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EXAMINING MENTAL HEALTH AND SUBSTANCE USE DISPARITIES AMONG NATIVE HAWAIIAN AND PACIFIC ISLANDER POPULATIONS

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EXAMINING MENTAL HEALTH AND SUBSTANCE USE DISPARITIES AMONG NATIVE
HAWAIIAN AND PACIFIC ISLANDER POPULATIONS

By

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A capstone project submitted for Graduation with University Honors

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APPROVED

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ABSTRACT

Limited data exists regarding the mental health and substance use rates of Native Hawaiian and Pacific Islander (NHPI) adults. This research capstone project utilized a large dataset of NHPI adults to investigate prevalence rates of mental health and substance use, the relationships between mental health and alcohol severity, and significant differences among age groups. NHPI adults across the United States completed surveys to assess their mental health and substance use behaviors. The participant sample was a balanced gender distribution between female and male (*46% female, 44% male*) with 10% identifying as another gender. Key findings from the data include high prevalence rates of depression, anxiety, and alcohol use disorder. However, despite this heavy mental health burden, there is a large treatment gap as almost half of NHPI participants reported delaying or avoiding care. Statistical analyses revealed a strong positive correlation between anxiety and depression ($r = 0.81, p < 0.05$) and multiple regression showed that depression significantly predicted risky alcohol use ($\beta = 0.24, p < .05$), indicating alcohol being a possible coping mechanism for depression. Furthermore, older adults and middle-aged adults had significantly lower depression scores than younger adults, suggesting age affecting depression. Addressing the sizable scope of NHPI mental health and substance use problems through disaggregated research data is necessary to illuminate NHPI disparities and meet the growing mental health needs of this understudied population group.

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BACKGROUND

Compared to other ethnic groups in the United States, Native Hawaiian and other Pacific Islander (NHPI) populations experience a disproportionately higher prevalence of mental health and substance use challenges while having some of the lowest rates of seeking treatment. This stems from historical trauma, prevalence rates, lack of research among NHPI populations, and barriers to seeking clinical treatment that cause NHPI individuals to be three times less likely to receive mental health support than other groups (Snow et al., 2023). In a study on examining differences in the need for mental health services among various ethnic groups, NHPI had one of the highest rates for suicidal ideation (Heaton, 2018). Despite these significant disparities in mental health and substance use, existing research on NHPI remains severely limited and NHPI are significantly underrepresented in current mental health research. This lack of research data makes it difficult to make comparisons with other populations and restricts our overall understanding of their unique mental health needs (Marshall & Lau, 2024). Without sufficient data, this hinders the improvement of culturally relevant care to address the unique challenges that this community faces. Identifying NHPI health disparities is necessary to address how to improve health equity. Expanding research focused on this population is important to address these disparities and improve mental health problems to help inform culturally appropriate care.

NHPI has a long history of cultural trauma stemming from the forced U.S. colonization of Hawai‘i, losing population size, traditional land systems, and language to Western systems (Sasa & Horse, 2023). In relation to alcohol use, alcohol did not exist in Hawai‘i before Western colonialism, and the introduction led to alcohol being used as a coping strategy for mental health and substance use problems. This was especially prevalent with feelings of hopelessness and anger caused by the forced assimilation, where NHPIs were forced to relocate; disrupting

significant cultural and family traditions. This suppression of culture resulted in intergenerational trauma from family stress and structural inequalities that continue to cause mental health and substance use disparities among NHPI populations (Greywolf et al., 2025).

Despite NHPI's heightened levels of mental health problems, the lack of care that is culturally appropriate creates a large barrier to getting the help they need. Structural barriers also play a big factor in these treatment disparities, including considerable underrepresentation of NHPI working in healthcare. This is prevalent even in Hawai'i with NHPI being almost a fifth of the population yet less than 4% physicians there identify as NHPI (Ha et al., 2025). The significant lack of representation in healthcare alongside stigma provide significant barriers to receiving treatment, leading many NHPIs to not get help.

NHPI individuals have historically been grouped under the broader category of Asian Americans and Pacific Islanders (AANHPI) (Choi et al., 2024). As a result, the disproportionate substance use and mental health challenges that specifically NHPI face are often minimized under the broad AANHPI label and NHPI continue to be perceived as low risk (Subica et al., 2024). This broad classification leads to specific NHPI groups being largely overlooked, resulting in an incomplete understanding of the specific needs of different subgroups that undermines the complex experiences of NHPI that differ from Asian Americans (Sasa & Horse, 2023). This results in significant gaps in knowledge of NHPI cultural barriers and historical contexts. Furthermore, research that combines Asian Americans and Pacific Islanders into a single category results in a lower prevalence of mental health and substance use problems compared to only studying NHPI individuals as Asian Americans generally have lower problem rates than NHPIs (Wu & Blazer, 2014). This underestimation of the problem results in a lack of funding, resources, policies, and programs for NHPI communities.

Many NHPI individuals also experience a heavy stigma surrounding mental health which prevents many NHPI individuals from seeking treatment. In a research study interviewing several NHPI families on their perspectives on mental health and healthcare, it was concluded that there are generational differences, with older generations not seeking out help. These generational differences and patterns are shaped by past experiences and cultural expectations, which can lead to newer generations lacking or being discouraged from having open conversations about mental health or substance use challenges. Overall, this leads to intergenerational difficulties of not feeling comfortable to seek help (Park et al., 2024). Within NHPI communities, having mental health challenges can also be perceived as being weak and not a valid concern to seek help for. Previous studies with individuals of Samoan or part-Samoan heritage identified common obstacles to the Samoan population receiving care for their mental health despite the increasing concerns around mental health and substance use problems. The barriers were reported to be cultural stigma of mental health not being a topic appropriate to talk about and the shame mental illness may bring among themselves and their family (Yamada et al., 2019). This resulted in limited knowledge of such problems and how to receive care. Rather than being seen as a clinical concern, it may often be seen as a personal or family issue to keep to themselves about. Individuals may not get the support needed and can result in their symptoms becoming more severe and creating a greater gap in mental health disparities.

To address these research data gaps on NHPI mental health and substance use, this thesis aimed to examine the scope and nature of NHPI mental health and substance use problems in a large sample of NHPI adults. First, the project sought to examine the prevalence of major mental health and substance use problems (e.g., depression, anxiety, illicit substance use) in NHPI adults. Second, this project examined relationships between depression, anxiety, alcohol severity,

and mental health predictors of alcohol severity. Based on existing literature, it was first hypothesized that higher rates of depression and anxiety would predict increased alcohol severity. Third, generational differences were analyzed to examine prevalence rates among different age groups (e.g., younger adults, middle-aged adults, older adults). It was hypothesized that depression scores would vary significantly among different generations with younger adults experiencing the highest rates. This project aimed to analyze a large-scale dataset of NHPI adults to generate important data of NHPIs' mental health and substance use challenges.

METHODOLOGY

Participants

The study sample contained 806 NHPI adults from across the United States. All participants reported to be of NHPI background. Participants ranged from various demographics. Secondary data analysis with several datasets on NHPI adults were used to formulate a first-of-its-kind large data set of multiple NHPI populations in the United States for this study.

Measures

The data was collected via surveys with NHPI adults. Demographic data, such as age, gender, and education level were collected. The questions asked were targeted to assess their mental health and substance use behaviors. Questions regarding mental health ranged from data on how they view their general health from poor to excellent, in addition to completing a PHQ-9 (Patient Health Questionnaire-9) and GAD-7 (Generalized Anxiety Disorder-7) to measure their depression and anxiety symptomology. PHQ-9 and GAD-7 were used to give quantitative data that are valid across many populations. The PHQ-9 and GAD-7 diagnostic cutoffs scores of 10+ points were used to identify probable Major Depressive Disorder and Generalized Anxiety Disorder, respectively (Spitzer et al., 2020). With respect to substance use behaviors, participants

completed an AUDIT-C test to determine their alcohol use and to identify probable Alcohol Use Disorder. AUDIT-C test was used as it is the proven reliable and valid measurement across diverse populations. The AUDIT-C diagnostic cutoff score was 4+ for men and 3+ for women to indicate risky alcohol use. Men and women have different cutoffs due to sex differences in metabolizing alcohol. Participants also reported their smoking, electronic cigarette, and illicit substance use. Participants indicated if they wanted to seek treatment as well as if they experienced barriers to receiving treatment for their mental health and substance use. These values were summed to examine variable patterns and correlations.

Statistical Analysis

All the datasets with the survey responses were uploaded to Statistical Package for the Social Sciences platform (IBM SPSS Statistics) to analyze. Statistical analyses, including frequencies, One Way Post Hoc Tukey Test, Pearson correlations, and multiple regressions were conducted to test significant differences and to explore mental health correlations and predictors.

RESULTS

Descriptive Statistics

The final sample consisted of 806 participants. However, some participants chose not to respond to some questions and thus, these responses were not included in the results of the data. The majority of participants identified as female (~46%), followed by male (~44%), and then other gender (~11%). In regards to education, approximately 38% graduated from high school, 32% completed some college, and 20% graduated from college. Table 1 summarizes the demographics of the participants.

Table 1. Demographic Statistics

Variable	Percent (%)	N
Gender		
Female	45.6	358
Male	43.7	343
Other	10.7	84
Education		
Graduated High School	37.7	294
Some College	32.1	250
Graduated College	19.9	155

Table 2 describes the frequencies of the health and mental health variables in the study. Among participants, approximately 36% reported fair/poor health, 27% screened positive for Major Depressive Disorder (MDD), 21% for Generalized Anxiety Disorder (GAD), and 41% for Alcohol Use Disorder (AUD). Furthermore, 60% of participants reported current illicit substance use, 39% reported current smoking use, and 36% reported current electronic cigarette use. Participants also reported their likelihood to seek help as well as if there was a delay or did not receive care. Approximately 44% of the participants wanted to seek help about stress and depression in the past year, but 46% of these participants delayed or did not get this needed care.

Table 2. Measurement Statistics

Variable	Percent (%)	N
Fair or Poor Health	35.6	160
Major Depressive Disorder	26.8	103
Generalized Anxiety Disorder	20.9	81

Table 2. (continued)

Variable	Percent (%)	N
Alcohol Use Disorder	41.1	218
Substance Use	59.6	220
Smoking Use	39.3	201
E Cigarette Use	36	191
Wanted to Seek Help	44.1	336
Delayed or Did Not Get Care	45.5	243

An ANOVA test was performed to analyze different age groups on depression. Younger adults were categorized to be between the ages of 18-29, middle-aged adults were categorized to be between the ages of 30-54, and older adults were categorized to be 55 years and older. There was an overall significant difference in the mean depression scores among the three age groups as shown in Table 3 ($F = 6.90, p < 0.05$). A Post Hoc Tukey HSD Test was next performed to identify specific differences among each group, shown in Table 4. There was a significant difference between younger adults and middle-aged adults ($p < 0.05$) with a significant mean difference of 1.78. Additionally, there was a significant difference between younger adults and older adults ($p < 0.05$) with a significant mean difference of 2.32. Younger adults had significantly higher depression scores than middle-aged adults and older adults.

Table 3. ANOVA One-Way

	SS	df	Mean Square	F	Significance
Between Groups	448.29	2	224.24	6.90	< 0.05
Within Groups	18474.68	569	32.47		

Table 4. Post Hoc Tukey HSD Test

Age Groups		MD	Std. Error	Significance
Younger Adults	Middle-Aged Adults	1.78	0.53	< 0.05
	Older Adults	2.32	0.80	0.01

Bivariate Correlations

A bivariate Pearson correlation was performed to examine correlations between depression, anxiety, alcohol severity, illicit substance use, and current alcohol use. There were significant positive Pearson correlations between depression and anxiety ($r = 0.81, p < 0.05$), between depression and alcohol severity ($r = 0.20, p < 0.05$), between depression and illicit substance use ($r = 0.14, p < 0.05$), and between depression and current alcohol use ($r = 0.24, p < 0.05$).

Multiple Regression

Multiple regression analysis was performed to examine predictors for depression and alcohol severity. Table 5 illustrates the depression regression findings with predictors of age, gender, education, general health, illicit substance use, total anxiety score, and total AUDIT-C. In the model, only general health ($\beta = -0.07, p < .05$), total anxiety score ($\beta = 0.82, p < .05$), and total AUDIT-C ($\beta = 0.08, p < .05$) significantly predicted depression.

Table 5. Multiple Regression

	<i>B</i>	<i>SE(B)</i>	β	Significance
Age	-0.01	0.02	-0.01	0.65
Gender	0.09	0.19	0.01	0.65
Education	-0.13	0.20	-0.02	0.51
General Health	-0.41	0.18	-0.07	0.02

Table 5. (continued)

	<i>B</i>	<i>SE(B)</i>	<i>β</i>	<i>Significance</i>
Illicit Substance Use	-0.20	0.39	-0.02	0.61
Total Anxiety Score	0.93	0.03	0.82	< 0.05
Total AUDIT-C	0.18	0.07	0.08	0.01

*Dependent Variable: Total Depression Score (PHQ Total)

Table 6 illustrates the alcohol regression model with predictors of age, gender, education, general health, illicit substance use, total anxiety score, and total depression score. In the model, only education ($\beta = 0.11, p < .05$), general health ($\beta = 0.11, p < .05$), illicit substance use ($\beta = 0.29, p < .05$), and total depression score ($\beta = 0.24, p < .05$) significantly predicted AUD.

Table 6. Multiple Regression

	<i>B</i>	<i>SE(B)</i>	<i>β</i>	<i>Significance</i>
Age	-0.02	0.01	-0.07	0.19
Gender	0.04	0.15	0.02	0.77
Education	0.32	0.15	0.11	0.03
General Health	0.30	0.14	0.11	0.03
Illicit Substance Use	1.59	0.29	0.29	< 0.05
Total Anxiety Score	0.01	0.05	0.01	0.93
Total Depression Score	0.11	0.04	0.24	0.01

*Dependent Variable: Total AUDIT-C

DISCUSSION

Findings from this capstone thesis indicated that many NHPI adults experience high prevalence of depression, anxiety, and alcohol use disorder. This aligns with previous research conducted where NHPI populations had a significantly higher mental health burden compared to other racial groups (Heaton, 2018). Specifically, over one quarter of participants reported MDD, one fifth of participants reported GAD, and over 4 in 10 participants reported AUD. These rates indicate that NHPI adults experience extremely heavy burdens of mental health issues. This heavy burden is further compounded by the finding that although 44% of participants reported needing to seek mental health help, almost half of these participants reported delaying or avoiding this needed mental health care. These findings demonstrate the gap in formal treatment among NHPI populations with high frequency for mental health problems and substance use as many NHPI adults delay or do not receive the care they need. The NHPI population has been underrepresented within research, and this large dataset of 806 participants provides an extensive background for factors affecting this group.

Demographic data offered insight where the gender distribution among females and males were relatively equal (46% female, 44% male) to provide information not biased towards one specific gender. The 'Other' gender frequency emphasizes the necessity for further outreach in healthcare. This concept of gender plays a significant role in NHPI culture where there is a third gender that is considered to not be man or woman, but another gender. On many of the islands in the Pacific, this can be called RaeRae or Mahu, moving away from the traditional gender binary. It's important for such historical culture to remain present as RaeRae and Mahu continue to be visible (Stip, 2015), and additional studies like this one that include these groups are needed. The inclusion of more than two genders in this study highlights the importance of

native NHPI cultural structures that were in place before Western colonization. This is especially important in modern Western systems that restrict and lose the traditional factors that brought this community together. This brings a possible future study on the effects of racial marginalization and barriers to the LGBTQ+ community in seeking care to highlight the pervasive treatment gap.

NHPI adults also reported high rates of substance use. The highest prevalence rates were reports of substance use and alcohol use disorder, followed by smoking use. This highlights substance use affecting a large number of the population. Additionally, total anxiety scores and total depression scores had a very strong significant positive correlation ($r = 0.81, p < 0.05$), indicating that as one of these scores increases, the other tends to also increase. Furthermore, the multiple regression findings indicated that anxiety is a significant predictor of depression, an expected finding given the strong correlation between these two factors. One pathway for this relationship is that high anxiety may play a factor in creating external stressors that have a link to depression. These stressors cause increased feelings of both worry and hopelessness among NHPI populations, and alluding that both disorders may be linked to historical trauma.

Interestingly, the multiple regression analysis shows that depression significantly predicts risky alcohol use ($\beta = 0.24, p < .05$). This adds on to the discussion of how different aspects of mental health affect each other. This suggests that when experiencing a distressed environment with high levels of depression, risky alcohol use may increase. Symptoms of depression are commonly low mood, reduced motivation, and fatigue, whereas alcohol can increase the amount of dopamine and in turn, can cause temporary relaxation or happiness (Acuff, et al., 2019). This relationship indicates that alcohol can be a possible coping mechanism to provide a temporary release from the negative feelings of depression. The dopamine release of alcohol could

temporarily stop the feelings of numbness that depression causes, resulting in many NHPs wanting to have all experiences with this dependence, which can result in a constant reliance for alcohol when under this emotional burden (Acuff, et al., 2019). When looking at culturally relevant treatment, it is important to look at all factors, such as screening for depression when caring for risky alcohol use. Illicit substance use is also a strong predictor of risky alcohol use, highlighting that many different problems in mental health and substance use can play a factor in one another, and are not isolated problems. There is a heavy risk for a reliance on alcohol use, and moving away from the systemic assimilation through connecting more to the historical cultural ties can help prevent this reliance.

Furthermore, age plays a factor in systemic stress and depressive symptoms. The ANOVA One Way test highlighted that depression scores are highest in the youngest age group and lower in middle-aged and older adults. Younger adults have significantly higher depression scores than both older adults and middle-aged adults. This emerging adulthood transition is often characterized as the period of time when many people have increased academic, financial, and social pressures. The youngest age group may feel additional stress from navigating between traditional cultural and Western expectations, leading to higher stress and depression (Acuff, et al., 2019). Furthermore, generational differences in mental health stigma may play a factor. Many older adults often view mental health as a topic to not talk about (Park et al., 2024), leading to many younger adults growing up in an environment with a heavy stigma around mental health. At the same time, younger adults may have the highest depression scores because they are more likely to report high depressive symptoms compared to older adults. Although there is the largest mean difference among younger adults and older adults, younger adults and middle-aged adults have a significant difference, suggesting that middle-aged adults also

experience heightened levels of depression. The collectivist nature of NHPI families can create a higher level of stress towards middle-aged adults from having a burden of needing to take care of those younger and older. Their own needs are put under the obligation to care for the family (Park et al., 2024). The impact of older adults having depression may also highlight the isolation and loss to cultural traditions as time goes by. This group is most likely to have more knowledge of historical trauma and cultural ties compared to generations more assimilated into Western culture. Furthermore, many older adults often have the most stigma associated with mental health and thus, do not seek help (Park et al., 2024).

The impact of NHPI groups being combined within the broader Asian American category diminishes the prevalence of depression, anxiety, and substance use as Asian Americans generally have lower prevalence rates in comparison (Subica et al., 2024). Within Western culture, Asian Americans experience harmful stereotypes of the “Model Minority” myth that all Asian Americans are successful and high achieving (Ruiz et al., 2023). While this stigma offers a viewpoint of prosperity, there is a harmful effect for NHPI groups. Since NHPI data is aggregated with Asian American data, the heightened mental health prevalence for NHPI is overlooked, minimizing systemic racism and resulting in a lack of resources for this group.

The history of NHPI colonization has resulted in a loss of cultural ties, leading to a lack of cultural competency towards NHPI values and many individuals delaying or not getting the care they need. NHPI has a collectivist culture, meaning that the family is prioritized over individual needs. This creates a culture of not seeking help outside of their family as it is discouraged. Individuals often focus on their family first and not focus on their individual challenges, leading to an avoidance to seek care. This is emphasized when many NHPI individuals do not fully trust Western healthcare systems because they do not take into account

cultural history when treating these individuals (Park et al., 2024). Barriers to accessing care include language barriers and insensitive healthcare providers. The lack of representation in healthcare and lack of cultural competency leads to a feeling of being dismissed when seeking help. This highlights the need for more information on how to better treat, such as increasing resources for language accessibility with translators and enhancing cultural competency for healthcare providers. Addressing these barriers is critical to promoting health equity among NHPI populations. These systemic challenges must be addressed to provide equitable and culturally competent care.

Limitations & Future Directions

Despite the significant findings of this study, there are several limitations. First, a key limitation rests in the data being collected through self-reporting as there can be differing bias and stigma with the topics described within NHPI culture. There are various cultural perspectives on stigma and shame associated with mental health. Future studies could explore each topic further through incorporating interviews with the surveys to offer a deeper understanding of the mental health and substance use disparities among this community through qualitative data. Second, this study focused on the elevated prevalence of mental health and substance use problems of the entire NHPI population. A limitation is that each NHPI subgroup (e.g., Native Hawaiian, Samoan, Marshallese, Chamorro) was not analyzed in comparison with one another. In addition to analyzing these specific subgroups within NHPI populations, future studies can analyze the LGBTQ+ community and third gender experiences, and the effect among older adults. Third, this study analyzes participants from one period of time. A longitudinal study can provide more specific data on depression across different generations. With this data, more studies incorporating culturally relevant treatments that incorporate historical and cultural

knowledge of NHPI populations can offer more insights in providing higher quality care (Nguyen et al., 2024). This will help integrate strategies that align with NHPIs' values and lived experiences to prevent the increasing prevalence rates.

CONCLUSION

Native Hawaiian and other Pacific Islander groups are often overlooked, highlighting significant gaps in systemic care especially with high prevalence rates for mental health and substance use problems. Findings reported that older adults and middle-aged adults experience lower levels of depression in comparison to younger adults. Regression findings indicated that depression was a strong predictor for risky alcohol use. This may suggest that alcohol may be used as a possible coping mechanism for NHPI adults. This research adds onto existing literature by continuing to raise awareness for the significantly growing mental health and substance use disparities in this community. Being Native Hawaiian with strong cultural ties to Hawai'i and Hawaiian culture, this capstone project plays an important role in my academic and personal journey in University Honors through learning more about this underrepresented group. Using disaggregated data encourages future research to be conducted to have more representation for NHPI individuals to help fill in the gaps in knowledge with this understudied racial group. This emphasizes the importance of studies on culturally specific treatment for mental health among NHPI communities to enhance health equity. Conducting this research and obtaining this data may ultimately improve NHPI trust with healthcare providers and help to reduce stigma to ensure that NHPI individuals receive the care and support the project data indicate that they urgently need.

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