

THE 2019-2020 HAWAI'I STUDENT ALCOHOL, TOBACCO, AND OTHER DRUG USE (ATOD) SURVEY

In Contract with and Prepared By:
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*WEST HAWAI'I
COMMUNITY
REGION REPORT*

Acknowledgments & Disclosures

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The findings from the ATOD Survey disseminated here are solely the views presented by the authors and do not necessarily represent the views of the sponsoring or partnering agencies.

Unless otherwise indicated, all data presented utilize findings from the Data Source: University of Hawai'i Department of Psychiatry, 2019-2020 Hawai'i Student ATOD Survey.

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I. Background and Purpose

This **Community Region Report** is part of a series of reports from the **Hawai'i Student ATOD Survey** that include data from state, county, and community region levels that present an assessment of the scope of alcohol, tobacco, marijuana, and other drug use among participating students in grades 8, 10, and 12. This report summarizes data for the **West Hawai'i Community Region**. Data were collected using a primarily online survey, using a risk and protective factors approach, to report levels of substance use and treatment needs in the community region. These findings may be used by the State of Hawai'i and other organizations for planning, evaluation, prevention, and treatment services for youth substance use.

II. Design & Method

The design of the ATOD survey was informed, in consultation with ADAD, with the end-goal of the study in mind, i.e., how to disseminate the findings to key stakeholders and decision-makers effectively. Miao and colleagues¹ have conceptualized this as a **relational design approach** (Figure 1). In addition to the quantitative school-based needs assessment approach with the 2019-2020 ATOD Survey, a **parallel qualitative youth needs assessment was conducted focusing on special populations of youth that may be less likely to complete a school-based survey**. This companion report may be found at the [Hawai'i State Department of Health Alcohol and Drug Abuse Division website](#).

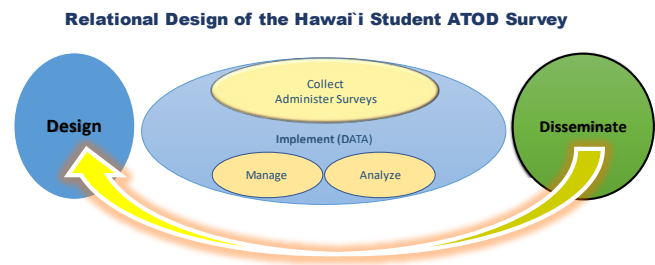


Figure 1. Relational design with dissemination goal as the driver for informing the design of the survey project

The survey sample included **public middle and high schools** that agreed to participate and **8th, 10th, and 12th grade students** from those schools who assented to participate with parental opt-out/passive consent.

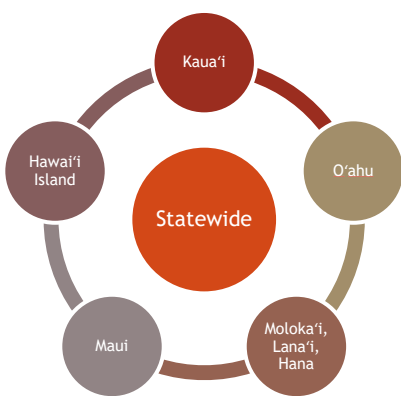


Figure 2. Community region sampling

A **two-stage cluster sample design** was utilized to obtain a representative sample for 8th, 10th, and 12th graders in each community region which would be included into the statewide sample (Figure 2). Community regions were defined to include county and island representation. In the **first stage of sampling**, schools within each community region were randomly selected by grade level. Additionally, schools that were not selected but were located in communities that had demonstrated high need and few resources were included as a subgroup of interest. In the **second stage of sampling**, for each grade, a target minimum of

¹ Helm, S., Onoye, J., Yurow, J., Dau, C., Miao, T., Ng-Osorio, J., Wilczek, K., & Nguyen, L. (2020, October 13, 2020). A data-driven system of care for State of Hawaii Alcohol Drug Abuse Division [Round table]. 2020 Annual Hawaii Pacific Evaluation Association Meeting, Honolulu, HI.

approximately 75 students were surveyed. Where data were unavailable for a few schools, estimated scores for selected substance use and behavioral health indicators (e.g., treatment need, current use of substances, mental health symptom severity, attentional disorder) were substituted using a composite from other selected schools based on knowledge of the community and matching of similar demographic characteristics (i.e., driving distance to major hospital, percent Native Hawaiian, and percent free/reduced lunch) that were shown to be important variables of substance use treatment need from a statistical classification model analysis. For substance use indicators examined by grade, gender or ethnicity/race, no adjustments for missing schools were made, therefore percentages of reporting may be underreported or overreported.



Figure 3. Components of the ATOD Survey

Using standardized survey methods, data collection was conducted using a **primarily online survey administration method** to assess **prevalence rates of youth substance use** in each county, as well as comparisons between the overall state level data from Hawai'i. **Risk and protective factors for substance use among students based on the existing literature were measured for individual, peer, family, school, and community domains as well as contextual items from the literature related to substance use.** Components of the survey are depicted in Figure 3. More details about the development of survey items, survey administration procedures, and data collection can be found in the **2019-2020 Hawai'i Student Alcohol, Tobacco, and Other Drug Use (ATOD) Survey Statewide Report.**

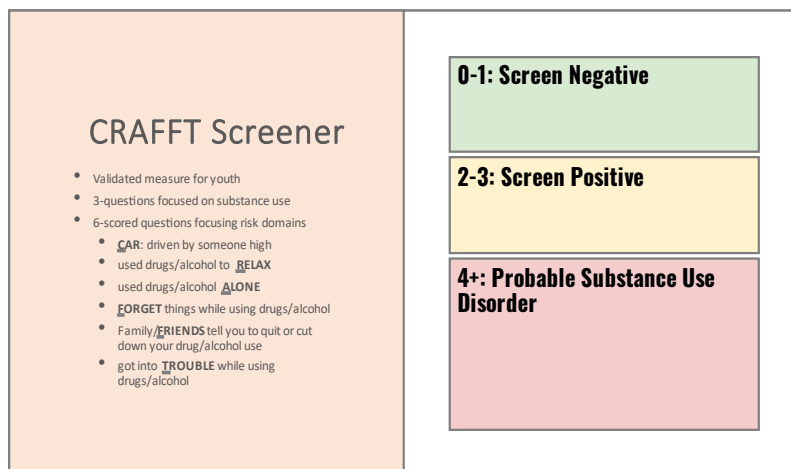


Figure 4. Brief illustration of the validated CRAFFT screen.

A statewide weighted sample was obtained, where weights were applied for each school and grade level using corresponding pre-calculated scores from the academic enrollment prior to the survey year.²

Demographic items included the following: **Age; Grade; Parent or Family in the Military or Reserve/National Guard; Live on a Hawaiian Homestead; Any and Primary Identification for Race/Ethnicity; Primary Language Spoken in Household; Sex assigned at birth; Gender; Place Usually Sleep; Parent/Caregiver Level of Education (as proxy for socioeconomic status).**

Because when combined with other protective factors, expression of the importance of **maintaining one's cultural traditions** and having a **strong sense of belonging to one's ethnic group** may be protective against substance use, these items related to culture were included on the ATOD Survey. Speaking a **primary language other than English**

² Data were weighted based on the sampling frame and led to adjustments for enrollments using the prior academic counts to lessen the effects of a sample bias. A corresponding weight score for each school was applied in the analyses to represent estimates for the overall sample.

in the home may also reflect a protective factor among families who are intentional about language preservation and cultural perpetuation.

Using the weighted sample, estimated **need for substance use treatment** among adolescents was based on the cutoff score of **4 or higher on the well-validated CRAFFT instrument**³ (Figure 4), indicating probable substance use disorder (abuse/dependence, American Psychiatric Association DSM-IV and DSM-5). Current and frequent substance use in the past 30 days for those most prevalent, **alcohol, tobacco/vaping, and marijuana** are highlighted in this summary report by demographic variables of grade, gender, and race/ethnicity.

Moderate -Heavy Use = 6 or more times



Figure 5. Definition of moderate-heavy use as 6 or more times in the past 30 days.

Current use was defined as any use of a categorized substance in the past 30 days. **Moderate-heavy use** was defined as 6 or more times in the past 30 days (Figure 5). **Binge drinking** definitions (Figure 6) were updated for youth as 3+ standard drinks on one occasion for all 8th graders and for 10th and 12th graders assigned female at birth. For students assigned male at birth, binge drinking was defined as 4+ drinks for 10th graders and 5+ drinks for 12th graders.⁴ **Lifetime use** was determined if the student endorsed any first use of a substance category. **Age of initiation** was described as the age when a person first begins using a substance. **Early initiation** indicated that a person’s first use occurred at age 13 or younger.

In addition to substance use indicators, **mental health distress** and **attentional disorder** were screened respectively using the validated Patient Health Questionnaire PHQ-4⁵, which collects symptoms related to depression and anxiety, and the Pediatric Symptom Checklist⁶ Attention Subscale for which a positive screen indicates further assessment for an Attention Deficit Disorder (ADD/ADHD).

The 2019-2020 Hawai’i Student ATOD Survey assessed several **risk and protective factors** related to **individual, peer, family, school, and community domains** to aid in planning for prevention efforts. Risk factors are attributes of the five domains that have been shown to

Binge Drinking

is having more than ___ drinks on one occasion

<p>Female Students: 3+ drinks: 8th grade 3+ drinks: 10th grade 3+ drinks: 12th grade</p>		<p>Male Students: 3+ drinks: 8th grade 4+ drinks: 10th grade 5+ drinks: 12th grade</p>
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Figure 6. Binge drinking definition for youth accounts for grade level and sex assigned at birth.

³ Knight JR, Shrier LA, Bravender TD, Farrell M, Vander Bilt J, Shaffer HJ. A new brief screen for adolescent substance abuse. Arch Pediatr Adolesc Med. 1999 Jun;153(6):591-6. doi: 10.1001/archpedi.153.6.591. PMID: 10357299.

⁴ National Institute on Alcohol Abuse and Alcoholism (2021, May 2021). Binge drinking. National Institute on Alcohol Abuse and Alcoholism. Retrieved 9/30/21 from <https://www.niaaa.nih.gov/publications/brochures-and-fact-sheets/binge-drinking>

⁵ Löwe B, Wahl I, Rose M, Spitzer C, Glaesmer H, Wingenfeld K, Schneider A, Brähler E. A 4-item measure of depression and anxiety: validation and standardization of the Patient Health Questionnaire-4 (PHQ-4) in the general population. J Affect Disord. 2010 Apr;122(1-2):86-95. doi: 10.1016/j.jad.2009.06.019. Epub 2009 Jul 17. PMID: 19616305.

⁶ Gardner W, Murphy M, Childs G, et al. The PSC-17: a brief pediatric symptom checklist including psychosocial problem subscales: a report from PROS and ASPN. Ambulatory Child Health. 1999;5:225-236

foretell increased probability of substance use, delinquency, and problem behaviors in young people ⁷ while protective factors are characteristics that appear to have a hand in reducing or preventing problem behaviors in adolescents. Risk and protective factors were analyzed using a modeling approach for predicting problem substance use. Using the modeling-informed approach, factors that emerged as important were analyzed for descriptive characteristics for the county sample to show rates of endorsement for these factor within the county.

The **West Hawai'i Community Region** (Figure 7) data are reported based on the analyses by community region from the overall statewide sample. As with the overall state level, data for the main indicators for treatment need and substance use in the community region are also shown as reported using weighted percentages.

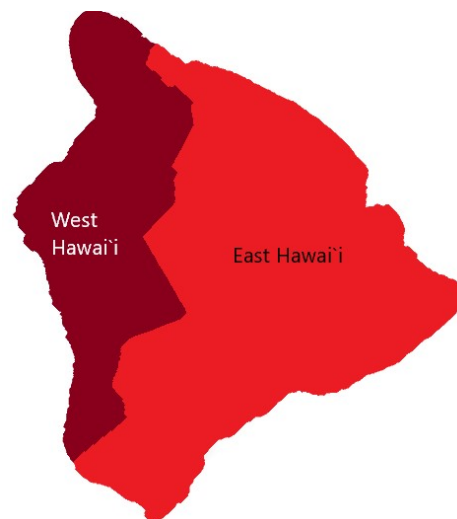


Figure 7. Hawai'i Island is divided into east and west for the ATOD survey community regions.

⁷ Arthur, M. W., Hawkins, J. D., Pollard, J. A., Catalano, R. F., & Baglioni, A. J., Jr. (2002). Measuring risk and protective factors for substance use, delinquency, and other adolescent problem behaviors. The communities that care youth survey. *Evaluation Review*, 26(6), 575-601. <https://doi.org/10.1177/0193841X0202600601>

III. Sample Description

The weighted sample consisted of **810** students from public middle and high schools in the **West Hawai'i Community Region** who participated in the survey. The overall participation rate for West Hawai'i Community Region was **81.8%**. Gender, grade, and primary ethnicity/race distributions are shown in Table 1.

Table 1. Characteristics of Participants by Gender, Grade Level, Primary Race/Ethnicity, and Other Demographics (weighted %) for West Hawai'i Community Region

Demographic Characteristics	% (weighted)
Gender	
Male	52.7
Female	43.5
Transgender & Other Gender Minority	3.8
Grade	
8th Grade	28.8
10th Grade	37.3
12th Grade	33.9
Self-Identified⁸ Primary Ethnicity/Race	
Native Hawaiian	11.8
Other Pacific Islander	8.6
Japanese	2.5
Filipino	17.6
Other Asian	1.2
Hispanic/Latino	5.3
White/Caucasian	10.2
Other	-
2 or more ethnicities with Native Hawaiian	26.5
2 or more ethnicities without Native Hawaiian	15.7
Family member in Active Military, Reserve, or National Guard	13.4
Self or family member lives on Hawaiian homestead	27.1

Note: cells with counts less than 10 are suppressed and noted “ - “

Gender was determined using the survey question asking students their current gender. Other or Transgender were combined into the category of “Transgender and Other Gender Minority” also categorized in this report as gender diverse. **Race/ethnicity** was determined using the survey question asking students with which ethnic or racial group(s) they **primarily identified**. Students who chose more than one response were grouped together into the category of “2 or more ethnicities.” Due to relatively small sample sizes for some ethnicities, certain groups were combined. Students who reported their primary identity as Samoan, Chuukese, Marshallese or other Pacific Islander were grouped into the category of “Other Pacific Islander.” The category of “Other Asian” included

⁸ While the survey asks students to select a group with which they primarily identify, a large proportion reported primarily identifying with multiple (2 or more) ethnic/racial groups. Among those who selected 2 or more ethnic/racial groups in the state sample, Native Hawaiian was among the highest therefore, the table shows the percentage of students that selected Native Hawaiian and those that did not.

students who reported that they primarily identified as Chinese, Vietnamese, Korean, or other ethnicities from East, South or Southeast Asia. The “Other” ethnicity category included students who reported their primary identity as African American, Native American, Alaska Native, or other ethnicities not indicated. Additionally, in the community region samples, for some of the ethnicity/racial categories, percentages were not reported due to low counts (less than 10).

In the West Hawai‘i Community Region, **6.5% of students reported usually sleeping at a place other than home**, **62.3% reported their mother/guardian had less than a college degree**, and **65.6% reported their father/guardian’s education was less than a college degree** (Figure 8).

West Hawai‘i Community Region Other Demographics (%)

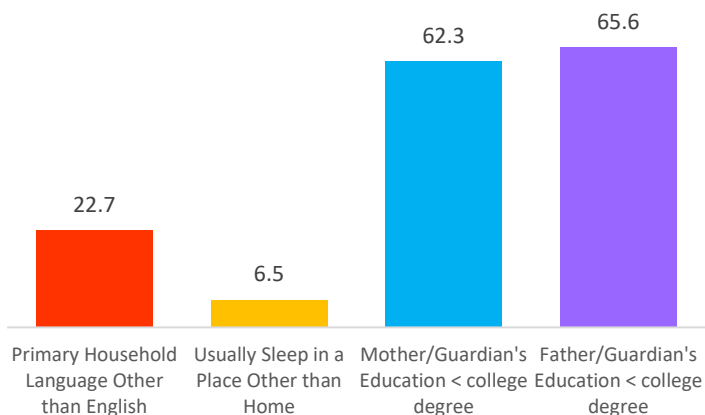


Figure 8. Percent of community region sample for other demographic characteristics.

West Hawai‘i Community Region Importance of Culture (%)

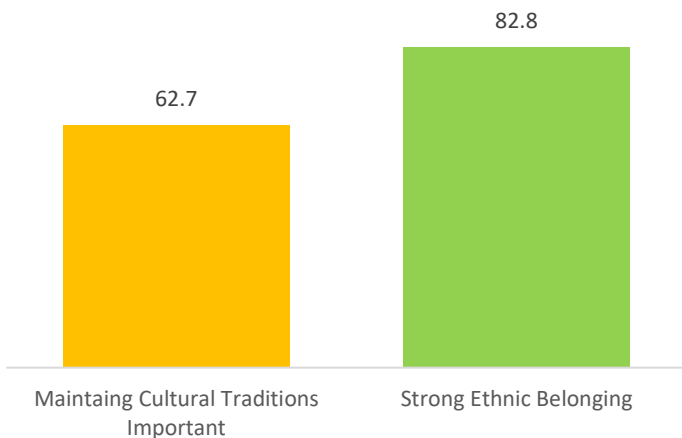


Figure 9. Percent of community region sample endorsing items related to culture.

For items related to culture, **22.7% of students reported speaking a primary household language other than English** (Figure 8), **62.7% reported that maintaining cultural traditions was important**, and **82.8% reported having a strong ethnic belonging** (Figure 9). Further analysis may enhance the evidence base for positive cultural identity and cultural practices as protective factors for youth substance use and other behavioral health concerns

IV. Estimated Treatment Need & Substance Use

The **West Hawai'i Community Region** reported **similar rates for probable substance use disorder (SUD) and higher rates for positive risk screens compared to the county and state samples** (Figure 10). In contrast to the increasing pattern by **grade level** for the county and state, **in the West Hawai'i Community Region, 8th, 10th, and 12th graders all had similar rates of probable SUD** (8th grade 11.1%; 10th grade 11.3%; 12th grade 11.3%). Probable SUD **by gender** showed similar patterns to the state with **females (13.3%) having higher rates than males (8.3%)** in the community region. By **primary race/ethnicity**, students identifying primarily as **Other Pacific Islander (20.9%), two or more ethnicities not Native Hawaiian (14.3%), or two or more ethnicities with Native Hawaiian (12.6%)**

were among those with higher probable SUD rates than the overall state. Rates of probable SUD for transgender/other gender minority and other race/ethnicity groups are not reported here due to low counts.

Of those who had a probable SUD, only a small proportion received help at school (15.7% for alcohol and drug use, 14.3% for tobacco/vaping) **or from some place other than school** (25% for tobacco/vaping; percent for alcohol and drug use not reported due to low count). Among students that screened as **risk positive**, similar **low percentages received help at school** (8.9% for alcohol and drug use; 14.7% for tobacco/vaping) **or at some place other than school** (12.3% for alcohol and drug use, 12.7% for tobacco/vaping). The remaining majority of students with a probable SUD, or who had screened positive for an SUD, did not receive help or did not think it applied to them.

West Hawai'i Community Region
CRAFFT SCREEN (%)

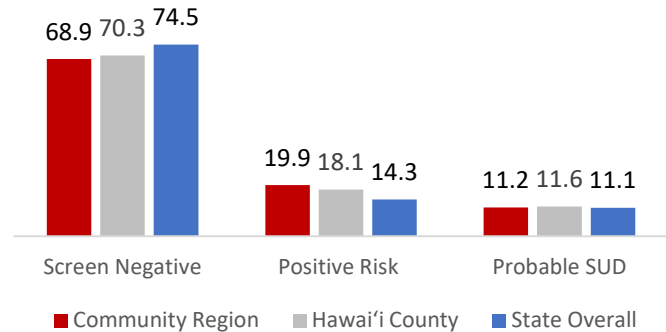


Figure 10. CRAFFT screen percentages for West Hawai'i community region compared to Hawai'i County and state samples.

West Hawai'i Community Region
Mental Health & Attention Disorder Screen (%)

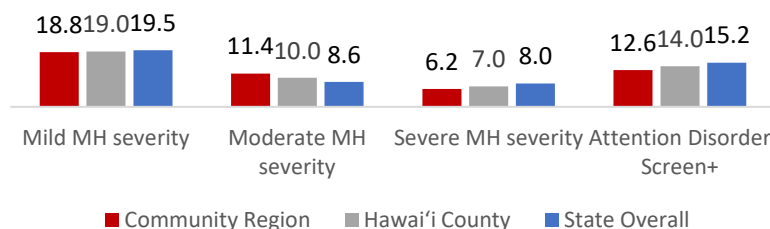


Figure 11. Mental health and attention disorder screen percentages for West Hawai'i community region compared to Hawai'i County and state samples.

The **West Hawai'i Community Region** reported **mental health and attention disorder rates** more similar to the county, than those at the state level (Figure 11). These rates of mental health and attention disorder screening are important considering the data at the state level showing that a **positive screen for attentional disorders had a two-fold likelihood of a probable SUD compared to a negative screen**, and that with **increasing mental health distress severity there were also increasing rates of a probable SUD**.

V. Overall Current and Moderate-Heavy Alcohol & Substance Use (within past 30 days) in West Hawai'i Community Region, Hawai'i County & State

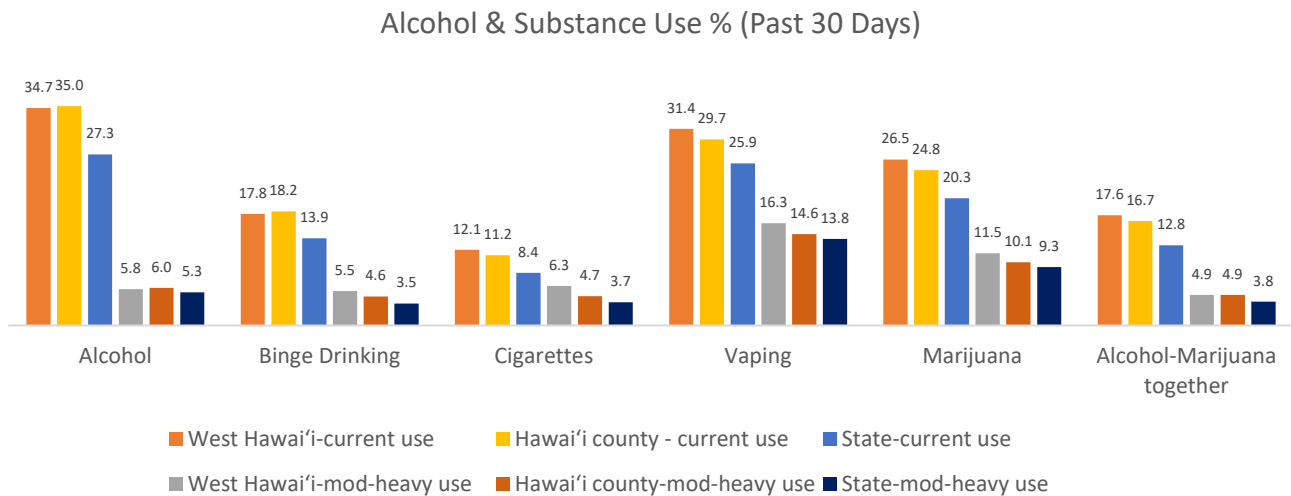


Figure 12. Community region and state comparisons for current any use and moderate-heavy use of substances in the past 30 days. Note: moderate-heavy binge percentages were based on a survey item for 4+ drinks on one occasion.

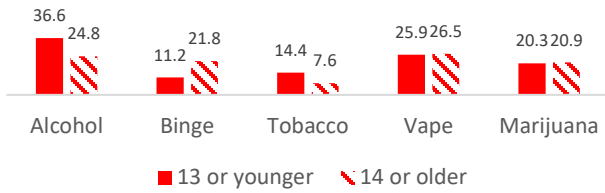
Overall in the West Hawai'i Community Region, rates of **current alcohol and substance use**, defined as **any use in the past 30 days**, were higher for the community region compared to the state. West Hawai'i community region data were similar to Hawai'i County. For current **moderate-heavy use**, defined as **6 or more times in the past 30 days**, rates of alcohol and substance use were higher across most categories for the community region compared to the state and similar or slightly higher compared to the county (Figure 12).

West Hawai'i students also reported **similar rates** to the state⁹ for overall current (past 30 days) use of **steroid** (1.7% vs. 1.3%), **and sedatives & other prescription drugs** (2.5% vs 2.8%), **inhalants** (2.0% vs. 2.3%), **over-the-counter drugs** (4.8% vs. 5.0%), **hallucinogens** (3.1% vs. 2.0%), and **other illicit drugs** (1.3% vs. 1.5%). Rates of current opioid, heroin, cocaine, and methamphetamine and in the past 30 days for the community region are not reported here due to low counts.

⁹ Statewide prevalences by Grade, Gender and Primary Race/Ethnicity for Lifetime, Any Current (past 30 days), and Moderate-Heavy Use (6+ times in past 30 days) use are found in the Appendix of the [2019-2020 Hawai'i Student Alcohol, Tobacco, and Other Drug Use \(ATOD\) Survey Statewide Report](#).

VI. Age of Initiation

West Hawai'i Community Region Early Initiation of Substance Use (%)



Age of Initiation is described as the age when a person **first begins using a substance**. **Early initiation** is used to indicate that a person’s first use occurred at age 13 or younger. In the West Hawai'i Community Region, students reported **early initiation of all substance use behaviors** (Figure 13), but more frequently for **alcohol and tobacco**. A **bimodal peak of later initiation of alcohol and later peak for binge** (based on survey item for 4+ drinks on one occasion) use were also noted (Figure 14).

Figure 13. Percent for early initiation (13 or younger) vs. later initiation (14 or older) by substance category for the community region.

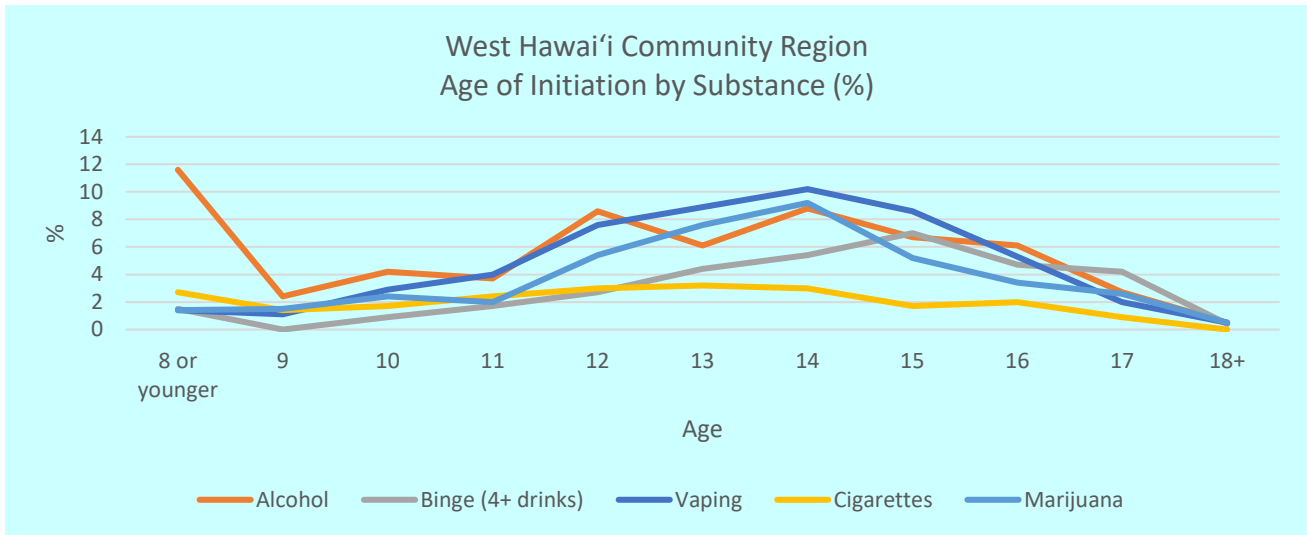


Figure 14. Distribution of age of first use for substance categories in the West Hawai'i Community Region.

VII. Alcohol Use

Current Alcohol and Binge Drinking: Community Region, County, & State

Current Alcohol & Binge Use by Grade:
West Hawai'i Comparison (%)

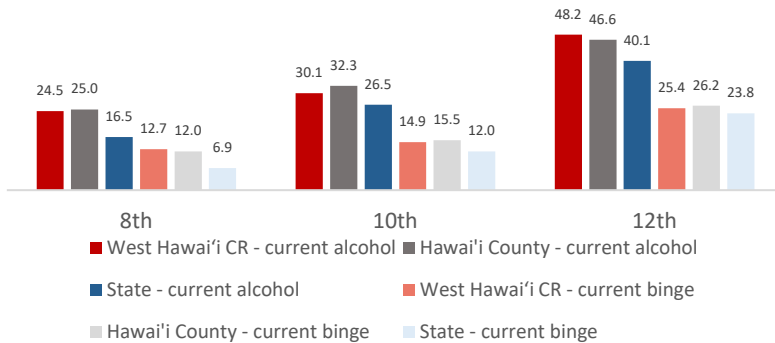


Figure 15. Current any use of alcohol in the past 30 days by grade level for West Hawai'i community region, Hawai'i County, and the state.

Current Alcohol & Binge Use by Gender:
West Hawai'i Community Region Comparison (%)

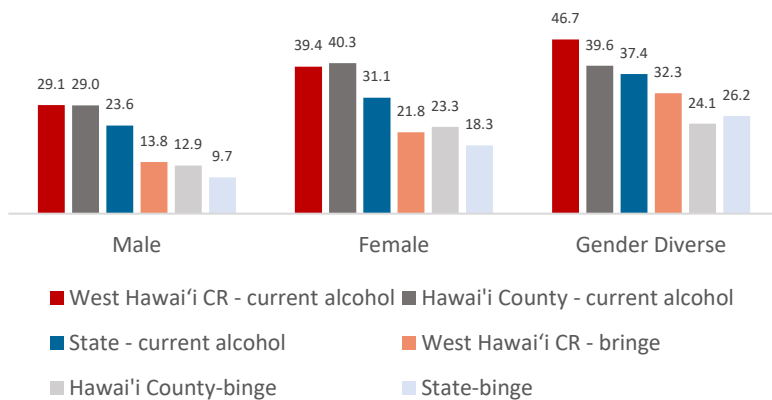


Figure 16. Current any use of alcohol and binge drinking in the past 30 days by gender for West Hawai'i community region, Hawai'i County, and the state.

For each grade level, the West Hawai'i Community Region generally had similar rates of **current alcohol use and binge drinking** to Hawai'i County and slightly higher rates compared to the state overall. (Figure 15)

West Hawai'i Community Region male and female students had rates of any **current alcohol and binge drinking** more similar to the county, which were higher than the state levels. Rates for gender diverse students were higher than the county and state for **current alcohol use and binge drinking** (Figure 16).

Rates of **moderate-heavy** (6+ times in the past 30 days) **alcohol use by grade level** were higher for 10th graders and similar for 12th graders in the West Hawai'i Community Region compared to the state¹⁰ (10th grade 5.3% vs. 3.0%; 12th grade 8.5% vs. 8.1%; 8th grade percentage not reported due to low counts).

Rates of **moderate-heavy alcohol use by gender** were slightly lower for males and similar for females in West Hawai'i compared to the state (males 3.8% vs. 4.4%; females 5.5% vs. 5.4%; gender diverse percentage not reported due to low counts).

¹⁰ Statewide prevalences by Grade, Gender and Primary Race/Ethnicity for Lifetime, Any Current (past 30 days), and Moderate-Heavy Use (6+ times in past 30 days) use are found in the Appendix of the [2019-2020 Hawai'i Student Alcohol, Tobacco, and Other Drug Use \(ATOD\) Survey Statewide Report](#).

VIII. Cigarette & Vape Use

Current Tobacco Cigarette and Vape/E-cigarette Use: Community Region, County, & State

Current Cigarette & Vape Use by Grade:
West Hawai'i Comparison (%)

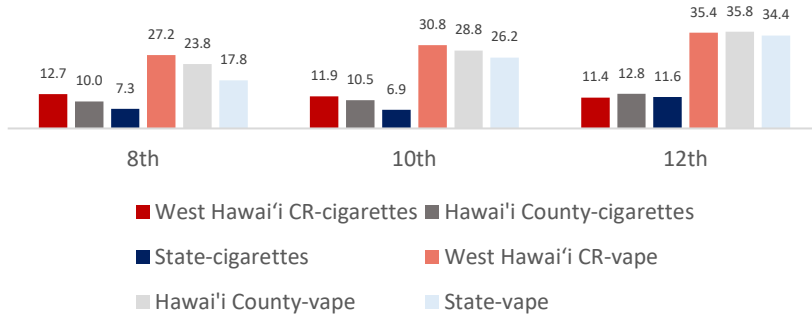


Figure 17. Current any use of tobacco cigarette and vape use in the past 30 days by grade level for West Hawai'i community region, Hawai'i County, and the state.

Current Cigarette & Vape Use by Gender:
West Hawai'i Comparison (%)

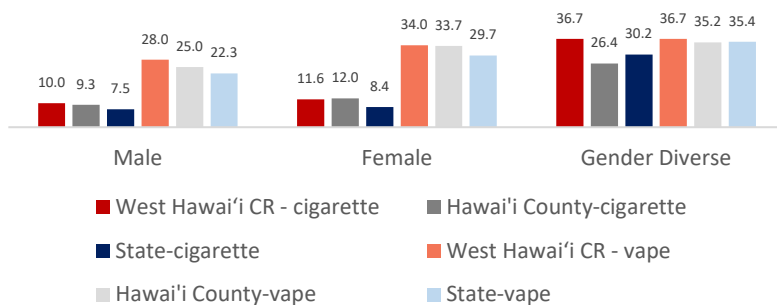


Figure 18. Current any use of tobacco cigarette and vape use in the past 30 days by gender for West Hawai'i community region, Hawai'i County, and the state.

Current cigarette and vape use were higher for 8th and 10th grades, and similar for 12th grade, in the West Hawai'i Community Region compared to respective county and state levels (Figure 17).

Similar to Hawai'i County and the state, gender diverse students in West Hawai'i reported the highest rates of current cigarette use and vaping compared to females and males who were similar to the county and slightly higher than the state levels (Figure 18).

In comparison to the state¹¹, East Hawai'i students also reported higher use rates for 8th and 10th graders for moderate-heavy use (6+ times in the past 30 days) of cigarettes (8th grade 6.6% vs. 3.0%; 10th grade 6.6% vs. 2.9%; 12th grade 5.5% vs. 5.5%) and for 8th and 12th graders for vape/e-cigarettes (8th grade 10.0% vs. 7.0%; 10th grade 12.9% vs. 13.7%; 12th grade 25.3 vs. 21.2%). Moderate-heavy use by gender for cigarettes (males 4.5% vs. 3.4%; females 7.2% vs. 3.4%), and vape/e-cigarettes (males 13.7% vs. 12.2%; females 18.6% vs. 15.2%) were also higher compared to the state¹¹. Due to low counts, percentages for gender diverse students are not reported.

Substances used in Electronic Vaping Devices: The most reported substances used by East Hawai'i students were nicotine (28.8%) and flavors (25%), however 14.9% also reported vaping marijuana.

¹¹ Statewide prevalences by Grade, Gender and Primary Race/Ethnicity for Lifetime, Any Current (past 30 days), and Moderate-Heavy Use (6+ times in past 30 days) use are found in the Appendix of the 2019-2020 Hawai'i Student Alcohol, Tobacco, and Other Drug Use (ATOD) Survey Statewide Report.

IX. Marijuana Use

Current Marijuana and Concurrent Marijuana-Alcohol Use: Community Region, County & State

Current Marijuana & Concurrent Marijuana-Alcohol Use by Grade:
West Hawai'i Comparison (%)

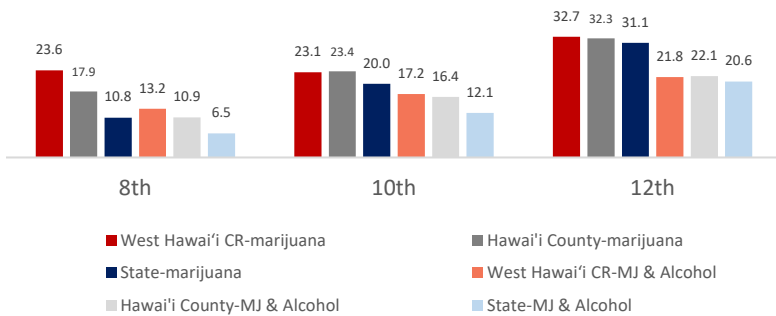


Figure 19. Current any use of marijuana and concurrent use marijuana-alcohol in the past 30 days by grade level for West Hawai'i community region, Hawai'i County, and the state.

Current Marijuana & Concurrent Marijuana-Alcohol Use by Gender:
West Hawai'i Comparison (%)

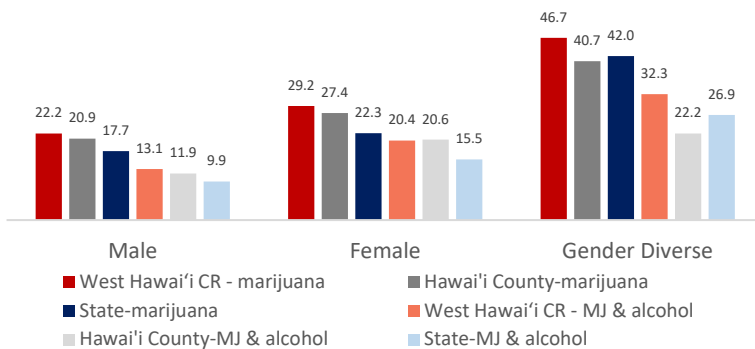


Figure 20. Current any use of marijuana and concurrent use marijuana-alcohol in the past 30 days by gender for West Hawai'i community region, Hawai'i County, and the state.

Current marijuana use in the **West Hawai'i Community Region** was higher than county and state rates for 8th graders, and similar for 10th and 12th graders. **Concurrent marijuana-alcohol use** in the past 30 days for the **West Hawai'i Community Region** was higher for 8th and 10th grades compared to the state and county, with 12th graders similar across the community region, county, and state levels (Figure 19).

Similar to patterns in Hawai'i County and the state, in the **West Hawai'i Community Region**, gender diverse students reported the highest rates of **current marijuana use** and **concurrent marijuana-alcohol use** compared to females and males (Figure 20). Community region rates for all gender categories were generally higher than the state, with males and females being most similar to the county levels.

Moderate-heavy (6+ times in the past 30 days) **use of marijuana** was reported at similar rates for West Hawai'i 10th and 12th graders but more than double for 8th graders compared to the overall state¹² levels (8th grade 10.2% vs. 4.5%; 10th grade 9.0% vs. 8.5%; 12th grade 15.4% vs. 15.1%). By gender, East Hawai'i female students (13.5% vs. 9.2% state) reported **higher rates of moderate-heavy marijuana use** compared to the state, while **males** (8.1% vs. 8.4% state) **were similar**. Gender diverse percentage not reported due to low counts

¹² Statewide prevalences by Grade, Gender and Primary Race/Ethnicity for Lifetime, Any Current (past 30 days), and Moderate-Heavy Use (6+ times in past 30 days) use are found in the Appendix of the [2019-2020 Hawai'i Student Alcohol, Tobacco, and Other Drug Use \(ATOD\) Survey Statewide Report](#).

X. Substance Use in the Past 30 days by Ethnicity

Table 2 summarizes estimated rates of substance use for the West Hawai'i Community Region in the past 30 days by self-reported **primary identification** in major race/ethnicity categories. Current substance use rates were generally uniformly **higher for most groups, where students primarily identified as Hispanic/Latino, Other Pacific Islander, Native Hawaiian, including those who identified as two or more ethnicities with Native Hawaiian, White, and two or more ethnicities not Native Hawaiian.** Filipino students also reported similar higher rates of current alcohol use. Note that due to low counts for certain race/ethnicity groups, percentages were not reported.

Table 2. Percent of current substance use for alcohol, tobacco, vape, and marijuana categories (in the past 30 days) by primary race/ethnicity among West Hawai'i Community Region students

	Alcohol	Binge	Cigarettes	Vape	Marijuana	Marijuana & Alcohol Together
Filipino	31.2%	7.9%	-	19.3%	11.4%	8.6%
Japanese	-	-	-	-	-	-
Other Asian	-	-	-	-	-	-
Hispanic/Latino	31.7%	-	-	34.1%	27.5%	-
Native Hawaiian	34.7%	18.9%	-	35.8%	24.5%	18.1%
Other Pacific Islander	26.5%	18.2%	23.5%	45.6%	29.5%	-
White	33.8%	-	-	23.5%	41.1%	-
2 or more ethnicities with Native Hawaiian	42.7%	28.2%	19.2%	43.7%	24.6%	30.5%
2 or more ethnicities not Native Hawaiian	37.3%	20.6%	13.5%	25.4%	24.6%	18.3%
Other	-	-	-	-	-	-

Note: cells with counts less than 10 are suppressed and noted " - "

XI. Access and Location of Use

Access to Substances

While the majority of students reported not using substances, for the West Hawai'i Community Region the **most selected method of acquiring substances was by having someone give it to them** (alcohol 29.4%, marijuana 25.2%, tobacco/vape 23.9%, and other drugs 4.4%). Other ways included **giving someone money to buy it** for them (alcohol 8.7%, tobacco/vape 7.5%, marijuana 6.0%), **getting it while at school** (tobacco/vape 13.2%, marijuana 7.6%), or **took it** (alcohol 15.7%, marijuana 7.7%) **from a family member** (Figure 21).

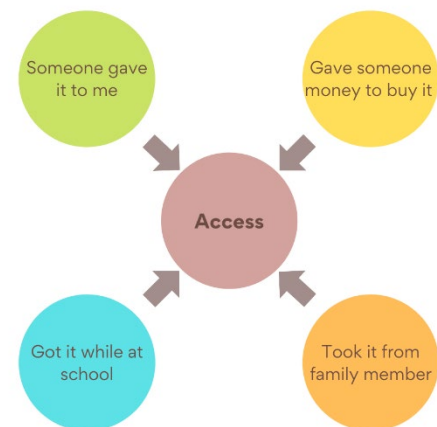


Figure 21. Commonly reported ways in which students get access to substances.

Location of Use

In the West Hawai'i Community Region students were **most likely to use substances at their own home** (alcohol 22.9%, tobacco/vape 13.5%, marijuana 15.9%, and other drugs 1.7%), and **at another person's home with a few friends and family** (alcohol 21.6%, tobacco/vape 14.7%, marijuana 18.2%, and other drugs 2.4%), at a **public place** (marijuana 9.6%, tobacco/vape 9.8%, alcohol 9.2%), or at a **party** (alcohol 15.3%, tobacco/vape 9.5%, marijuana 11.4%). Marijuana and vapes were also used **while in a vehicle** (marijuana 8.4%, tobacco/vape 10.8%) and on **school property** (marijuana 6.4%, tobacco/vape 11.5%).

XII. Prevention Education and Messaging

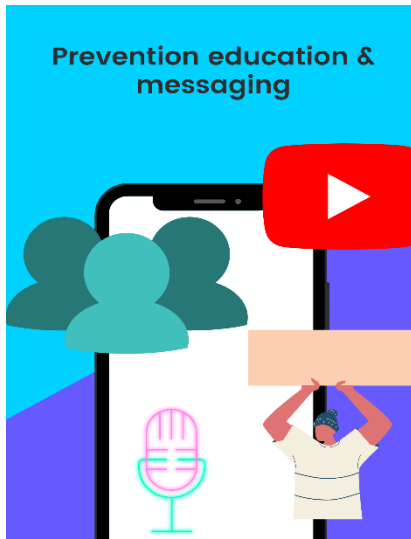


Figure 22. Common prevention education and messaging sources.

Overall, **85.3% of West Hawai'i students reported having received any type of prevention education** with a majority having heard from their **family** (74.8%), at **school** (66.6%), or their **friends** (41.2%) around the dangers of alcohol, tobacco, or drugs.

Likewise, **81.6% of students reported having viewed or heard any public awareness messages** around the risks or dangers of alcohol, tobacco, or other drugs. The **sources of public awareness messaging** primarily came from **television or internet channels** (54.8%), **social media/apps** (61.9%), **ads on their devices** (47.7%), **printed media such as posters or signs** (41.6%), or **traditional/internet radio stations** (23.3%). (Figure 22)

In the West Hawai'i Community Region, **8.9% of youth reported that they thought it was safe for a woman to drink regularly** (once a day to once a week) **or even occasionally** (once a month or less), **during pregnancy**. Because prenatal alcohol exposure is associated with significant in utero brain damage and can result in Fetal Alcohol Spectrum Disorders, yet entirely preventable, targeted prevention education may be needed for teens.

XIII. Risk And Protective Factors

Structural equation modeling was used to examine in the state level data the relationships of risk and protective factors in the social-ecological domains applying the conceptual model of **resilience and adversity**. Higher levels of adversity were found to reduce resilience, with **community adversity as the largest contributor, followed by peer, family, and individual, respectively**. The model also indicated that **resilience significantly reduces the likelihood of any substance use. Validation of prosocial beliefs was the largest contributor, followed by school climate, relationships, self-efficacy, and cultural connection, respectively**. Figure 23 graphically highlights characteristics for these factors endorsed in the **West Hawai'i Community Region sample**.

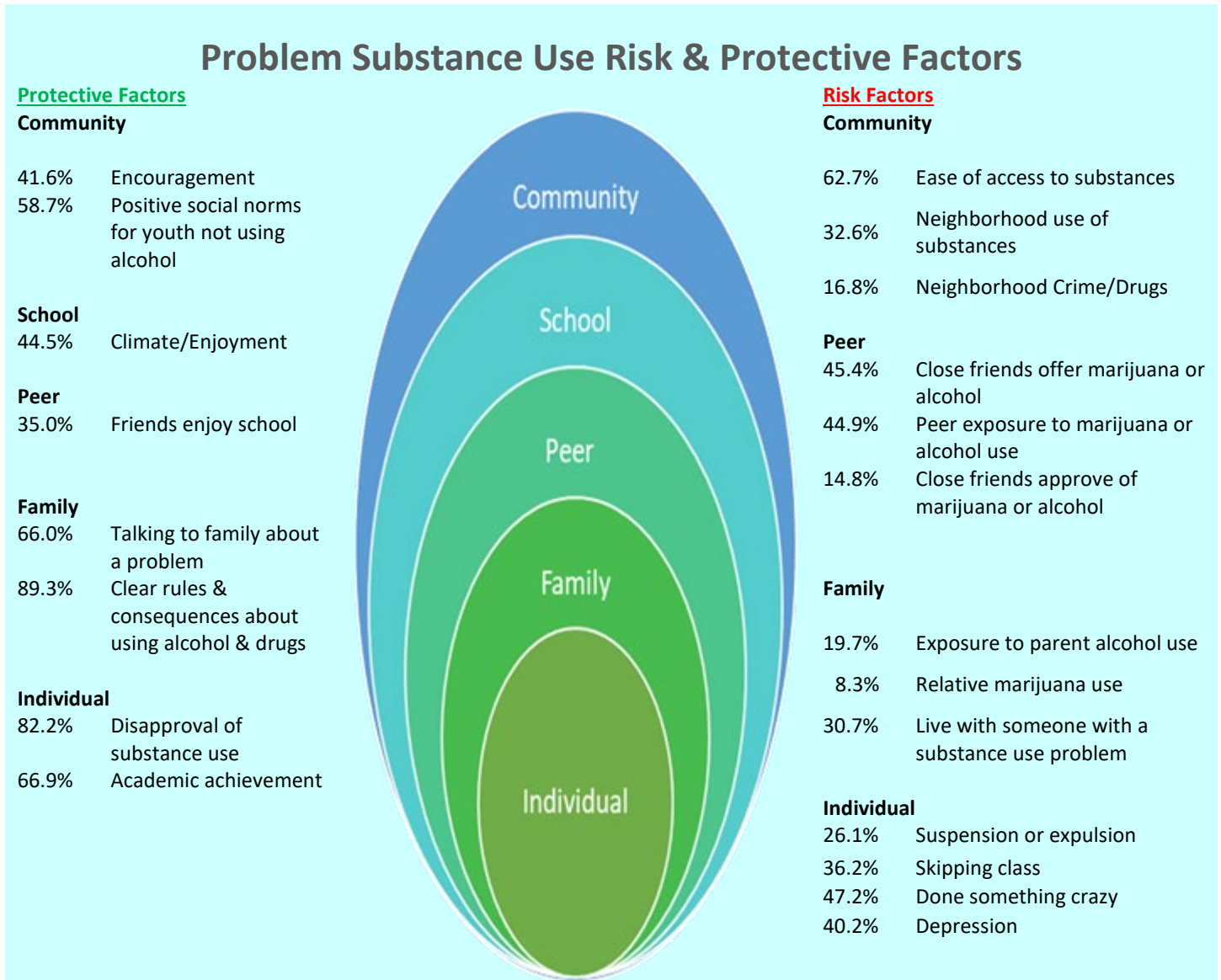


Figure 23. West Hawai'i Community Region profile of percent of students endorsing emerging important risk and protective factors in the Social-ecological model for predicting problem substance use.

XIV. Key Takeaways & Recommendations

This iteration of the Hawai'i ATOD Survey provides data to inform substance use treatment and prevention needs among Hawai'i's youth.

- Overall rates of PSUD in the West Hawai'i Community Region indicating treatment need were similar to the state.
- Only a small proportion of students who screened in the PSUD range reported receiving any assistance (at school or outside of school) for substance use problems. This indicates a gap between adolescents in need of services and those who actually receive services. Additionally, given the significant number of students who are at risk for an SUD, there may be a greater demand for earlier intervention to adequately address prevention needs.
- Similar to state level findings, substance use and PSUD increase with grade level among West Hawai'i students; 12th graders almost consistently reported highest rates of use across alcohol, tobacco, and marijuana. Female and gender diverse students also reported higher rates of alcohol and substance use.
- Through the lens of race and ethnicity, among West Hawai'i students, rates of current substance use were higher among almost all the self-identified ethnoracial groups with available data, including Hispanic/Latino, Other Pacific Islander, Native Hawaiian, including those who identified as two or more ethnicities, White, and two or more ethnicities not Native Hawaiian. Filipino students also reported similar higher rates of alcohol use.
- In the West Hawai'i Community Region, vape/e-cigarette use disproportionately affects 12th graders, female and transgender/other gender minority students, as well as students who primarily identify as Other Pacific Islander, Hispanic/Latino, or Native Hawaiian.

To decrease the rates of PSUD indicating treatment need, several recommendations may be beneficial to consider:

- Continued behavioral health screening and supports in schools and community settings, with greater integration of behavioral health services to address co-occurring mental health issues and substance use
- Evidence-based approaches such as Screening, Brief Intervention, and Referral to Treatment (SBIRT) implemented in school- and community-based settings, given the growing body of research associated with SBIRT that demonstrates overall improvements for substance use and increased student access to mental health support
- The expansion of extracurricular activities as a protective factor for students who are at greater risk of exposure to substance use at home and in their communities
- Improved staff training to facilitate a shift from punitive to supportive attention, with a focus on recognizing student needs and sharing information on services and resources and destigmatizing help-seeking for substance use
- Explore or enhance outreach, monitoring, and support systems for gender diverse students who are at higher risk for using all substances and potential PSUDs

- Increasing protective factors through gender-responsive, culturally-rooted, and other tailored and strength-based approaches to supports and services for youth and their families

Identifying risk and protective factors via data-driven strategies used in the Hawai'i ATOD Survey and the companion qualitative needs assessment (Helm et al., 2021)¹³ are important for building on youths' resilience around substance use. Prevention, treatment and recovery, and other intervention programs can be informed by projects like this to help improve outcomes for reducing adolescent substance use more effectively. These factors have potential implications among broader stakeholders working in the system of care. We hope that youth substance use data from the Hawai'i ATOD Survey and its qualitative companion study will be used to inform and improve practice and policy. We are grateful to be a part of this kākou effort to embrace our youth and support their development to thrive.

¹³ Helm, S., Miao, T., Onoye, J., Monick, B., Masuda, T., Rehuher, D., Juberg, M., Sabellano-Tsutsui, T., Taeza-Gutter, G., Kanemoto, R., Guillermo, M., Topinio, J., & Lawler, A. (2021). Services to conduct a needs assessment for substance use prevention and treatment services among special populations youth using qualitative methods. Protocol 2, in-depth interviews with youth regarding the system of care. Hawaii State Department of Health Alcohol and Drug Abuse Division. https://health.hawaii.gov/substance-abuse/files/2021/10/Youth-Substance-Use-Needs-Assessment_Interviews_September-2021.pdf