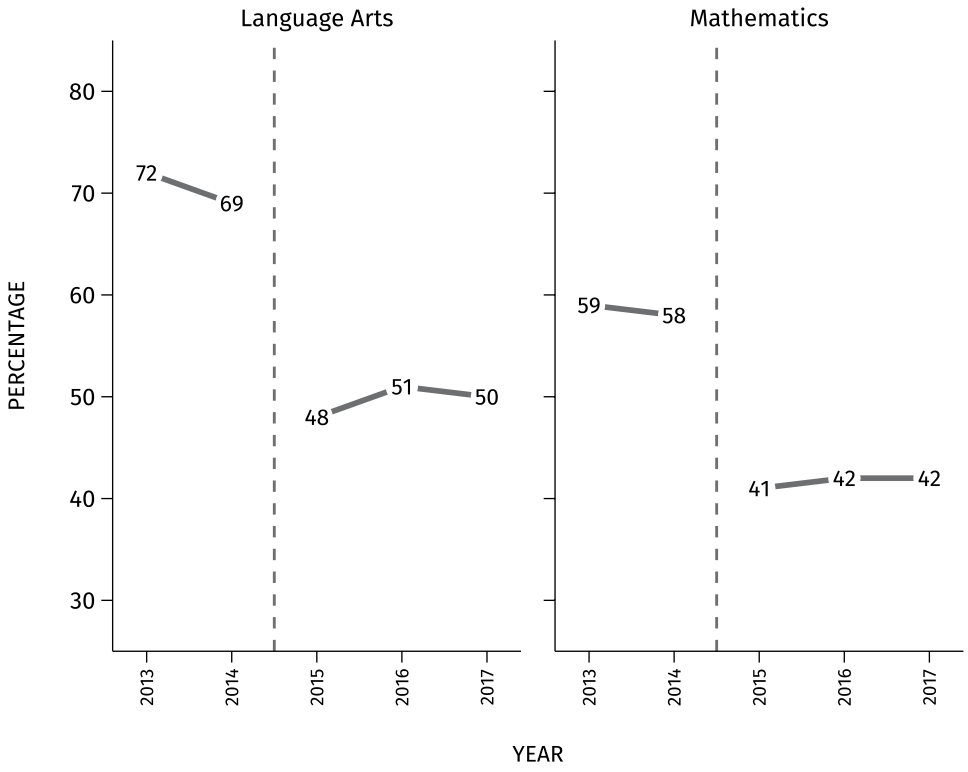
Grade 3 and 4 students in kaiapuni schools take the KĀʻEO tests. First administered in 2016, the KĀʻEO assessments were developed by a partnership between the Hawaiʻi DOE and the University of Hawaiʻi at Mānoa (Hawaiʻi Department of Education, n.d.[g]). Kaiapuni students do not take the SBA.

Other Hawaiʻi DOE assessments[9] 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) (Hawaiʻi Department of Education Offices, "Other Assessments," n.d.[f]).

[9] 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 Hawaiʻi 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, Hawaiʻi, 2013 to 2017]



Data source: Hawaiʻi Department of Education, Hawaiʻi 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 Hawaiʻi public schools: HSA in 2013; HSA/SBA bridge assessment in 2014; SBA in 2015 to 2017; Alternative assessment offered in 2014 to 2017; and KĀʻEO in kaiapuni 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 Hawaiʻi 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.

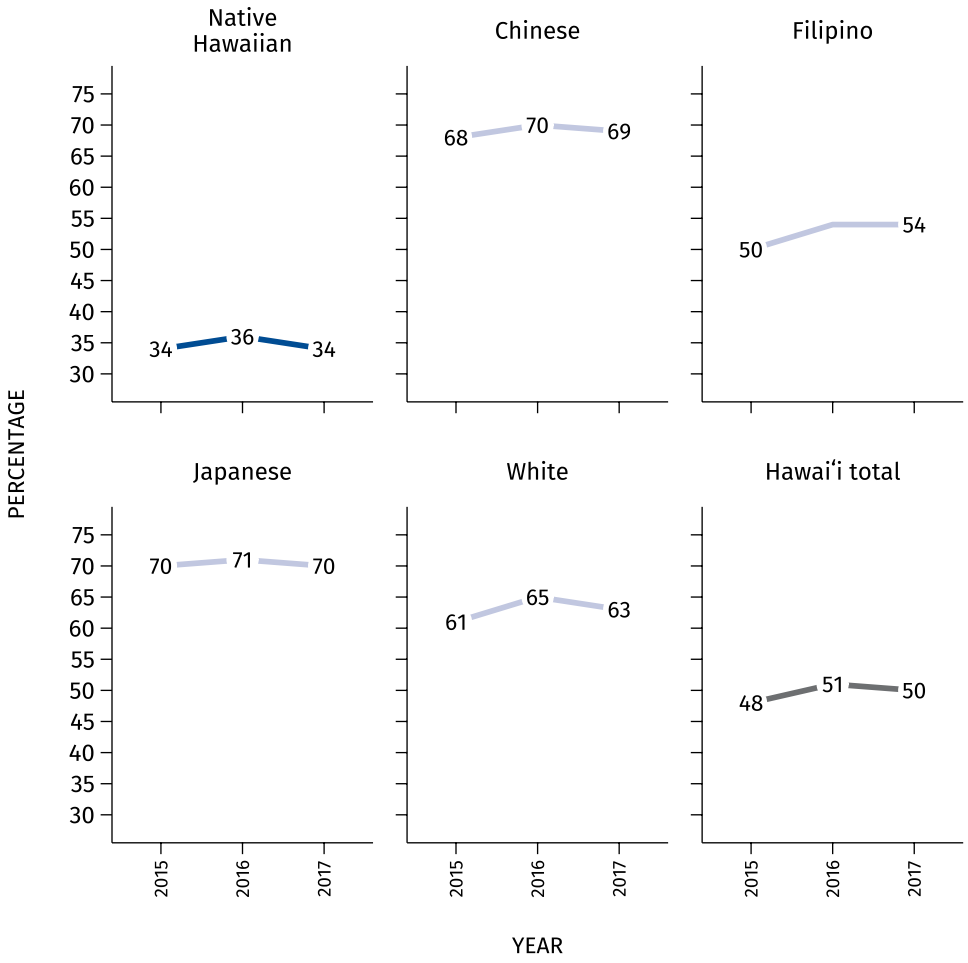
The intention of including figure 3.53 is not to compare the HSA and SBA tests, which use different methods to measure competency and proficiency standards. Rather, it is to acknowledge the changes in assessment that occurred in the Hawai‘i DOE prior to 2015, which is the starting year for data presented 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, Hawaiʻi, 2015 to 2017]



Data source: Hawaiʻi Department of Education, Hawaiʻi 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.

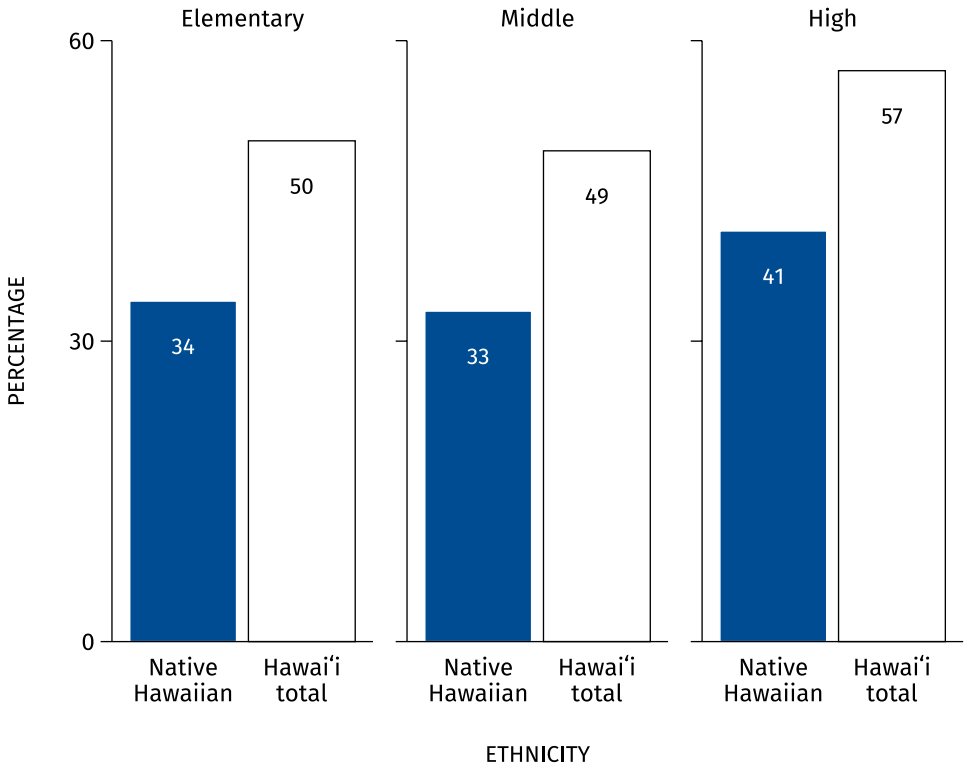
Note 3: Data labels are presented for the first and last points, the maximum and minimum points, and some inflection points where the trend changes.

- 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 Hawaiʻi total in 2017, half of all Hawaiʻi 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 Hawaiʻi'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

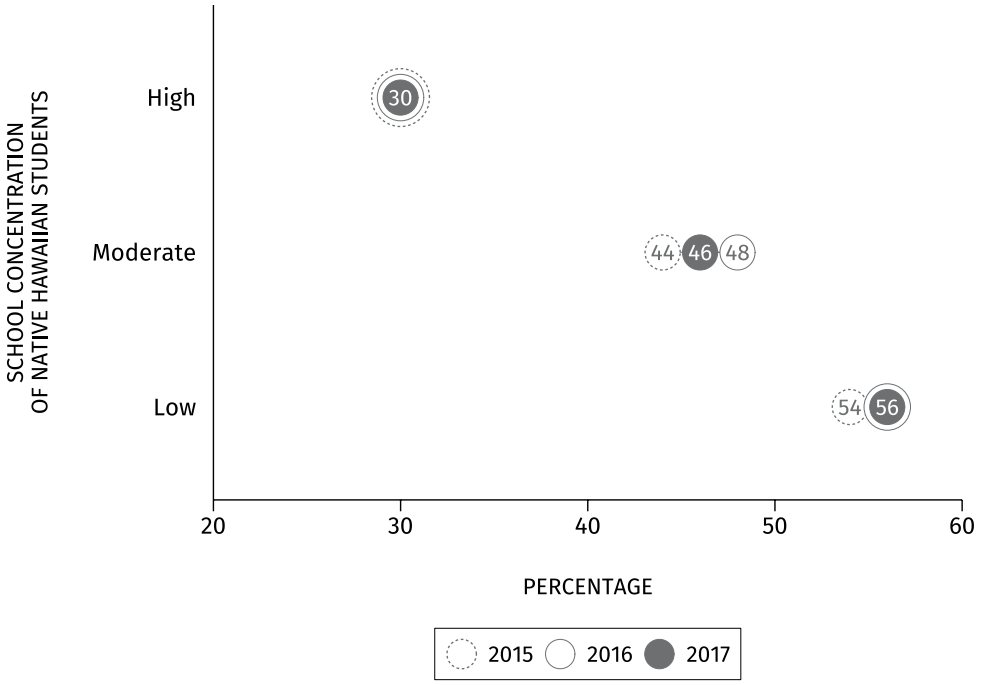
Note 1: 2017 refers to school year 2016–17.

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, Hawaiʻi, 2015 to 2017]



Data source: Hawaiʻi Department of Education, Hawaiʻi 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.

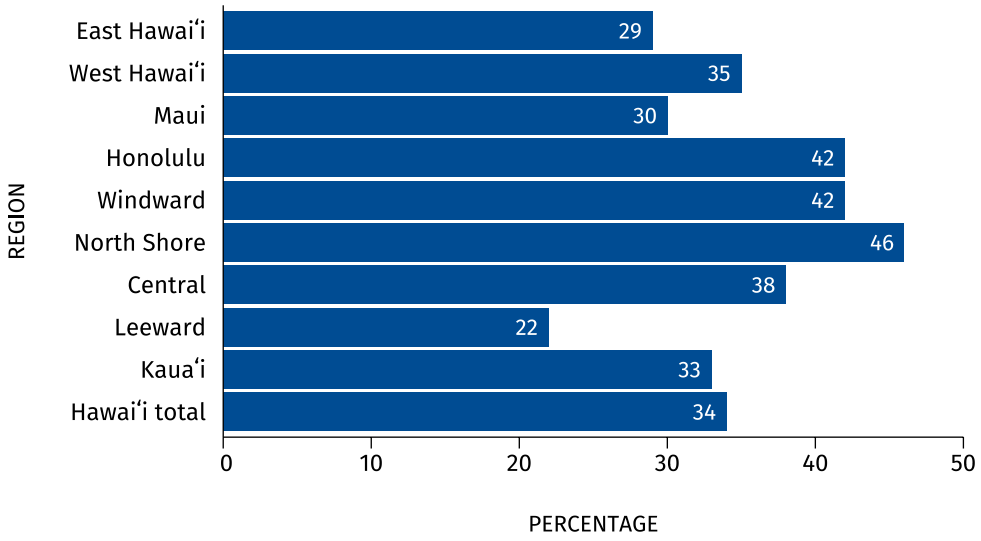
- Proficiency rates in language arts are consistently lower among test takers in schools with a high concentration of Native Hawaiian students, compared with test takers in schools with a low or moderate concentration of Native Hawaiian students.
- In 2015, 2016, and 2017, more than 50 percent of students 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, Hawaiʻi, 2017]



Data source: Hawaiʻi Department of Education, Hawaiʻi 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.

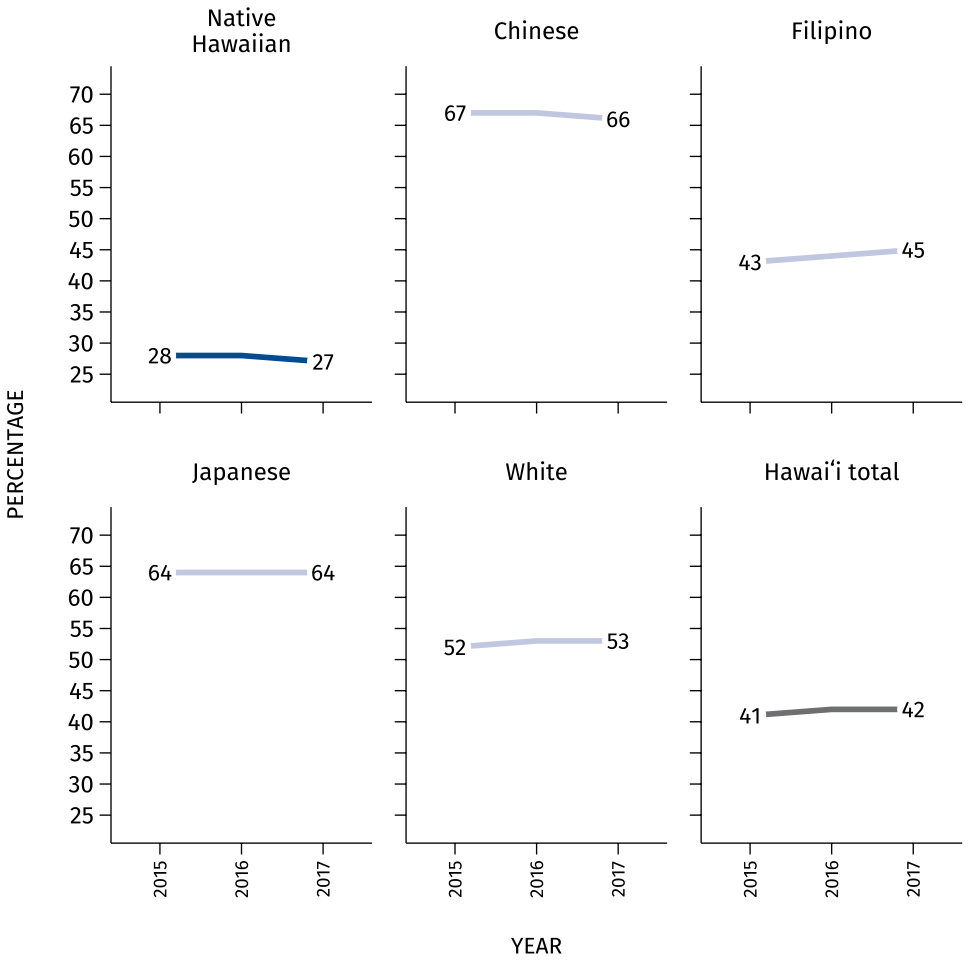
Note 3: Regional data refer to where the student is enrolled or graduated from, rather than where they live.

- 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, Hawaiʻi 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 Hawaiʻi. 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.

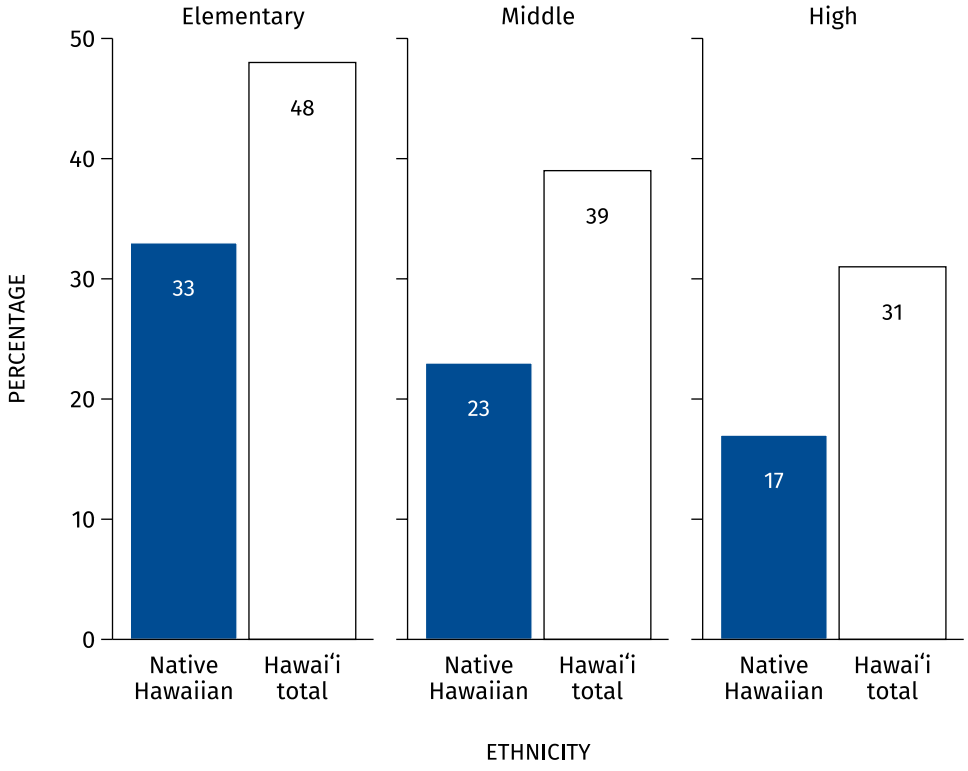
Note 2: These data include proficiency outcomes based on any standardized test at any grade level.

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 Hawaiʻi 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, Hawaiʻi, 2017]



Data source: Hawaiʻi Department of Education, Hawaiʻi Data eXchange Partnership, DXP469 cross-section; prepared at the request of Kamehameha Schools

Note 1: 2017 refers to school year 2016–17.

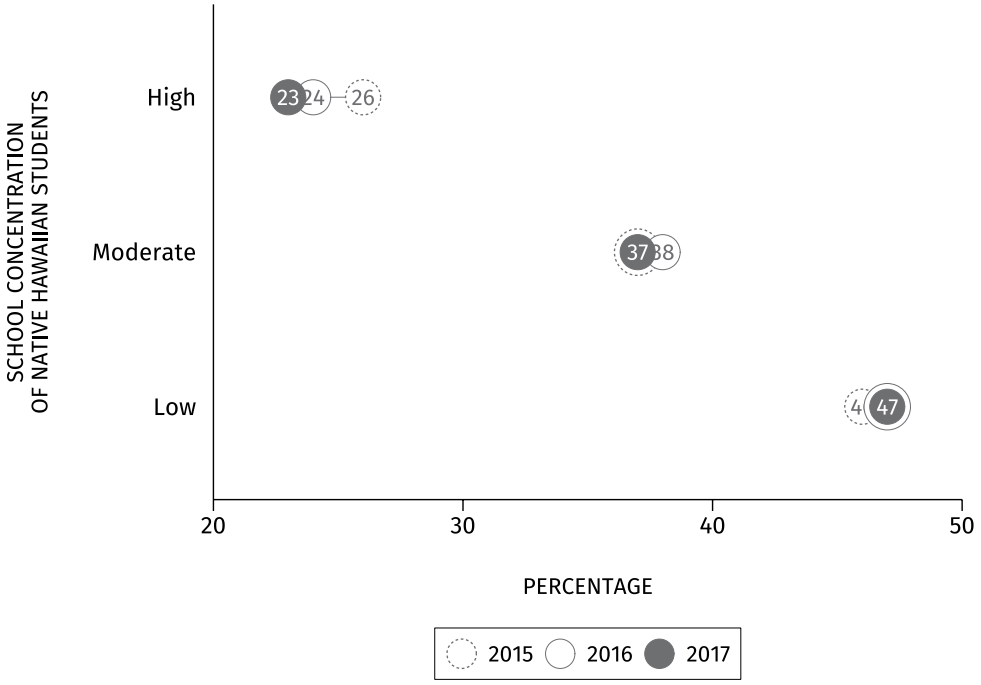
Note 2: These data include proficiency outcomes based on any standardized test at any grade level.

- For the Hawaiʻi total, nearly half (48 percent) of elementary students in Hawaiʻi 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, Hawaiʻi, 2015 to 2017]



Data source: Hawaiʻi Department of Education, Hawaiʻi 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.

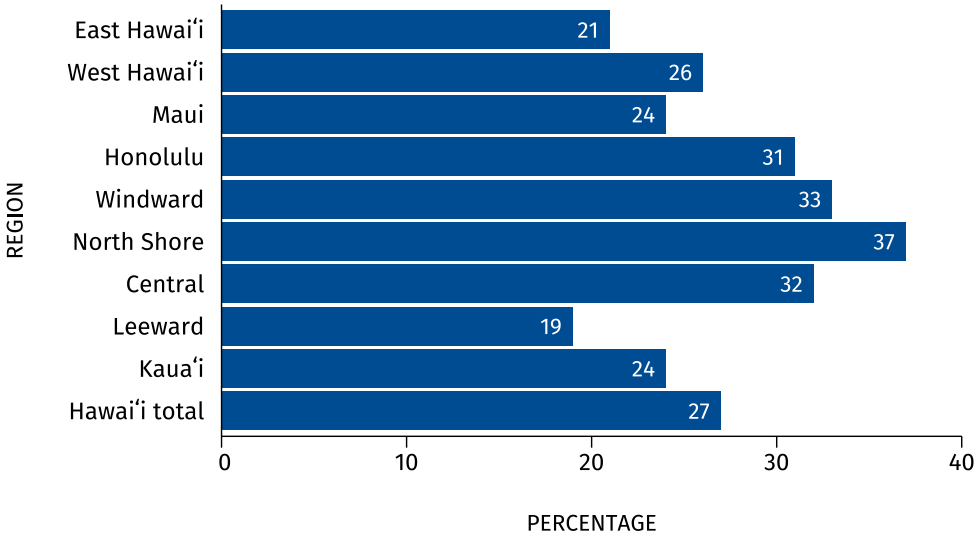
- Proficiency rates in mathematics are consistently lower among test takers in schools with a high concentration of Native Hawaiian students, compared with test takers in schools with a low or moderate concentration of Native Hawaiian students.
- In 2017, nearly half (47 percent) of test takers in schools 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.

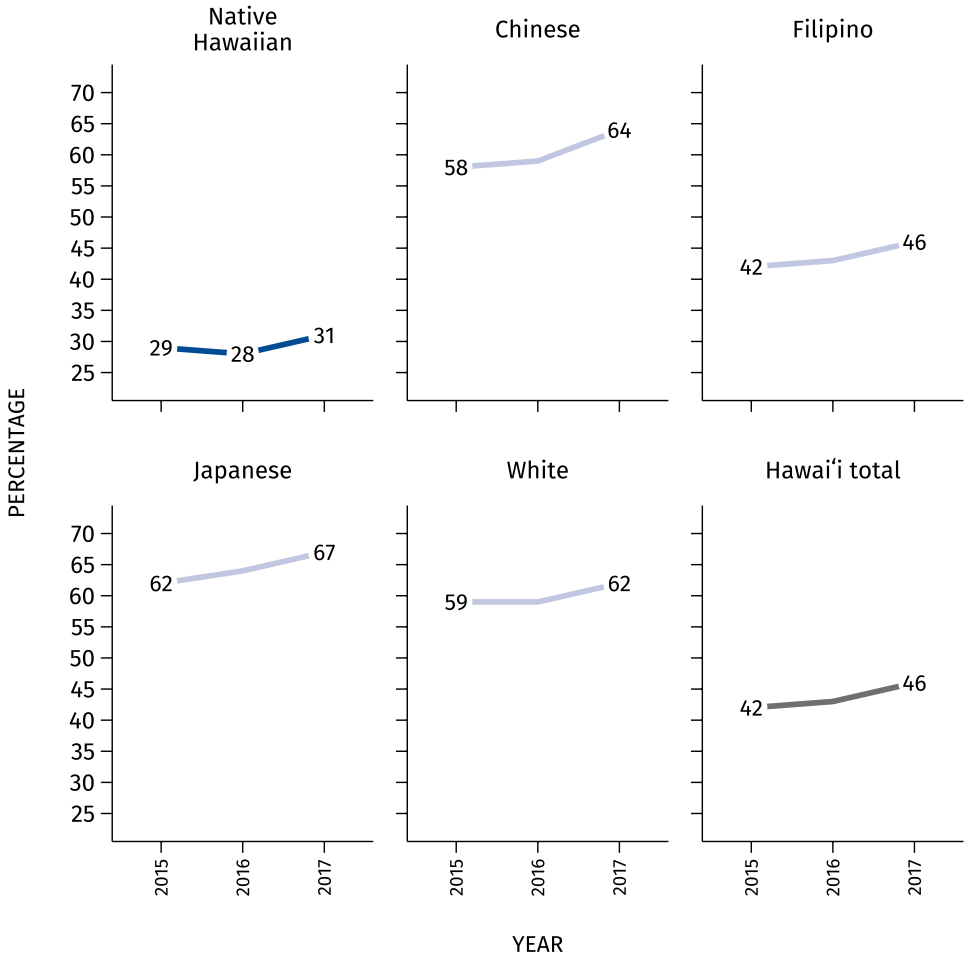
Note 3: Regional data refer to where the student is enrolled or graduated from, rather than where they live.

- 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 Hawaiʻi (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 Hawaiʻi.

FIGURE 3.62 Trends in science proficiency among students in public schools
[as a percentage of public school students, by ethnicity, Hawaiʻi, 2015 to 2017]



Data source: Hawaiʻi Department of Education, Hawaiʻi 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.

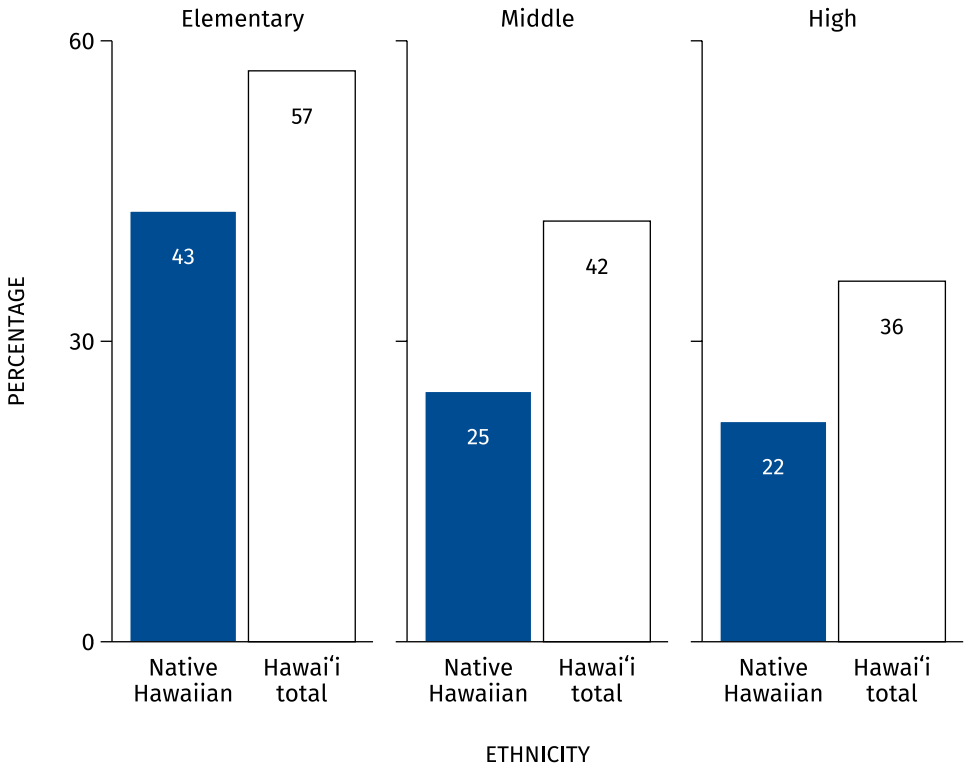
Note 2: These data include proficiency outcomes based on any standardized test at any grade level; the KĀʻEO science assessment was introduced for kaiapuni elementary students in 2016.

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, Hawaiʻi, 2017]



Data source: Hawaiʻi Department of Education, Hawaiʻi Data eXchange Partnership, DXP469 cross-section; prepared at the request of Kamehameha Schools

Note 1: 2017 refers to school year 2016–17.

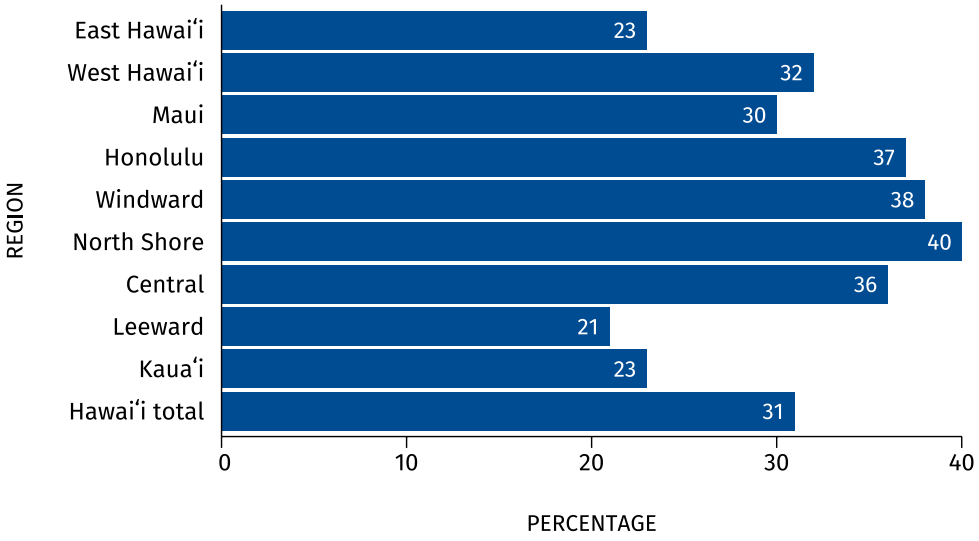
Note 2: These data include proficiency outcomes based on any standardized test at any grade level; the KĀʻEO science assessment was introduced for kaiapuni elementary students in 2016.

- All school levels show notable achievement gaps in science proficiency between Native Hawaiian students and the Hawaiʻi 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 Hawaiʻi total, nearly three-fifths (57 percent) of elementary students in Hawaiʻi 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 Hawaiʻi DOE posits that students who earn a high school diploma meet the vision of a Hawaiʻi public school graduate (Hawaiʻi 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).

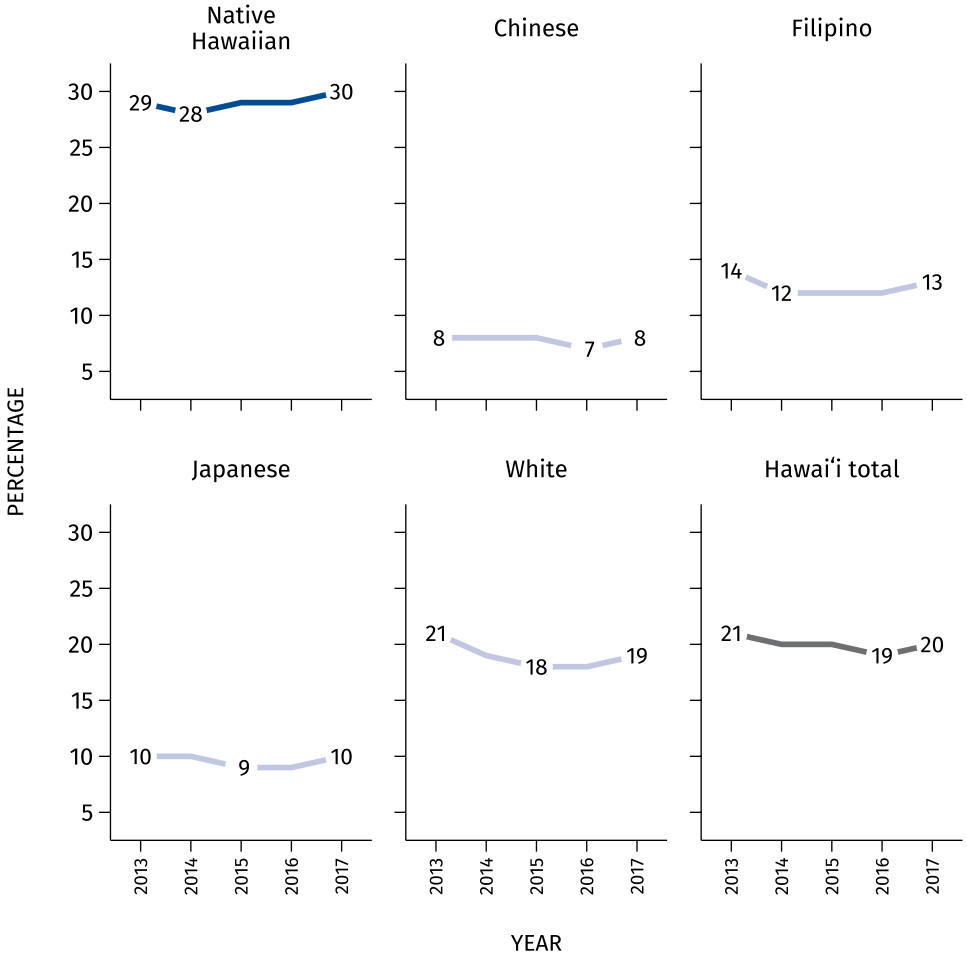
In this section, we examine Hawaiʻi DOE student persistence using two measures that serve as proxies for engagement and persistence: chronic absenteeism and grade retention (or in-grade retention). We also present dropout rates among Hawaiʻi public school students and conclude with timely high school 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.

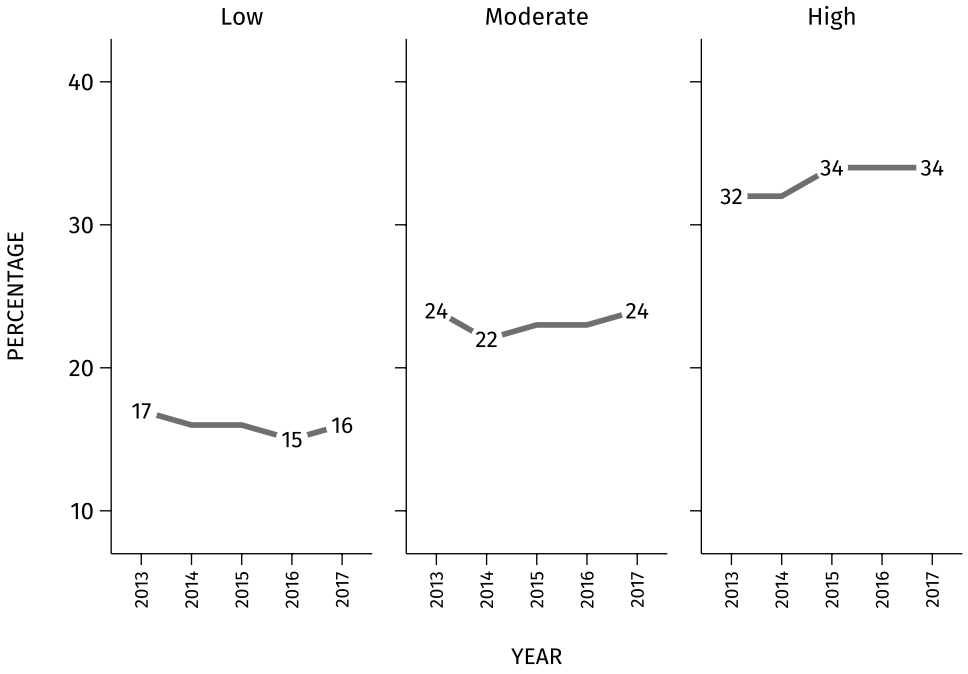
Note 2: Chronic absenteeism is defined as missing fifteen or more days of school during the academic year.

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 Hawaiʻi were relatively consistent and hovered around 20 percent for the Hawaiʻi 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 Hawaiʻi 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%.

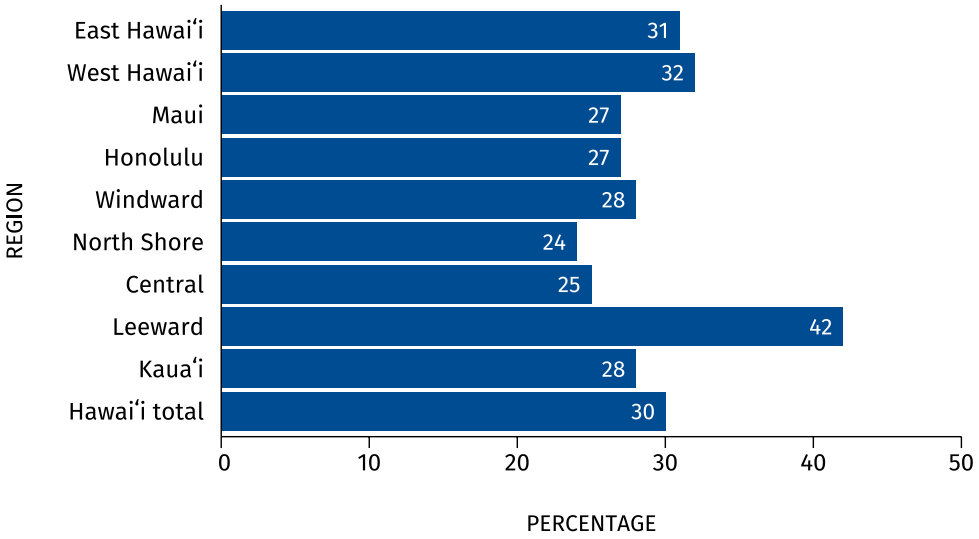
Note 3: Chronic absenteeism is defined as missing fifteen or more days of school during the academic year.

- 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 Hawaiʻi 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 Hawaiʻi 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, Hawaiʻi, 2017]



Data source: Hawaiʻi Department of Education, Hawaiʻi 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 Hawaiʻi.
- 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).

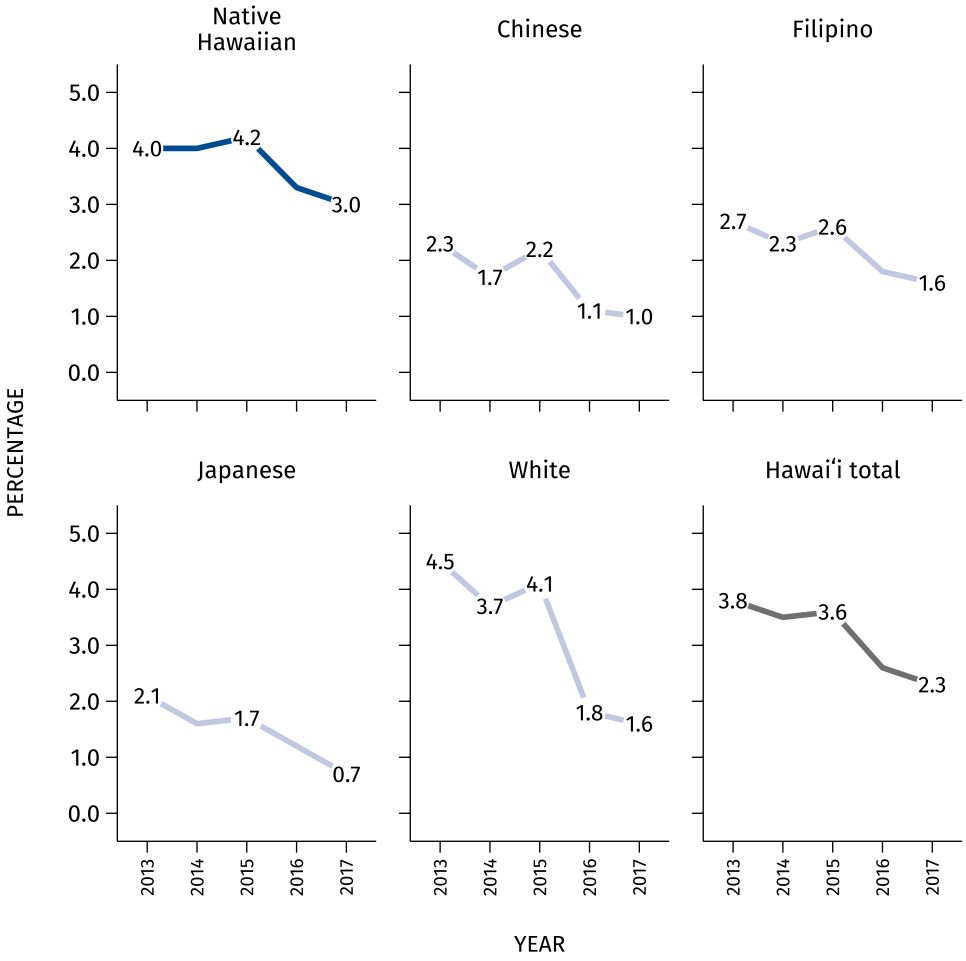
GRADE RETENTION

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, Hawaiʻi, 2013 to 2017]



Data source: Hawaiʻi Department of Education, Hawaiʻi Data eXchange Partnership, DXP469 cross-section; prepared at the request of Kamehameha Schools

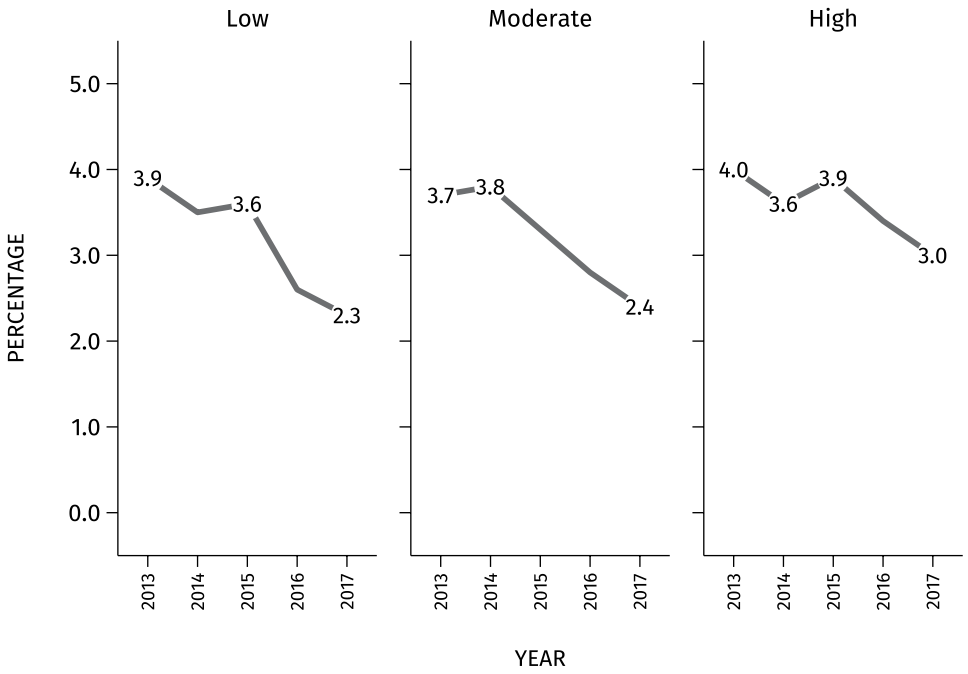
Note 1: The years displayed represent the end of a given school year; e.g., 2017 refers to school year 2016–17.

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 Hawaiʻi total, 2.3 percent of public school students were retained in 2017.
- In 2017, Native Hawaiian students were the most likely of Hawaiʻi'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%.

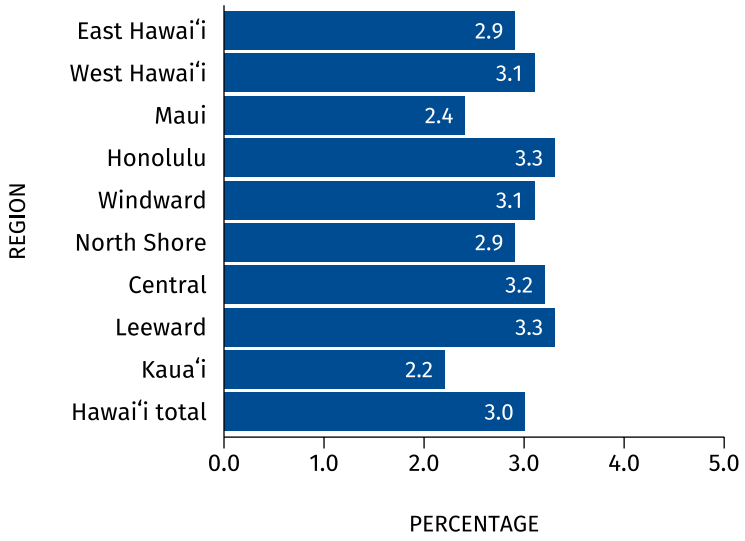
Note 3: Data labels are presented for the first and last points, the maximum and minimum points, and some inflection points where the trend changes.

- 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 Kauaʻi (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 Kauaʻi 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, Hawaiʻi, 2017]



Data source: Hawaiʻi Department of Education, Hawaiʻi 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, Kauaʻi 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).

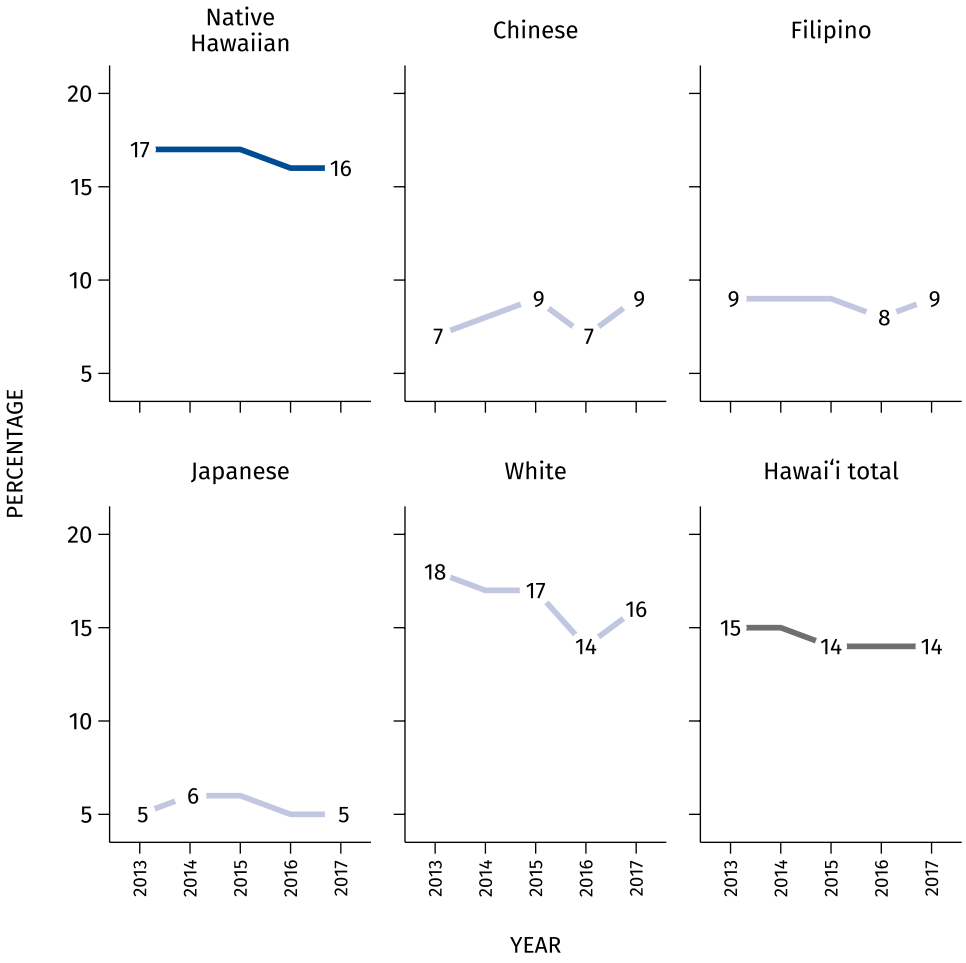
The dropout data presented below are based on five cohorts of students who began high school as ninth-graders in Hawai‘i public schools and were expected to graduate four years later. Each cohort is identified by its anticipated year of graduation:

- 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, Hawaiʻi, 2013 to 2017]



Data source: Hawaiʻi Department of Education, Hawaiʻi 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.

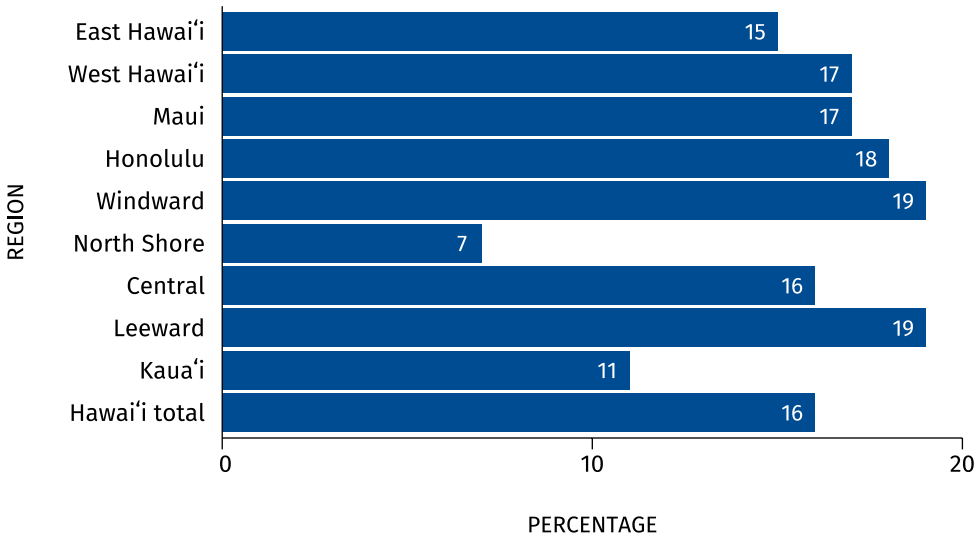
Note 2: Data labels are presented for the first and last points, the maximum and minimum points, and some inflection points where the trend changes.

- For the Hawaiʻi 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

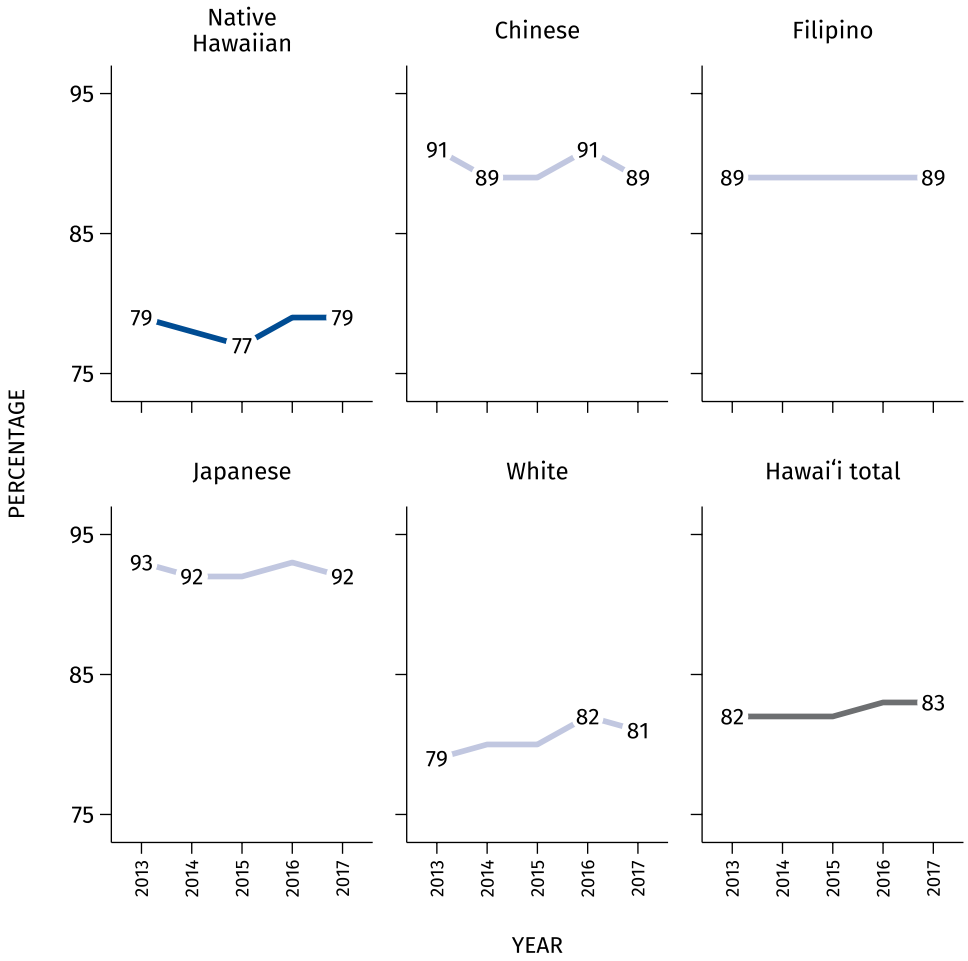
On-time high school graduation can be defined in multiple ways (Stetser and Stillwell 2014). For the purposes of *Ka Huakaʻi*, on-time high school completion is defined as meeting graduation requirements within four years of beginning high school.[10] Our analysis examines on-time completion based on five cohorts of students who began high school as ninth-graders in Hawaiʻi 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).

[10] Cohort data include high schoolers who transferred to a different public school in Hawaiʻi and completed high school within four years. Data do not include students who transferred to a private school in Hawaiʻi 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.

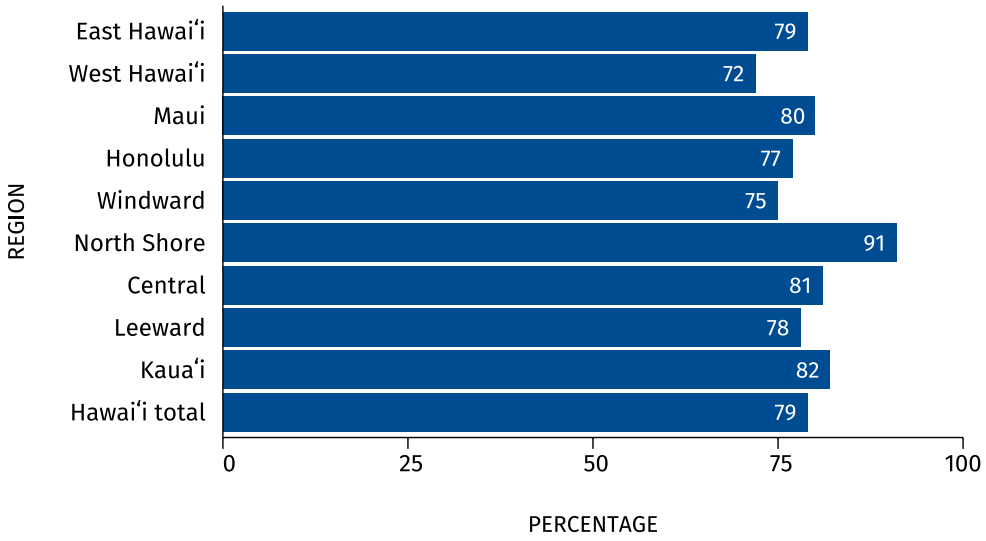
Note 3: Data labels are presented for the first and last points, the maximum and minimum points, and some inflection points where the trend changes.

- 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 Hawaiʻi 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 Hawaiʻi had the highest rate for the 2013 cohort, with 87 percent (not shown). In 2017, West Hawaiʻi 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, Hawaiʻi, 2017]



Data source: Hawaiʻi Department of Education, Hawaiʻi 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 Hawaiʻi 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.[11] 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.[12] 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.[13] We first look at Hawai'i DOE student enrollment in advanced placement (AP) courses and dual credit programs.[14] 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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[11] See Chapter 1, "Post-High School Decisions and Transitions," for a brief discussion on non-college pathways.

[12] 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).

[13] 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).

[14] 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 Hawaiʻi 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

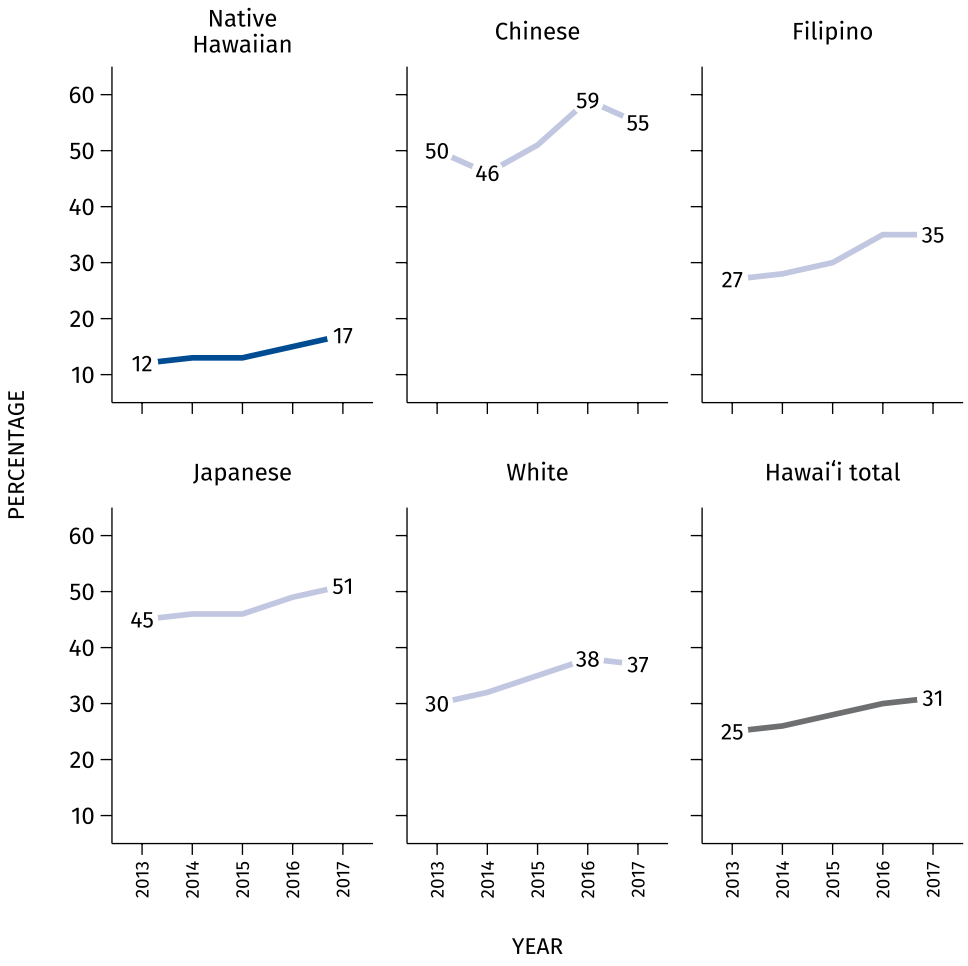
AP courses were developed to provide high school students with opportunities to earn early college credits or advanced placement in college-level courses. Beyond the prospect of gaining college credits by passing an AP exam or achieving a score of 3 or higher, AP courses also have become a means to identify 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 Hawaiʻi 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 Hawaiʻi. For example, in the 2017 cohort, there was a 14 percentage point difference between Native Hawaiian students (17 percent) and the Hawaiʻi 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

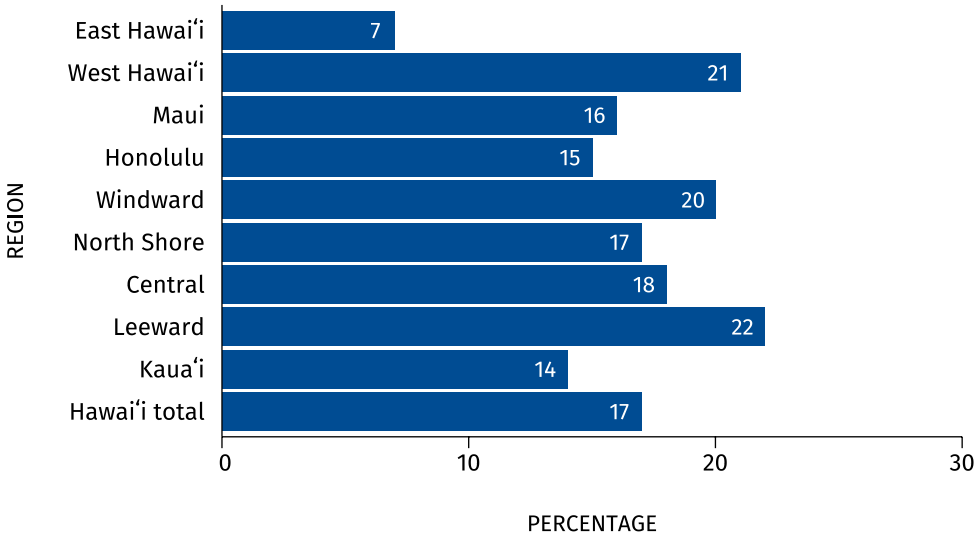
The 2017 cohort saw regional variation in AP enrollment among Native Hawaiian students. Among regions, Leeward schools saw the highest proportion (22 percent) of Native Hawaiians enrolled in AP courses (fig. 3.76). This finding may correspond with previous federal grant programs such as GEAR UP, as well as community programmatic efforts aimed at increasing the number of students in the region who are prepared to succeed in postsecondary education (University of Hawaiʻi 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 Hawaiʻi (21 percent) and Windward (20 percent) also had relatively high rates of Native Hawaiians taking AP courses. Conversely, East Hawaiʻi had the lowest proportion of Native Hawaiian AP course takers—10 percentage points lower than the Hawaiʻi 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 Hawaiʻi remained steady, while Kauaʻi 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 Hawaiʻi public schools have grown in number over the past decade, in part due to several public–private partnerships to promote and facilitate the courses (Hawaiʻi P–20 Partnerships for Education 2014). Hawaiʻi currently offers three dual credit programs: Running Start, Early College, and Jump Start.

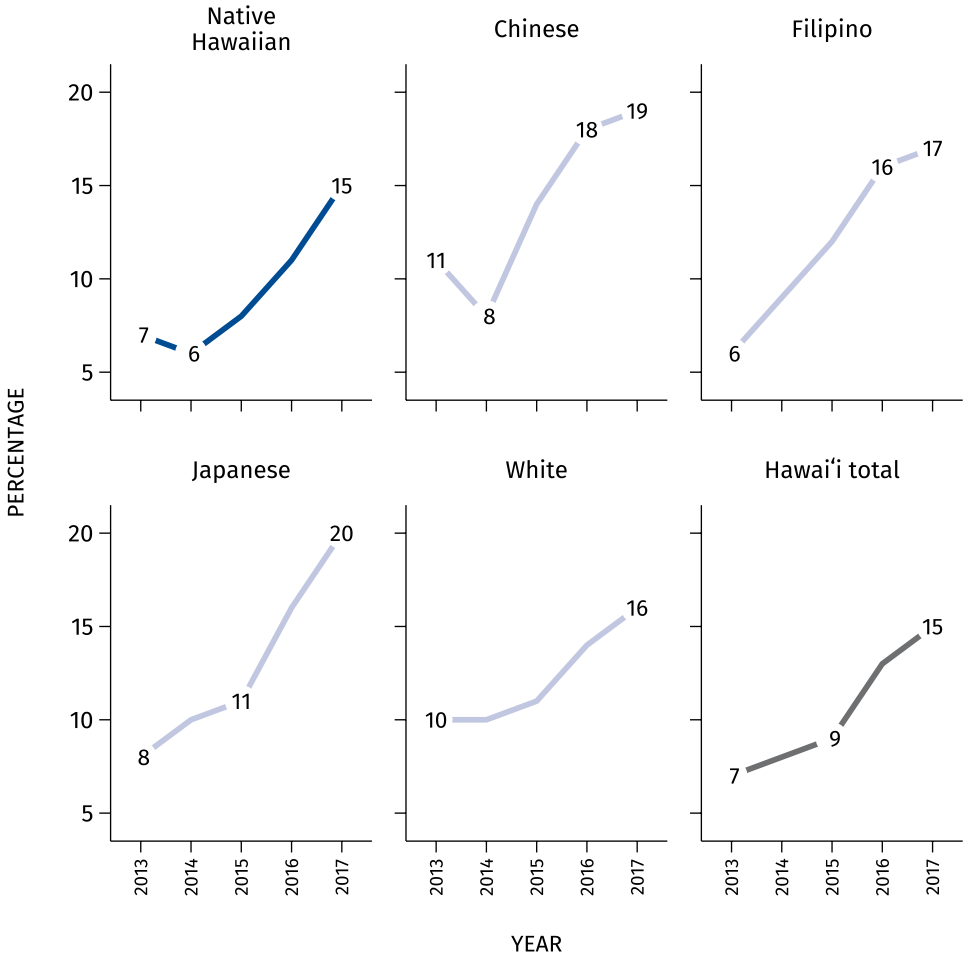
1. **Running Start** is a joint partnership program between the Hawaiʻi DOE and the University of Hawaiʻi. This program allows high school students to take college classes, on college campuses, and earn credits that count toward their high school diploma and college education (Hawaiʻi P–20 Partnerships 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 (Hawaiʻi 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 (Hawaiʻi 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 Hawaiʻi 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 Hawaiʻi 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 Hawaiʻi. 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.

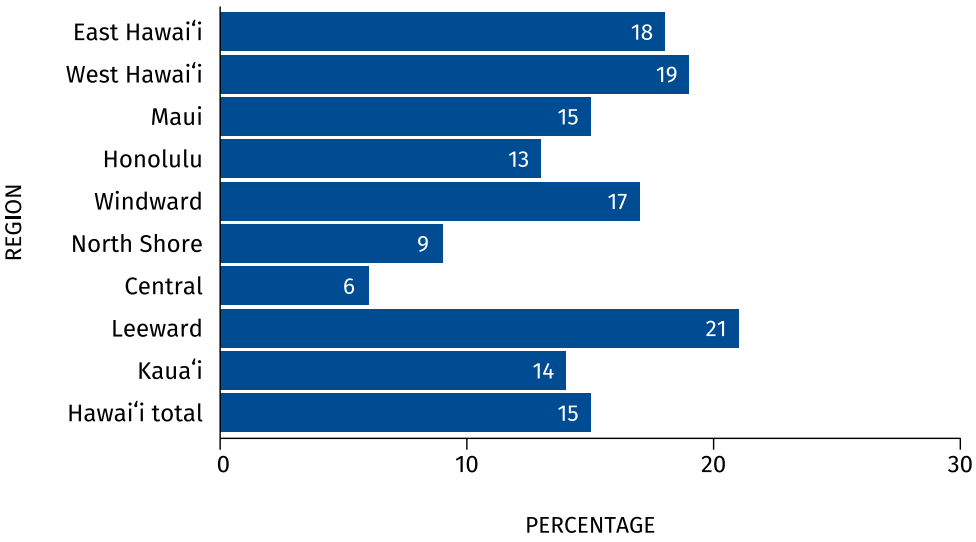
Note 3: Data labels are presented for the first and last points, the maximum and minimum points, and some inflection points where the trend changes.

- 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 Hawaiʻi 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 Hawaiʻi, 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 Hawaiʻi 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, Hawaiʻi, 2017]



Data source: Hawaiʻi Department of Education, Hawaiʻi 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 Hawaiʻi, 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 Hawaiʻi 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 Hawaiʻi (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).

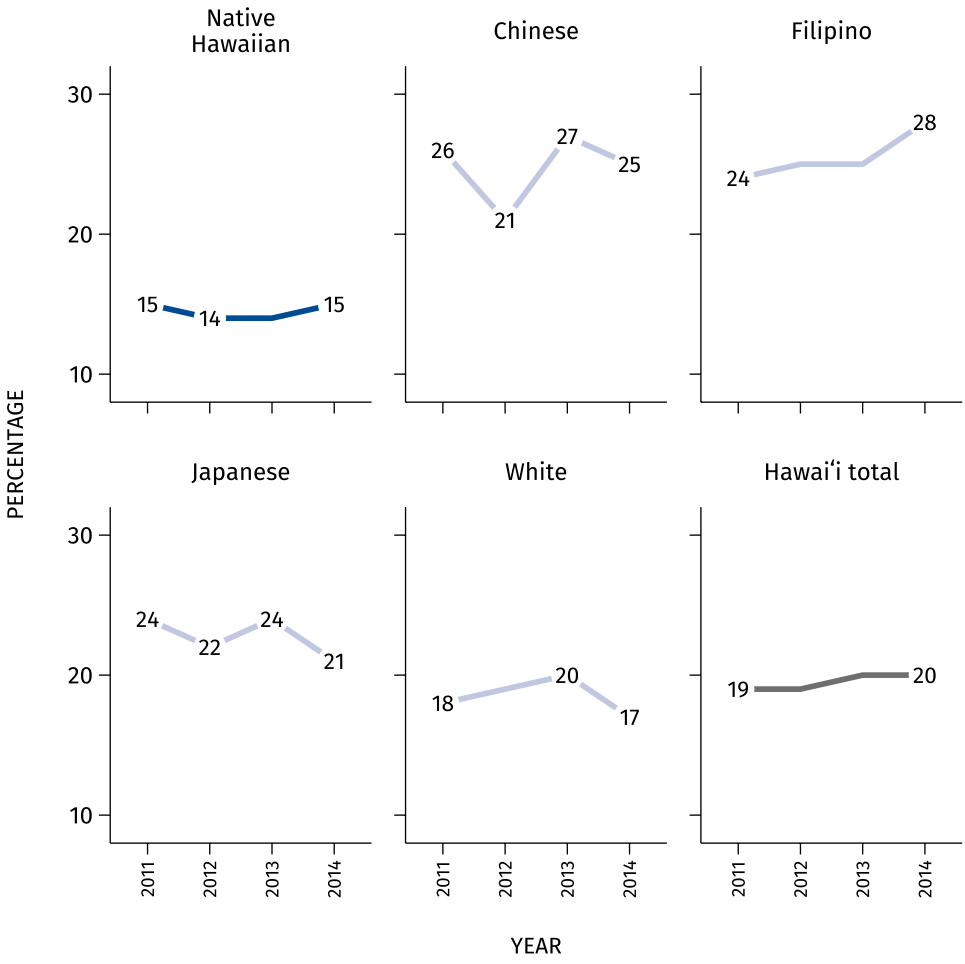
In the data that follow, the completion rate for two-year colleges is defined by earning an associate's degree or certificate in three years or less. For four-year institutions, the completion rate is defined as earning a bachelor's degree in six years or less.[15]

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).

[15] 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, Hawaiʻi, high school classes of 2011 to 2014]



Data source: Hawaiʻi Department of Education, Hawaiʻi 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.

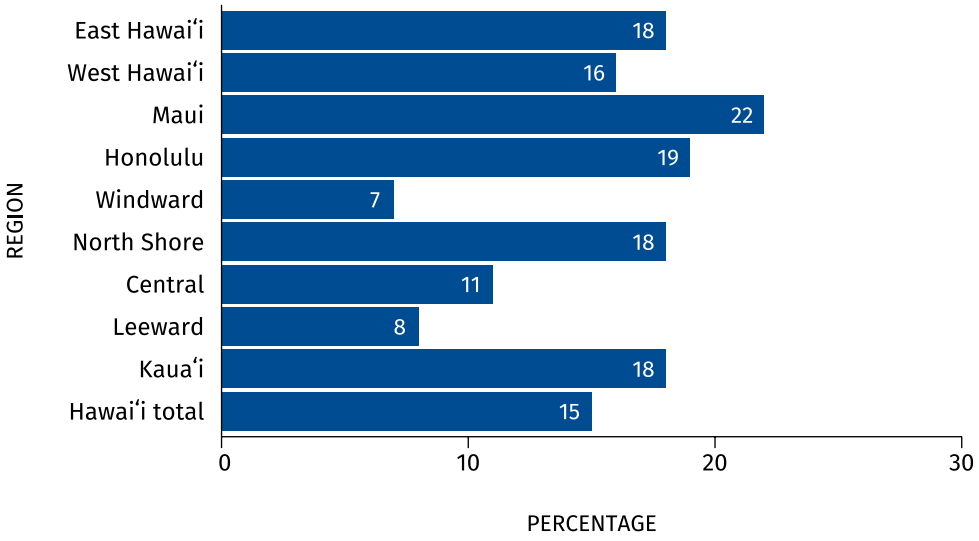
Note 3: Data labels are presented for the first and last points, the maximum and minimum points, and some inflection points where the trend changes.

- For the Hawaiʻi total, overall completion rates at two-year colleges remained stable (approximately 20 percent) across high school classes of 2011 to 2014.
- Among Hawaiʻi'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.

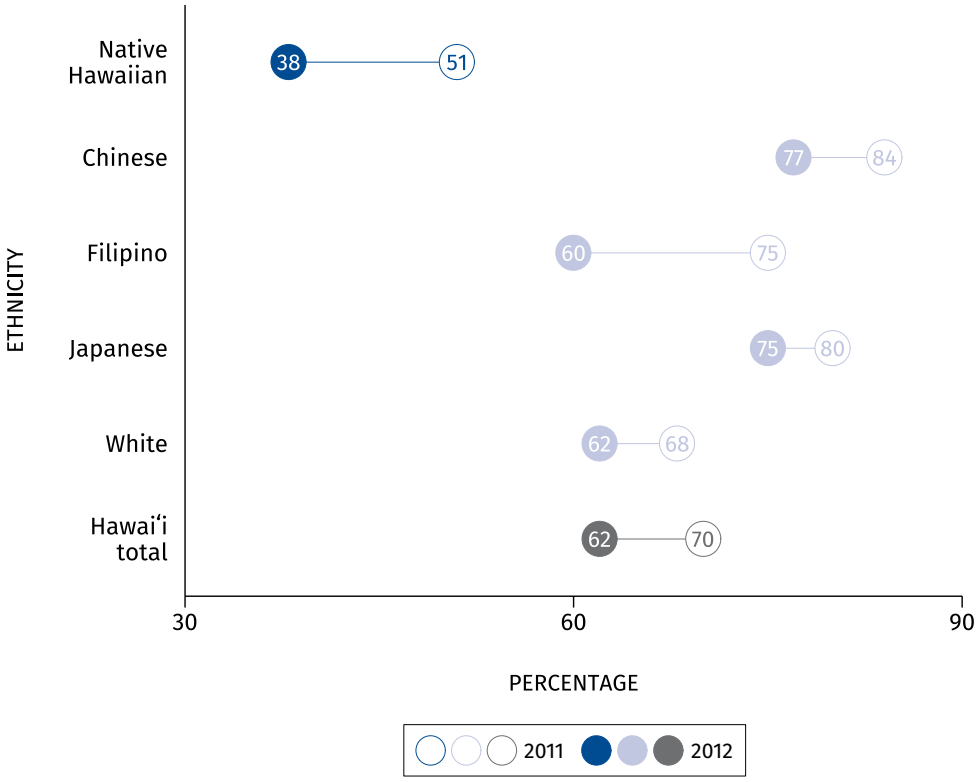
- For the Hawai‘i total, 15 percent of Native Hawaiians in the class of 2014 graduated from a two-year college within three years of first enrolling.
- Among Native Hawaiians in the high school class of 2014, the Maui region had the highest college completion rate (22 percent), followed by Honolulu (19 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, Hawaiʻi, high school classes of 2011 and 2012]



Data source: Hawaiʻi Department of Education, Hawaiʻi 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.

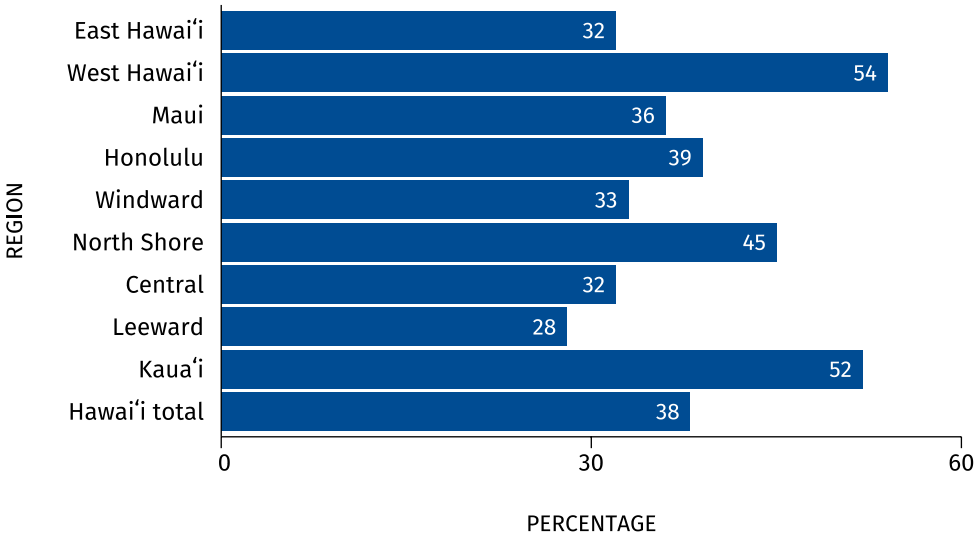
Note 2: These data represent students who finish their four-year degree within six years.

- 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, Hawaiʻi, high school class of 2012]



Data source: Hawaiʻi Department of Education, Hawaiʻi 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 Hawaiʻi 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 Hawaiʻi had the highest proportion of college completion (54 percent), followed closely by Kauaʻi (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 (Kanaʻiaupuni, 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 Hawaiʻi public schools	44%	57%	78%	↑ percentages of economically disadvantaged students
	Special education enrollment as a percentage of students in Hawaiʻi 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 Hawaiʻi 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 Hawaiʻi public schools	38%	37%	36%	slightly lower percentages of teachers with advanced degrees
	Teachers with emergency credentials as a percentage of all teachers in Hawaiʻi public schools	4%	5%	10%	↑ percentages of teachers with emergency credentials
ACADEMIC PROFICIENCY	Language arts proficiency*** as a percentage of test takers in Hawaiʻi public schools	56%	46%	30%	↓ percentages of students meeting language arts proficiency
	Mathematics proficiency*** as a percentage of test takers in Hawaiʻi public schools	47%	37%	23%	↓ percentages of students meeting mathematics proficiency
STUDENT PERSISTENCE	Chronic absenteeism*** as a percentage of students in Hawaiʻi public schools	16%	24%	34%	↑ percentages of chronically absent students
	Retention in grade*** as a percentage of students in Hawaiʻi 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 Hawaiʻi'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.