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Hawai‘i Journal of Health & Social Welfare

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Aim:

The aim of the Hawai‘i Journal of Health & Social Welfare is to advance knowledge about health and social welfare, with a focus on the diverse peoples and unique environments of Hawai‘i and the Pacific region.

History:

In 1941, a journal then called The Hawai‘i Medical Journal was founded by the Hawai‘i Medical Association (HMA). The HMA had been incorporated in 1856 under the Hawaiian monarchy. In 2008, a separate journal called the Hawai‘i Journal of Public Health was established by a collaborative effort between the Hawai‘i State Department of Health and the University of Hawai‘i at Mānoa Office of Public Health Studies. In 2012, these two journals merged to form the Hawai‘i Journal of Medicine & Public Health, and this journal continued to be supported by the Hawai‘i State Department of Health and the John A. Burns School of Medicine.

In 2018, the number of partners providing financial backing for the journal expanded, and to reflect this expansion the name of the journal was changed in 2019 to the Hawai‘i Journal of Health & Social Welfare. The lead academic partners are now the six units of the UH College of Health Sciences and Social Welfare, including the John A. Burns School of Medicine, Office of Public Health Studies, the Thompson School of Social Work & Public Health, the Nancy Atmospera-Walch School of Nursing, the UH Cancer Center, and the Daniel K. Inouye College of Pharmacy. Other partners are the Hawai‘i State Department of Health and the UH Office of the Vice Chancellor for Research. The journal is fiscally managed by University Health Partners of Hawai‘i.

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2022 Writing Contest Undergraduate Winner

Understanding Hawaiian Identity and Well-being to Improve Mental Health Outcomes for Hawaiian Young Adults

Catherine Jara BSW; Ngoc Phan PhD

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Catherine Jara

Catherine Jara received her BSW from Hawai'i Pacific University. She aims to increase visibility and representation of NHPI and Indigenous voices through strengths-based research. This study was originally developed for her senior capstone project, which she was awarded funding for as the 2022 Health Research Concept Competition (HRCC) winner from her university's biomedical research center.

Throughout her undergraduate career and gap year, she has worked on multiple research projects that explored Native Hawaiian identity and well-being with her mentor, Dr. Ngoc Phan. She also presented at the 2022 and 2023 Western Political Science Association and 2023 Hawai'i Sociological Association conferences.

Catherine Jara is currently a first-year Sociology PhD student at University of Wisconsin-Madison, where she continues to explore questions related to Native Hawaiian identity and belonging. She intends on returning home to continue giving back to her Native Hawaiian community.

Abstract

The mental health crisis among Native Hawaiian young adults is exacerbated by colonization-related risk factors, yet cultural identity stands as a key protective element. This study explored the link between cultural identity and stress, employing cultural reclamation theory, and surveyed 37 Native Hawaiians aged 18-24 through the Native Hawaiian Young Adult Well-being Survey. Engagement with culture, the significance of Hawaiian identity, and stress were assessed, revealing significant correlations between cultural and demographic factors and stress levels. Participants displayed high cultural engagement and valued their Hawaiian identity, with gender and education levels playing a notable role in stress. These findings highlight the importance of including Native Hawaiian perspectives in mental health research and may guide the development of targeted interventions.

Keywords

Native Hawaiian, young adults, cultural identity, cultural reclamation, perceived stress

Abbreviations and Acronyms

NHPI = Native Hawaiian and Pacific Islander
PSS = Perceived Stress Scale

Introduction

Mental health is a serious, under-addressed issue, especially within the Native Hawaiian and Pacific Islander (NHPI) community.[1] The NHPI community experience higher rates of depression, suicide, and anxiety compared to other ethnic groups in Hawai'i.[2] Research also links mental illness to increased likelihood of developing serious health conditions. Compared to other ethnic groups, Native Hawaiians experience some of the highest rates of diabetes, heart disease, cardiovascular disease, cancer, and chronic stress.[1,3] The severity of this mental health crisis is exacerbated with the intersectionality of other demographics, such as age and race. Young adults are at a greater risk of developing mental health concerns, and the millennial cohort is facing a faster decline in their mental health compared to previous generations.[4,5] Furthermore, Indigenous young adults are at greater risk of developing mental health concerns, due to the inequity that their communities face and the barriers to accessing mental health treatment such as fear, shame, intergenerational trauma, and distrust of service confidentiality.[6,7] In this article, "Indigenous" is used in a broad context to refer to "the original inhabitants of the land."[8]

Despite the mental health crisis, Native Hawaiians have some of the lowest rates of mental health service.[9] This prompts the need to consider the historical context of inequity in the Native Hawaiian community.[10] Native Hawaiians continue to be impacted in similar ways to other colonized groups, including exposure to foreign disease, and loss of land, language, culture, and autonomy over their lands.[11] However, Native Hawaiians continue to keep their culture alive through collective knowledge. Equating health statistics to community deficits creates the false narrative that Indigenous peoples fail to succeed in Euro-

colonial societies.[12-14] Furthermore, there is limited research that focuses on mental health from Native Hawaiian perspectives due to the aggregation of Native Hawaiians, Pacific Islanders and Asian Americans.[15]

Understanding Native Hawaiian identity is critical in promoting Native Hawaiian well-being because research shows that cultural identity is a protective factor against adversity for Indigenous peoples.[5,14] Additionally, studies show that Native Hawaiians often prefer cultural ways of healing.[16-18] From a cultural lens, well-being is understood from a holistic perspective, in which the biological, psychological, emotional, social, and spiritual dimensions are all considered.[18,19] An individual is not seen as an isolated entity – contrary to the Euro-colonial value of individualism – but rather as an interrelated part in a greater system of relationships with the ʻāina (land), ʻohana (family), *akua* (god(s)), and the *lāhui* (Native Hawaiian nation or community).[20] Moreover, Native Hawaiian well-being is informed by values of collectivism, and the individual and overall community are considered the healthiest when all the dimensions of the individual and cultural relationships are in *lōkahi* (harmony).[20] Drawing upon culture leads to overall empowerment of the community through the recognition of community strengths.[21-23] In one study, a Native Hawaiian respondent described a "healthy Native Hawaiian" as an image of "The Healthy Ancestor."[24] This image is significant because it shows that Native Hawaiians understand their "natural" state as healthy.[24] Therefore, reclaiming this sense of self for Native Hawaiians is imperative to revitalizing health in contemporary society.

According to cultural reclamation theory, healing for Indigenous peoples occurs as they embrace their culture.[25] During this process, the impacts of colonization are understood as continuous. Historical trauma is the "complex, collective, cumulative, and intergenerational psychosocial impacts that resulted from the depredations of past colonial subjugation."[26] Cultural reclamation interrupts the snowball effect of historical trauma, which would otherwise lead to higher vulnerability to health-related risk factors for Indigenous peoples.[27] As Indigenous peoples embrace their culture, they also create pathways to reconnect to their ancestral past in order to make sense of themselves. This leads to an increased sense of cultural identity and overall well-being (**Figure 1**).

This study argues that healing for Native Hawaiian young adults occurs through: (1) resistance towards colonial forces; (2) finding one's purpose as a Native Hawaiian; and (3) meaningful engagement with Native Hawaiian culture practices. The authors acknowledge that the term "Native Hawaiian" has multiple nuances and may not fully capture or accurately represent identity for individuals within this community. In constructing measurements for cultural reclamation theory, this study expands on research about Native Hawaiian conceptualizations of health and well-being.

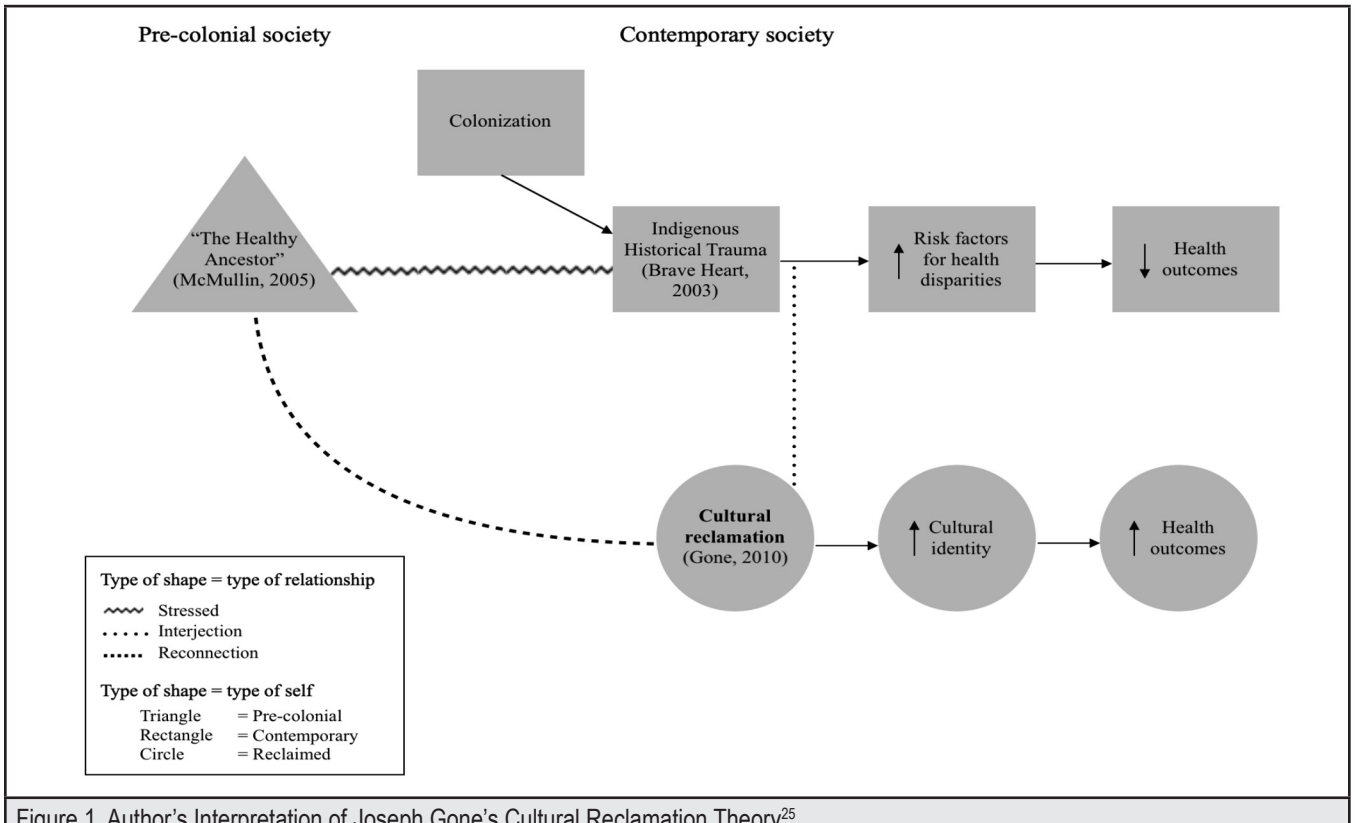

Figure 1. Author's Interpretation of Joseph Gone's Cultural Reclamation Theory[25]

Methods

Data Collection

Data from the Native Hawaiian Young Adult Well-being Survey was analyzed to examine the relationship between cultural identity and stress among Native Hawaiian young adults. This study hypothesized that respondents with connection to their identity through engagement with Native Hawaiian culture will have lower perceived stress. The survey instrument and research design used for this study were approved for ethical review in the beginning of March 2022 (Hawai'i Pacific University IRB: #56042021019). The survey instrument was available online through SurveyMonkey,™ (Survey Monkey, Inc., San Mateo, CA) and responses were collected over a 1-month period from March to April 2022.

Convenience and snowball sampling were used in this study, which aimed to recruit Hawai'i residents, aged 18-24 years, who self-identified as Native Hawaiian. No sample size calculations were done; however, a target sample size of 100 participants was decided based on the period for data collection. Prior to the survey, respondents were asked to read an online consent and debriefing form that described the study procedures, confidentiality measures, and future use of the survey data. Self-reported and administered surveys were used as non-intrusive approaches that see respondents as the experts on their own cultural identity and mental health.[28] Additionally, respondents were able to complete this survey at their own pace and in environments of their choice. All participation was voluntary and could be stopped at any point. There was no way to link any personal identifiers of respondents to their responses. The 20-question survey took approximately 10 minutes to complete. This study was funded by a $4000 grant that was used to purchase $10 Starbucks™ e-gift cards for compensating respondents and for Stata™ software Version 17 (Stata Corp LLC, College Station, TX) for statistical analysis (NIH: U01GM128435, PI: Vakalahi).

This study was grounded in Indigenous data sovereignty through involvement of Indigenous voices and transparency throughout the research process.[29] Additionally, an Instagram™ account (@nhyawellbeingsurvey) was created to disseminate information on the study's purpose, research team, study procedures and confidentiality measures, and potential plans for the collected data. Community stakeholders that regularly engage with this study's target population were also contacted and asked if they were willing to share the survey.

Measures & Data Analysis

Native Hawaiian identity and cultural engagement questions were used as measurements for the independent variable, cultural identity (**Table 1)**. These questions were derived from important themes within Native Hawaiian identity well-being literature[18,23] and identity questions from the 2019 Native Hawaiian Survey.[30] Perceived stress questions were used as measurements for the dependent variable, stress, through the 10-item Perceived Stress Scale (PSS) instrument, which is the most widely used psychological instrument for measuring the perception of stress[31] (**Table 1)**. For positive PSS variables (confidence coping; ability to control irritations; and felt on top of things), responses were reverse coded prior to being summed for sum stress.

Data from the Native Hawaiian identity and cultural engagement variables were run through multi-linear regressions for each PSS variable. Demographic controls were added to regressions considering social determinants of health.[32,33] Demographics were coded into the following dummy variables: female, higher education, student, and employed. No question asked respondents about their specific age within the 18-24 age range, so age was not included as a control.

Results

A total of 43 respondents fully completed the survey. The majority of these respondents identified as female (74%), completed high school (83%), were full-time students (63%), and were employed part-time (51%) during the time of the survey (**Table 2**). "Other" responses; "No" or missing responses for any of the inclusion questions; duplicate or irrelevant responses; and responses that were not fully completed (3 or more skipped questions) were excluded from analyses, which decreased the number of observations within our regression (N=37). It is also possible that not every respondent answered every question for the variables used.

Levels of Cultural Engagement & Importance of Native Hawaiian Identities

When asked about their engagement with Native Hawaiian culture through cultural values, practices, and activities, the average was close to "Often (1-4 days/wk)" ($x = 2.67$; $SD = 0.92$; **Table 3**). When respondents were asked about their engagement with others in the Native Hawaiian community, the average response was closer to "Often" ($x = 2.93$; $SD = 0.96$; **Table 3**).

Moderate Perceived Stress & Confidence in Coping

According to the PSS scoring criteria, scores ranging from 0-13 indicate low perceived stress, 14-26 indicate moderate perceived stress, and 27-40 indicate high perceived stress. For overall perceived stress scores, the average score is in the middle of the moderate perceived stress range ($x = 22.26$; $SD = 2.83$; **Table 3**).

Respondents indicated the highest average for the nervous and stressed feelings variable ($x = 3.16$; $SD = 0.87$; **Table 3**) and the lowest average for the things going well variable ($x = 2.09$; $SD = 0.72$; **Table 3**). However, the confidence coping variable yielded the second highest average after the nervous and stressed feelings variable ($x = 2.53$; $SD = 0.80$; **Table 3**).

For the cultural identity and engagement variables, respondents indicated high levels of cultural engagement and importance of Native Hawaiian identity. The pride in Native Hawaiian identity variable yielded the highest average level of agreement ($x = 3.93$; $SD = 0.26$; **Table 3**). No respondent answered "Neither Agree or Disagree," "Disagree," or "Strongly Disagree." Levels of agreement were lowest for the community affect variable. When asked about feeling affected by the stressors and/or successes of others in the Native Hawaiian community, the average response was near "Agree" ($x = 3.21$; $SD = 0.77$; **Table 3**).

For the perceived stress variables, respondents indicated moderate levels of overall perceived stress. The community affect cultural identity variable had a negative statistically significant impact on overall perceived stress. For the confidence coping stress variable, there were positive statistically significant relationships with the community engagement importance variable and education dummy variable, and a negative statistically significant relationship with gender (**Table 4**).

Demographic Variables: Community Affect, Community Engagement Importance, Gender, & Education

Although multi-linear regressions were run for each PSS variable with the Native Hawaiian identity and cultural engagement variable, only the sum stress and confidence coping models are included in this table because no statistically significant variables were yielded in the other models (**Table 4**). First, a negative relationship ($\beta = -1.41$, SE = 0.63, P=.037) was found between the sum stress variable and the community affect variable (**Table 4**). Second, positive relationships were found between the confidence coping and community engagement importance variable ($\beta = 0.66$, SE = 0.30, P=.038), and the education variable ($\beta = 0.53$, SE = 0.24, P=0.035; **Table 4**). Therefore, as the importance of engaging with others in the Native Hawaiian community and education levels increase, confidence in ability to cope with stress is also more likely to increase. Additionally, a negative relationship was found between the confidence coping and gender variables ($\beta = -0.77$, SE = 0.31, P=.021; **Table 4**). Respondents who identified as male were more likely to have higher confidence in ability to cope with stress compared to respondents who identified as female. Additionally, because the majority of this sample identified as female, when looking at gender differences in education level, 63% percent of the total 32 female respondents received some form of higher education, while only 37% of the total 3 male respondents received some form of higher education.

Table 1. Cultural Identity and Perceived Stress Scale Variables from the Native Hawaiian Young Adult Well-being Survey

Variable Name	Variable Question	Variable Coding
Cultural Engagement	On a day-to-day basis, how often do you engage with Hawaiian culture (values, practices, traditions)?	4 - Almost always, 5-7 days a week 3 - Often, 1-4 days a week 2 - Sometimes, once a month 1 - Rarely, few times a year 0 - Never
Community Engagement	On a day-to-day basis, how often do you engage with others in the Hawaiian community?	
Cultural Engagement Importance	Being able to engage with Hawaiian culture (values, practices, and activities) is important to me.	5 - Strongly Agree 4 - Agree 3 - Neither Agree or Disagree 2- Disagree 1- Strongly Disagree
Community Engagement Importance	Being able to engage with others in the Hawaiian community is important to me	
Learn Hawaiian History	I enjoy learning about Hawaiian history	
Healthy Cultural Engagement	I feel healthier when I engage with Hawaiian culture	
Pride Hawaiian Identity	I feel proud to be Hawaiian	
Community Belonging	I feel like I belong within the Hawaiian community	
Community Affect	I feel affected by the successes and/or stressors of others in the Hawaiian community	
In the last month…		
Upset from Unexpected Events	How often have you been upset because of something that happened unexpectedly?	4 - Very often 3 - Fairly often 2 - Sometimes 1 - Almost never 0 - Never
Difficulty Controlling Important Things	How often have you felt that you were unable to control the important things in your life?	
Nervous and Stressed Feelings	How often have you felt nervous and stressed?	
Confidence Coping	How often have you felt confident in your ability to handle your personal problems?	
Things Going Well	How often have you felt that things were going your way?	
Difficulty Coping with Tasks	How often have you found that you could not cope with all the things that you had to do?	
Able to Control Irritations	How often have you been able to control irritations in your life?	
Felt on Top of Things	How often have you felt that you were on top of things?	
Angered by Outside Things	How often have you been angered because of things that happened that were outside of your control?	
Unable to Overcome Difficulties	How often have you felt difficulties piling up so high that you could not overcome them?	
Sum Stress*	Total stress (sum of scores* from each PSS question)	

*For positive PSS variables (Confidence Coping, Ability to Control Irritations, and Felt on Top of Things), responses were reverse coded prior to being summed for Sum Stress.

Table 2. Demographics of Native Hawaiian Young Adult Well-being Survey Participants

Characteristic	N = 43[a] No. (%)
Gender Identity	
Male	8 (19)
Female	32 (74)
Non-binary	2 (5)
Other	1 (2)
Highest Education	
Some high school	2 (5)
High school or equivalent	16 (37)
Some college	12 (28)
Bachelor's degree	8 (19)
Other	5 (12)
Current Education	
Full-time student	27 (63)
Part-time student	4 (9)
Trade school	1 (2)
Not enrolled in school	10 (23)
Other	1 (2)
Employment	
Full-time	11 (26)
Part-time	22 (51)
Self-employed	1 (2)
Actively looking	4 (9)
Unemployed	2 (5)
Other	3 (7)

[a] Observation values for sample demographics (N=43) differ from observation values (N=37) in the regression models due to the construction of the dummy variables used in the regression models. It is also possible that not every respondent answered every question for the variables used.

Table 3. Cultural Engagement & Native Hawaiian Identity and PSS Descriptive Statistics from the Native Hawaiian Young Adult Well-being Survey

Variable	Mean (x)	Std. Dev. (SD)	Min.	Max.
Cultural engagement	2.67	0.92	1	4
Community engagement	2.93	0.96	1	4
Cultural engagement importance	3.69	0.51	2	4
Community engagement importance	3.65	0.53	2	4
Learn Hawaiian history	3.77	0.48	2	4
Healthy cultural engagement	3.49	0.70	2	4
Pride Hawaiian identity	3.93	0.26	3	4
Belonging community	3.28	0.85	1	4
Community affect	3.21	0.77	1	4
Upset from Unexpected Events	2.51	0.86	1	4
Difficulty Controlling Important Things	2.47	0.92	1	4
Nervous and Stressed Feelings	3.16	0.87	1	4
Confidence Coping	2.53	0.80	0	4
Things Going Well	2.09	0.72	0	4
Difficulty Coping with Tasks	2.23	1.02	0	4
Able to Control Irritations	2.23	0.78	1	4
Felt on Top of Things	2.32	0.97	0	3
Angered by Outside Things	2.33	0.98	0	4
Unable to Overcome Difficulties	2.37	0.98	1	4
Sum Stress	22.25	2.83	17	30

Table 4. Multi-linear Regression Results Comparing Cultural Identity Variables to Significant Perceived Stress Variables, Native Hawaiian Young Adult Well-being Survey

	Sum Stress	Confidence Coping
	Coefficient (Standard Error) ***P-Value***	***Coefficient (Standard Error)*** ***P-Value***
Cultural Engagement	-0.23 (0.64) *P* =.73	-0.14 (0.17) *P* =.43
Community Engagement	0.37 (0.54) *P* = .50	-0.10 (0.15) *P* = .50
Cultural Engagement Importance	-0.65 (1.31) *P* = .62	-0.31 (0.35) *P* = .39
Community Engagement Importance	0.48 (1.10) *P* = .67	0.66 (0.30) ***P* = .038**
Learn Hawaiian History	0.44 (0.86) *P* = .62	-0.40 (0.23) *P* = .095
Healthy Cultural Engagement	-1.16 (0.78) *P* = .150	0.22 (0.21) *P* = .32
Pride Hawaiian Identity	-1.89 (1.79) *P* = .301	-0.85 (0.48) *P* = .092
Belonging Community	-0.82 (0.52) *P*= .130	-0.14 (0.14) *P*= .33
Community Affect	-1.41 (0.63) ***P* = .037**	0.19 (0.17) *P* = .29
Gender	0.50 (1.14) *P* = .67	-0.77 (0.31) ***P* = .021**
Education	0.29 (0.88) *P*= .74	0.53 (0.24) ***P* = .035**
Student	-0.02 (1.10) *P* = .99	0.33 (0.30) P = .28
Employment	0.5 (1.92) P = .80	-0.64 (0.52) *P* = .23
Constant	43.61 (9.15)	7.33 (2.47)
N	37	37
F(13, 23)	2.37	1.77
Prob > F	0.04	0.11
R^2	0.57	0.5
Adj R^2	0.33	0.22
Root MSE	2.34	0.63

Only the Sum Stress and Confidence Coping models are included in this table from the PSS variables because no statistically significant variables were yielded in the other models.

Discussion

This study of Native Hawaiian young adults found that (1) respondents indicated high levels of engagement with Native Hawaiian culture and importance of Native Hawaiian identity; and (2) respondents displayed levels of overall perceived stress that were similar to levels of confidence in their abilities to cope with stress.

While respondents indicated experiencing feelings of nervousness and defeat at moderately high rates, they also indicated feeling similar levels of confidence in coping with these feelings. Additionally, the majority of respondents yielded scores in the moderate perceived stress range, although their expected perceived stress levels may be higher given the impacts of colonization, including the disproportionate rates of mental and physical health conditions among Native Hawaiians.[1,2] Confidence in ability to cope with stress may be an act of resistance in itself, especially since research often emphasizes the deficits within the Native Hawaiian community.[9,10] Furthermore, although Native Hawaiians continue to experience loss of land, language, culture, and autonomy over their lands due to colonization,[11] when asked about key components to Native Hawaiian identity, such as the ability to engage with Native Hawaiian culture and others in the Native Hawaiian community, cultural learning, sense of pride and health, and sense of belonging to the Native Hawaiian community, levels of agreement were high across the board. Finding one's purpose as

an Indigenous person may be reflected through this, and further insight may be found in the high levels of pride associated with being Native Hawaiian among respondents. Lastly, meaningful engagement with Indigenous practices may be reflected in the high frequencies of engagement with Native Hawaiian values, practices, and traditions and others in the Native Hawaiian community indicated by respondents, as well as high levels of agreement that the ability to participate in these engagement processes is important.

Feeling impacted by the stressors and/or successes by others in the Native Hawaiian community had a significant negative relationship with overall perceived stress. Moreover, as feeling affected by the other stressors and/or successes by others in the Native Hawaiian community increases, overall perceived stress is more likely to decrease, and vice versa. Revisiting the cultural value of collectivism,[20] this finding may indicate that respondents whose conceptualization of well-being aligns with a Native Hawaiian framework of well-being feel less stressed. More exploration into the different dimensions of Native Hawaiian well-being, particularly related to collectivism, may be valuable. Building upon collectivism, indicating high importance in ability to engage with others in the Native Hawaiian community had a significant positive relationship with confidence in ability to cope with stress. Moreover, respondents who indicated high importance in community engagement had higher levels of confidence in ability to cope with stress, whereas respondents who indicated low importance in community engagement had lower levels of confidence in ability to cope with stress. Further insight may be found in the role of social support in Native Hawaiian well-being found and specific ways Native Hawaiian young adults engage within the community.

Gender and education were 2 variables that were significant in relation to confidence in ability to cope with stress. Male respondents had higher confidence in their coping abilities, than female respondents. Additionally, education had a significant positive relationship with confidence in ability to cope with stress. Respondents who received some level of higher education had higher confidence in their coping abilities than those with high education or less. Although male respondents had higher confidence in their coping abilities, a higher percentage of female respondents received some form of higher education. Further exploration into these gendered differences and comparison of coping skills for each gender identity among Native Hawaiian young adults may be valuable for further analysis. Differences in accessibility to higher education may also be valuable to explore.

Revisiting the context of colonization may provide insight into the lack of significant relationships between the other cultural identity and stress variables. Native Hawaiians face barriers that prevent them from actively participating in cultural engagement processes, such as the need to continually advocate for the importance of accessing and protecting sacred lands in which these processes are rooted, and difficulty navigating institutional and social systems that are shaped by colonization.[34] Lack of significance may also relate to the prevalence of deficits-based research on Native Hawaiians. Because the Native Hawaiian community is often overgeneralized by this type of research, learning through the lens of these narratives may create a negative sense of self among Native Hawaiians, which reinforces the need for more strengths-based research.[12-14] Analysis of responses from the open-ended identity and well-being questions and focus groups may provide further insight into Native Hawaiian young adult conceptualizations of Native Hawaiian identity and well-being and their experiences with stress and mental health. Future studies should further examine factors that contribute to confidence in coping abilities among Native Hawaiian young adults, as well as the specific types of stress they experience, by incorporating quantitative data from this study using explanatory sequential analysis or qualitative data from focus group interviews.

Limitations

This study has several limitations, including a limited sample size; use of online platforms and monetary compensation as primary recruitment tools; use of "Native Hawaiian" as an identifier; and limited stress measurement. Due to this study's convenience and snowball sampling methods, and low sample variability, the survey results cannot be generalized. Additionally, while there is typically a high use of social media among young adults,[35] use of Instagram™ may have created selection bias. Use of SurveyMonkey™ may also have created a barrier for potential respondents who may not know how to use or access this survey platform. Next, utilizing "Native Hawaiian" as a self-identification label within this survey may not have been inclusive of all Native Hawaiians. Lastly, this study used perceived stress as the measurement for stress, but there may be other types of stress experienced by Native Hawaiian young adults that are not captured by the PSS.

Conclusion

The relationship between cultural identity and stress among Native Hawaiian young adults was analyzed using data from the Native Hawaiian Young Adult Well-being Survey, an original survey designed for this study. The following themes were found from the data, which may inform more effective mental health interventions for Native Hawaiian young adults: (1) respondents indicated high levels of engagement with Native Hawaiian culture and importance of Native Hawaiian identity; and (2) respondents displayed levels of overall perceived stress that were similar to levels of confidence in their abilities to cope with stress. Additionally, low statistical significance was found between the community affect variable in relation to the sum stress variable, as well as between the community engagement importance, gender, and education variable in relation to the confidence coping variable.

According to cultural reclamation theory, high levels of cultural engagement and importance of Native Hawaiian identity may reflect finding one's personal purpose as an Indigenous person and meaningful engagement with Indigenous practices. Compounded with similar levels of confidence in ability to cope and overall perceived stress, the former may also be acts of resistance to colonization, given the ways Native Hawaiians may be expected to fail in contemporary society.[13,20] Revisiting the context of colonization supports the need for more strengths-based research. Overall, stress management and strong cultural identity is present among this sample.

Conflict of Interest

None of the authors identify a conflict of interest.

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'Tausi Feagaiga: A Project to Train Caregivers and Empower the American Samoan Community

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Abstract

The '*Tausi Feagaiga* (Covenant Keeper) project was a partnership to support the traditional values of *tausi matua* (caring for one's elders). The partners included a non-governmental organization (Pacific Youth and Community Development), a faith-based organization (Roman Catholic Diocese of Samoa-Pago Pago), and an institute of higher education (University of Hawai'i John A. Burns School of Medicine). The project was created to address the lack of community-based health care such as home health or hospice, and families needing to work outside the home. A culturally based caregiving curriculum was developed to educate caregivers and improve their knowledge and skills. Using a train-the-trainer model, 125 caregivers were trained in family caregiving from 2016-2020. Training was conducted through an intensive workshop followed by practicum at Hope House, the Catholic Diocese home for the aged. Participants who expressed a willingness and competency were mentored to be trainers to continue the '*Tausi Feagaiga* project. The mean self-rated confidence in caregiving improved significantly from 3.17 $\pm$ 1.02 (mean SD) pre workshop to 3.53 $\pm$ 0.71 post workshop (P = .001). Competence in geriatric syndromes was improved from 18.04 $\pm$ 4.27 to 21.31 $\pm$ 4.30 after attending the workshop (P < .001) and the feedback was extremely positive. Technical assistance was provided to obtain funding through American Samoa Medicaid State Agency to improve the existing infrastructure of Hope House, obtain much needed supplies, and increase ability to hire the participants. '*Tausi Feagaiga* positively impacted the lives of the residents of Hope House, the course participants, the elders in the community, and those who care for them.

Keywords

Cross-cultural communication, Health Economics and Financing, American Samoa, Caregiving, Family Caregivers, Medicaid

Abbreviations

CMS = Centers for Medicare and Medicaid Services
COVID = Coronavirus Disease
PIGEC = Pacific Islands Geriatric Education Center
TAOA = American Samoa Government's Territorial Administration on Aging

Introduction

American Samoa is an unincorporated territory of the US and Pago Pago is the territorial capital home to approximately 49 000 people.[1] Approximately 90% of the land is held in communal or village ownership and is administered by '*matai*, titled heads of *'aiga* or extended families, through a centuries-old family governance system. This system of rituals and practices is sustained by an intricate network of relationships that prize reciprocity and collective wellbeing. The ethnic majority of the population is Samoan (88%), and the remaining are classified as Tongan (3%), Asian (3%), and mixed and other (6%). Samoan and English are the primary spoken languages. The median age in American Samoa is 27 years old. The life expectancy at birth is 71.1 years for men and 77.8 years for women.[2] The population over 65 years of age and older has increased from 529 people in 1960 to 3216 in 2022.[3]

The foundation of the Samoan culture is *Fa'a Samoa*, or the Samoan way. *Fa'a Samoa* is collectivist in orientation and permeates every aspect of modern life. *Fa'a Samoa* is reflected in how the land tenure and village governance systems, and family well-being is favored, as motivated by traditional values such as *fa'aaloalo* (courtesy, respect, and politeness), *alofa* (compassion), *agamalu* (humility), *osi aiga* (proactive support of family), *tausi matua* (caring for elders), and *loto fesoasoani* (heartfelt outreach and support).

Lack of physical activity, proper nutrition, and tobacco use are among the major risk factors causing dramatically high rates of non-communicable diseases in American Samoa. Population surveys show that 93% of the adults are overweight or obese and 47% have diabetes.[4] The leading causes of death include heart disease, diabetes, cancer and stroke.[4] Many persons with disabilities live in isolation with limited access to proper health care resulting in premature death. With families having to work, there is an increased need for care of the disabled and elders. There is no welfare system in American Samoa, however, a federally funded food stamp program is available for elders and children with special needs. There are approximately 1300 American Samoa residents receiving Social Security Disability benefits from the Social Security Administration each month.[5]

There are no home health agencies, hospices, care homes, nursing homes or other forms of community-based health care. Services and programs for the seniors in American Samoa are provided by the Area Agency on Aging funded by the Older Americans Act. The American Samoa Government's Territorial Administration on Aging (TAOA) is the lead agency responsible for programs and services for seniors and is one of the few resources available. TAOA administers federally funded programs to provide hot meals, nutrition education, disease prevention, caregiver support services, and part-time employment. Due to limited

funding these programs are largely provided at the TAOA center, not directly offered at home.

Although *fa'a Samoa* culture expects families to take care of their own, the demands of the current economy with limited job opportunities and low wages compels the majority of adults to go to work with no one in the home to serve as a full-time caregiver. However, committing the disabled or elderly to institutional care outside of the home is shameful and frowned upon within the Samoan community. Thus sometimes, the disabled or elderly loved ones are left at home, unsupervised, and without anyone to ensure their safety and help them with needs of daily living.

Hope House operated by the Catholic Diocese is the only facility in American Samoa that provides 24/7 care for the elders and disabled, and it has a continuous wait list. It was originally founded by the Sisters of the Nazareth in 1987 as a home for the poor and needy. At that time, individuals who did not have a next of kin or '*aiga* were admitted to Hope House. The only exceptions were severely disabled children who needed care that was above and beyond the capability of their own family. Hope House was staffed by 1 registered nurse, 1 certified nurse assistant, 3 nurse aides who receive nominal stipends as compensation for their work and 20+ volunteers. Almost 30 years later, the community need for assistance at Hope House has grown exponentially because of the increasing number of elders and adults with special medical needs who require advanced care. Thus the *'Tausi Feagaiga* (Covenant Keeper) project was born.

The '*Tausi Feagaiga* project was a partnership developed in 2016 between a non-governmental organization (Pacific Youth and Community Development), a faith-based organization (the Roman Catholic Diocese of Samoa-Pago Pago), and the University of Hawai'i John A. Burns School of Medicine. The purpose of *'Tausi Feagaiga* project was to create a sustainable caregiver program to improve the lives of American Samoan elders. The goal was to train participants to perform caregiving skills and for them to teach these skills to family caregivers. Secondary goals were to increase the sustainability of Hope House to improve the access to long-term care for elders and adults with disabilities.

Methods

'*Tausi Feagaiga* was developed based on an existing Family Caregiver Certificate that had been created by Pacific Islands Geriatric Education Center (PIGEC) and successfully piloted in the Republic of Palau, as well as neighboring US Affiliated Pacific Islands. PIGEC's mission is to promote training in geriatric education in the Pacific Islands to improve health care for older adults and persons with disabilities. The core curriculum of the Family Caregiving Certificate was divided into 4 main competencies: caregiver health literacy, mental health, hands-on skills training, and a field practicum.[6] The training covered topics such as activities of daily living, common medical problems, wound care, proper use of durable medical equipment, managing difficult behaviors, and caregiver burnout. **Table 1** describes the

Table 1. Core Curriculum of the Family Caregiving Certificate Modules and Learning Objectives

Session	Module	Learning Objectives
1	Normal Aging Cultural Aspects of Caregiving	• Understand the general principles in caring for the elderly. • Strengthen the cultural aspects of caregiving in Samoa. • Increase knowledge on the physical changes associated with aging.
2	Gait and Transfer Training Fall Prevention	• Learn strategies to prevent falls at home. • Training on gait and transfers techniques. • Proper use of durable medical equipment such as canes, walkers, and wheelchairs.
3	Pain and Symptom Management Managing Difficult Behaviors	• Understand the World Health Organization (WHO) approach to pain management. • Learn non-pharmacological approaches to managing difficult behaviors. • Improve communication with persons who have dementia.
4	Activities of Daily Living – Part 1	• Learn the importance of proper hygiene. • Increase confidence in performing activities of daily living. • Competence in giving a bed bath.
5	Activities of Daily Living – Part 2	• Understand the importance of oral care and dental hygiene. • Learn dietary recommendations for chronic diseases. • Describe strategies to improve appetite.
6	Wound care and Bedsore Prevention Common Medical Problems	• Increase knowledge on prevention of bed sores. • Learn signs and symptoms of a heart attack and stroke. • Understand common medical problems affecting the elderly.
7	Relieving Family and Caregiver Stress	• Describe stress management strategies. • Recognize signs of caregiver burnout. • Increase knowledge of community resources available for the elderly and disabled in Samoa.
8	Practicum	• Practicum at Hope House to provide trainees a real-world experience. • Hands-on skills check and assessment. • Opportunity to work with an interdisciplinary team.

modules and learning objectives. The participants underwent didactics in various caregiving topics and geriatric syndromes. Geriatric syndromes include a number of conditions typical of aging such as pressure ulcers, incontinence, falls, functional decline, dementia and delirium.

The family caregiver training curriculum was modified and tailored to meet the needs of the volunteers at Hope House and family caregivers in American Samoa. Caregiving handouts were translated into Samoan. The workshop integrated local culture and included role play, the teach-back method, and hands-on demonstrations. '*Tausi Feagaiga* revised and adapted the curriculum to ensure cultural sensitivity and linguistic competence for its intended audience. The '*Tausi Feagaiga* planning team met weekly to address the participant training needs and involvement of guest speakers. Physical therapists from Lyndon B. Johnson Hospital and nurse faculty at the American Samoa Community College were recruited to provide additional training. In year 2, an advanced caregiver training was conducted for the year 1 cohort. This included topics such as stroke, depression, Alzheimer's disease, delirium, polypharmacy, and substance abuse. Higher level skills such as peg tube care, Foley catheter care, and proper use of a Hoyer lift were taught. The advanced level training only occurred in year 2 and not in subsequent years due to lack of interest among future cohorts for an advanced level training and inability to offer a longer time commitment.

The week-long intensive in-person workshop was followed by monthly webinars distance learning with PIGEC and a practicum at Hope House. The long-distance learning was well attended and further instilled the principles of the culturally based curriculum. Hope House facility was used as the primary training site as well as the venue for providing the 10-months of experiential learning practicum. Participants were matched with severely disabled residents whom they visited weekly and practiced skills including transfers and gait training, medication management, and personal care services. They were given the opportunity to provide families with health education to improve health literacy. Nurses working at Hope House served as mentors for the trainees.

Participants self-evaluated their competence and confidence to teach specific geriatric skills before and after attending the workshop using a Likert scale of 1 to 5, with 1 representing a low rating and 5 representing a high rating. Each year approximately 20 volunteers obtained the necessary knowledge and skills to deliver proper and appropriate care for Hope House residents through formal training and certification.

In years 4 and 5, a caregiver creativity workshop was added to address unmet emotional needs and caregiver burden. Former participants were not invited as the numbers for the workshop would be too large to permit smooth facilitation. The goal of the creativity workshop was to facilitate creativity and self-expression where participants wrote and performed short prose and poetry pieces. Caregivers were encouraged to imagine, read, dance, and speak in a safe nurturing environment. The facilitator encouraged them to speak and write using all their senses, visualize deeply, and become aware of sensations arising in their body. Some of the exercises included: What does fear smell like? What does inspiration taste like? Gather a poem using objects from nature.

Data was collected on all participants to the fullest extent possible. Descriptive statistics with means and percentages were used to characterize participants. A pre-post test containing 28 multiple-choice questions was administered to assess knowledge of core geriatric topics. A score of 1 point was awarded for every correct answer. There were 4 questions for each geriatric syndrome, summed scores range 0-4 for each category. These questions were developed by PIGEC and used in past training conducted in Palau and Yap.[6,7] The post-test was administered on the final day of the week long intensive in-person workshop. To assess changes in knowledge and confidence to train and teach specific geriatric skills, values from the pre- and post-questionnaires were compared using paired *t*-tests. Data was analyzed using SAS version 9.1.3 (SAS Institute, Cary, NC).

Hope House and the Catholic Diocese did not have an ethics committee or institutional review board. The board of directors of Hope House and Pacific Youth and Community Development gave approval for the project. The caregiver training was considered usual care for Hope House volunteers and exempt from research. While no written informed consent was obtained from the participants, oral consent was provided by the participants to share lessons learned.

Results

The year 1 cohort of 19 trainees went on to further train 106 family caregivers. The trainers were supported in their teaching through an advanced course in year 2 and ongoing monthly webinar didactics. '*Tausi Feagaiga* trained 125 participants as caregivers over 5 years. These included community health workers, nurses, and family caregivers. The majority were Samoan, followed by Tongan. Participant demographic information was missing for 7 participants while years of caregiving experience was missing for 75 participants because they did not understand the interpreter or were in a hurry to return home to their families. Eighty-seven participants were female, 30 were male. Sixty participants were high school graduates, 13 had less than high school education, 27 had some college, and 14 had a college degree. The majority were in the age range of 40 – 49 years with less than 5 years of experience. Demographic characteristics of the participants are described in **Table 2**.

Self-rated competency of the participants with regards to skills on common geriatric syndromes before and after participating in the workshop is shown in **Table 3**. Data on 113 participants who completed both the pre and post-tests are shown in the

Table 2. Demographic Characteristics of ʻTausi Feagaiga Participants (N = 118)[a]		
No.	**Variable**	**Frequency (%)**
1	**Sex (n = 117)**	
	Male	30 (26%)
	Female	87 (74%)
2	**Ethnicity**	
	Samoan	89 (75%)
	Tongan	12 (10%)
	Caucasian	2 (2%)
	Other Pacific Islander	5 (4%)
	Other	10 (9%)
3	**Primary Language**	
	Samoan	90 (76%)
	Tongan	7 (6%)
	English	17 (14%)
	Other	4 (4%)
4	**Age**	
	10-19	6 (5%)
	20-29	28 (24%)
	30-39	20 (17%)
	40-49	33 (28%)
	50-59	22 (18%)
	60 or older	9 (8%)
5	**Education (n = 114)**	
	Elementary School	13 (11%)
	High School	60 (53%)
	Some college	27 (24%)
	College degree	14 (12%)
6	**Years of Caregiving Experience (n = 50)**	
	<5	27 (54%)
	5 to <10	9 (18%)
	10 to <15	8 (16%)
	15 to <20	3 (6%)
	20 to <30	3 (6%)

[a] Participant information was missing from 7 participants.

Table 3. Participant Caregiving Knowledge (N = 113)[a]				
Knowledge Question Categories	**Pre-Training (Mean ± SD)**	**Post-Training (Mean ± SD)**	**Change (Mean ± SD)**	***P*-value[b]**
Normal Aging	2.96 ± 0.80	3.02 ± 0.90	0.06 ± 0.80	.415
Gait and Fall Prevention	2.01 ± 0.94	2.87 ± 1.04	0.86 ± 1.08	<.001
Pain & Symptom Management	2.07 ± 0.89	2.97 ± 0.99	0.90 ± 0.98	<.001
Activities of Daily Living	2.37 ± 0.95	2.51 ± 1.14	0.14 ± 1.13	.186
Oral Care and Nutrition	2.26 ± 1.04	2.97 ± 0.95	0.71 ± 1.02	<.001
Common Medical Problems	3.22 ± 0.90	3.53 ± 0.74	0.31 ± 0.94	.007
Relieving Caregiver Stress	3.17 ± 0.99	3.46 ± 0.77	0.29 ± 1.05	.004
Overall Summary Scores	18.04 ± 4.27	21.31 ± 4.30	2.56 ± 3.01	<.001

[a] Participant information was missing from 12 participants who completed only one assessment.
[b] *P*-value based on paired *t*-tests.

table, paired data are missing for 12 participants who completed only one assessment. Competency in geriatric syndromes was significantly improved after attending the workshop. Topics such as gait and fall prevention, pain and symptom management, activities of daily living, oral care, and nutrition had statistically significant improvements ($P < .001$) in scores.

The self-rated confidence to teach geriatric topics pre workshop was 3.17 ± 1.02 and post workshop was 3.53 ± 0.71 showing significantly improved scores ($P = .001$) after attending the workshop (*not shown in table*). Participants were very pleased with the overall quality of the workshop, mean score 4.68 based on a 1-5 Likert scale. Mean satisfaction with the handouts translated into Samoan were 4.40 while content of the modules was 4.69. See **Table 4** for satisfaction survey variables. Some of the comments were: "*I learned so much, this will help me in caring for my family,*" and "*Teachers were encouraging and motivating*."

Monthly webinar didactics conducted with PIGEC had an overall attendance of 70%. Poor internet in American Samoa contributed to technical difficulties. The practicum at Hope House was a welcomed field training with 95% of caregivers availing of this opportunity weekly to hone their skills.

Table 4. Participant Satisfaction Survey after attending the 'Tausi Feagaiga Family Caregiving Certificate Train-the Trainer workshop (N = 113)[a]

No.	Training Evaluation	Mean ± SD[b]
1	Handouts	4.66 ± 0.56
2	Translations	4.40 ± 0.88
3	Demonstrations	4.64 ± 0.55
4	Audiovisuals	4.48 ± 0.66
5	Content of the modules	4.69 ± 0.55
6	Educational materials	4.62 ± 0.60
7	Trainer's knowledge of content	4.63 ± 0.82
8	Trainer's teaching skills	4.65 ± 0.70
9	Activities such as role plays	4.63 ± 0.61
10	Overall quality of the training	4.68 ± 0.56

[a] Participant information was missing from 12 participants.
[b] Likert Scale of 1 – 5, where 1 = poor, 2 = fair, 3 = good, 4 = very good, 5 = excellent

Figure 1. O Ai Ea A'u (Who I Am)

I am the daughter of a brave I am the apple of his eye
I am the medicine to his sickness
I am the light to his darkness
I am a mother to my beautiful daughter

O a'u o le tagata bingo (I am a bingo player)

I am the heart of the south pacific

I am a broken ship
in the middle of the sea
where sharks and dolphins stay

I am a plumeria that blooms during a storm
I am the fresh flower in the wild forest

I am a caregiver
and I have the skills and understanding to be a caregiver

I am a cockroach with a broken wing
that was dead and
now made whole by the righteousness of god

The product of the caregiver creativity workshop, short story poems and songs, were developed into a booklet in year 4 and a video in year 5.[8] *O Ai Ea A'u* in **Figure 1** is a collage poem, a compilation of literary composition from the participants. It was an invitation to explore what it means to be a caregiver. These products were shared with participants and grantors.

Discussion

For most Samoans, an underlying philosophy in the family structure is that children will serve their parents forever. This is the concept of *tautua*, or service. Until recently, it was almost unheard of for Samoan elderly to go to rest or retirement homes. It is more likely they would live out their lives with one of their children, usually their eldest daughter, whose siblings would help with the financial cost of their parents' care. The basic tenet is that a loving obedient child who takes good care of their parents will be blessed by the service of their own children.

A train-the-trainer model was incorporated, where graduates from previous cohorts co-taught the curriculum with the PIGEC faculty for subsequent cohorts. This allowed the training to be conducted in Samoan and Tongan without much need for interpretation. Short skits, live demonstrations, poster boards, crafts, song and dance were some of the innovative methods of instruction used by the graduates. The new teaching role boosted the self-confidence and self-esteem of the graduates. Some even expressed a desire to study further and pursue a career in health care. A partnership was created with the American Samoa Community College to establish a pathway for the participants to obtain certification as a nursing aide and a nursing degree if desired.

The creativity workshop was extremely popular with the participants as it tied into the local culture of song, dance, poems, drawing, and drama. There is a certain kind of alchemy in writing poetry. Metaphors bring healing by helping people to listen to their inner voice that guides them to share stories only they can tell. The workshop facilitator and faculty found it incredibly moving to see what the participants created. Creativity rose quickly to the surface finding its form in word, song, or dance. It brought a sense of joy and liberation to the participants who were creating.

Care for residents at Hope House over the years has been sustained by the community fundraising efforts and subsidization by the Catholic Diocese. The American Samoa Medicaid State Agency only covers hospitalizations and outpatient provider visits. Long-term support services are not included. In 2020, Hope House was granted a designation of a Medicaid Assisted Living Facility Provider. This additional funding has improved the lives of the residents by providing salaries for trainees and staff, monies for much needed improvements of the facility, and purchase of supplies. The primary source of referrals to Assisted Living would be from Lyndon B. Johnson Hospital and the Department of Health.

Lessons learned from this partnership were that community buy-in is key to recruitment and sustainability of the project. American Samoa has a fairly large Tongan population who migrated for employment at the Starkist tuna cannery. Handouts were only translated into Samoan, Tongan translations should be provided at future trainings. There were many positive outcomes as a result of the 5-year '*Tausi Feagaiga* project that impacted the lives of many in American Samoa. The strengths of the project were the changed lives of the Hope House volunteers who demonstrated the ability to continue the program with new participants. They now have increased opportunity for education and income with the potential of being hired at Hope House. '*Tausi Feagaiga* empowered them with additional skills and knowledge to either obtain employment in the home health care field or start up their own microenterprise as a sole proprietor and independently contract their services to families or partner agencies including TAOA and the hospital.

Some of the limitations of the project were unforeseen natural disasters that affected participant's learning. In Year 3, tropical cyclone Gita led to cancellation of the final day of the workshop. In Year 5, COVID-19 pandemic led to the inability to continue the practicum at Hope House due to social distancing requirements. Follow up with the graduates to evaluate long term outcomes on caregiving were also limited due to the pandemic. Future research is needed to determine the sustainability of home care. The number of jobs created, satisfaction of families, unmet needs, cost, utilization of hospital and emergency room could also be evaluated. The formal relationship concluded with the ending of the grant and with the shutdown of the island from COVID-19 pandemic.

Conclusion

'Tausi Feagaiga increased the capacity of family caregivers to properly care for their loved ones in the home. This project transformed the lives of the participants empowering family caregiving and strengthening the existing culture of *tausi matua*. An important related outcome is that Hope House which depended on charitable fundraising is now reimbursed as a Medicaid Assisted Living Facility. This far reaching project impacted the current residents, future residents and caregivers of Hope House by improving their living environment, nutrition, equipment and the quality of care they receive.

Conflict of Interest

None of the authors identify a conflict of interest.

Acknowledgments

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Historical Inequities in Medical Education – Commitment to Opportunity, Diversity, and Equity at the University of Hawai'i School of Medicine

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Abstract

Medical education in the US has contributed to institutionalized racism through historically exclusionary practices, which has led to health disparities and inequities in health care today. The 1910 Flexner report, which favored schools with greater resources, led to the closure of nearly half of medical schools in the US, which were mostly small schools located in rural communities that served economically disadvantaged, ethnic minority, and female populations. Closing these schools ultimately limited the availability of physicians willing to serve disadvantaged and minority populations in impoverished and underserved communities. In order to transform medical education to be more equitable, medical schools must be proactive in opportunity, diversity, and equity efforts. This not only includes efforts in admissions and faculty hiring, but also curricula related to social and health disparities, interracial interactions between students and faculty, and service learning activities that engage and work with marginalized communities.

The University of Hawai'i John A. Burns School of Medicine has a longstanding commitment to diversity, which is integral to the school's mission. Providing opportunities to underserved populations has been a priority since establishment of the school. As one of the most diverse univeristies in the US, the school of medicine continues to focus on opportunity, diversity, and equity priorities in both its strategic planning and overall mission.

Keywords

Medical education, DEI (diversity, equity, inclusion), equity in health care, institutionalized racism

Abbreviations

AAMC = Association of American Medical Colleges
COVID-19 = coronavirus disease 2019
C-CODE = Coordinating Committee on Opportunity, Diversity and Equity
DEI = diversity, equity, and inclusion
DICE = diversity, inclusion, culture and equity
JABSOM = John A. Burns School of Medicine
LCME = Liaison Committee on Medical Education
ODE = opportunity, diversity, and equity
RQ = representative quotient

Introduction

Institutionalized racism in the US has contributed to health disparities and inequities in the health care system that exists today.[1,2] Stemming from the early 1600s, enslaved people, particularly Black women, were subject to involuntary and coerced medical exploitation that included sterilization, experimentation, and dissection. Despite the resulting advances in medical knowledge and technology (eg, areas of immunology, oncology, and gynecology), these instances of exploitation and racial injustices have caused unfathomable damage and continue in the form of racial bias and inequities in health access, opportunities, and outcomes.[3] Medical education, in part, has contributed to this racism as evidenced by the history of exclusionary and discriminatory practices and policies within the US medical school system. These policies and practices, which have discriminated against people of color, women, and those with few economic resources, have directly contributed to the lack of diversity in the physician workforce. This in turn has impacted quality and access to care for communities of color as well as those from marginalized and underserved populations.[1,2,4]

Sparked by the recent social justice movements (Black Lives Matter, #MeToo, LGBTQ+) there has been an increased emphasis on initiatives by medical education organizations such as the Association of American Medical Colleges (AAMC) and Accreditation Council for Graduate Medical Education (ie, transformative admissions committees, diversity [pathway] programs, or curricular changes to be more inclusive) aimed at achieving diversity in US medical schools. In order to transform the system to be more equitable, medical schools must embrace these movements and increase efforts in opportunity, diversity, and equity (ODE). This includes curricula related to social and health disparities, interracial/intercultural interactions between students and faculty members, and service learning activities that engage and work with marginalized communities. A medical school education that includes curricula on health equity and exposure to interracial interactions, both with fellow students and faculty members, has been shown to positively impact decisions to practice in underserved and minority communities.[5] Evidence has also shown that geographical and patient practice preferences of medical school graduates are influenced by the types of educational experiences received during their medical school training.[4,5]

ODE efforts will in turn contribute to a more diverse physician workforce, which has the potential to reduce health disparities by creating a workforce that better reflects patient diversity. Additional potential benefits of a diverse physician workforce include an increase in the number of medical school faculty members that can serve as role models and mentors to better attract diverse students; better patient-provider interaction that is culturally sensitive; and support of further efforts to eliminate health disparities in minority and underserved populations.[1,4]

However, despite recent upward trends to address the lack of diverse representation among students and faculty within US medical schools, rectifying past exclusionary practices remains a challenge. Barriers include the lack of leadership commitment, prioritizing academic scores over other criteria, and social, policital, and alumni pressures that influence medical school admissions. In order to end racial inequalities in medical education, coordinated strategies, both internal and external, are needed at multiple levels within the educational system.[6] As an example of a medical school that has integrated ODE efforts from inception, the University of Hawai'i John A. Burns School of Medicine (JABSOM) has a history of promoting inclusion through its mission and institutional initiatives, which are further described in this article. See **Figure 1** for a historical timeline of events related to ODE, medical education and JABSOM.

Past Inequities in Medical Education

Structural racism in the US has been an influence on the types of students that medical schools admit and subsequently graduate into the physician workforce. These social, economic, and political structural factors result in systems (both health care and educational) that are racially and culturally biased, which utimately leads to health inequities related to access, quality, and outcomes for those groups that are disadvantaged. As a monumental influence, published in 1910, the Flexner Report studied, assessed, and rated 155 medical schools in the US and Canada based on 5 principles: admissions, faculty, endowments and tuition, quality of laboratories, and availability of clinical educators. Assessment criteria favored schools with laboratory, hospital, and research resources versus schools that focused on the physician as a practitioner and the delivery of health care.[7] This report contributed to a higher standard in medical education, however it came at the expense of closures of medical schools with limited financial and faculty resources, which ultimately limited the availability of physicians willing to serve in impoverished and underserved communities.[1,8]

Ten years after the Flexner Report was published, approximately half of US medical schools, mostly small schools located in rural communities that served disadvantaged, female, and minority populations, closed (from 160 in 1910 to 85 in 1920).[8,9] Additionally as a direct influence of the report, 5 out of 7 Black medical schools in operation at that time were closed.[8,10] The 2 remaining historically Black medical schools, Howard University School of Medicine and Meharry Medical College, were subsequently responsible for graduating approximately 75% of all Black physicians in the US through the 1960s. Furthermore, the number of medical colleges for women decreased from 7 in 1900, to only 1 remaining by 1930 (Women's Medical College of Pennsylvania).[10] As a result, the number of female physicians decreased from 5.6% in 1900 to 2.9% in 1915.[10] The Flexner report has been criticized as promoting professional elitism as it also raised standards and requirements for admission, which

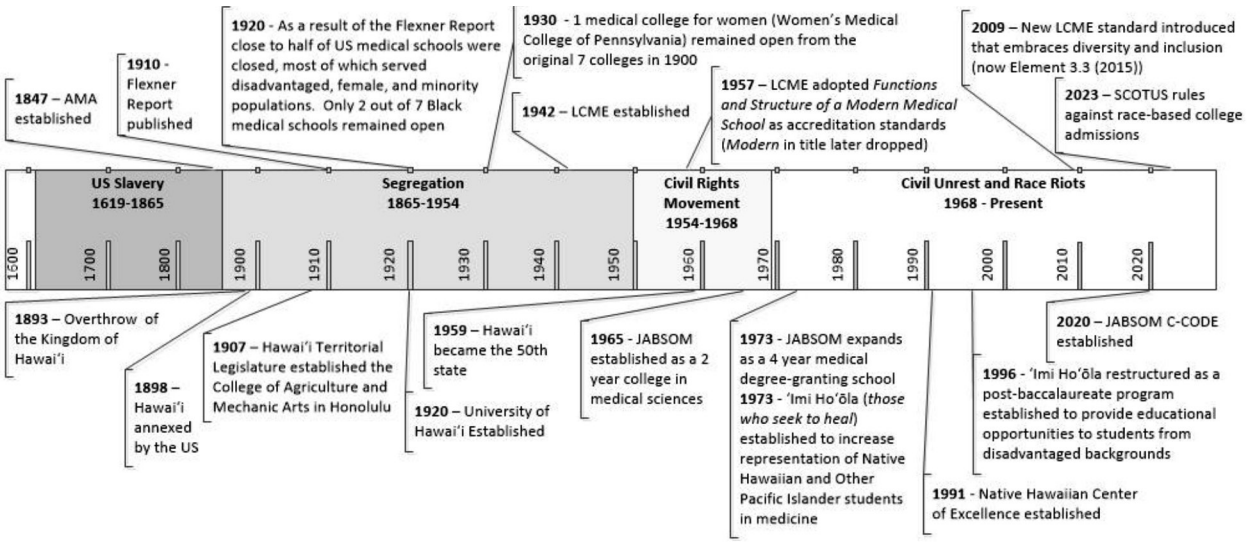

Figure 1. Historical Timeline of Events Related to ODE, Medical Education and JABSOM

Abbreviations: ODE, opportunity diversity equity; JABSOM, John A. Burns School of Medicine; AMA, American Medical Association, LCME, Liaison Committee on Medical Education; SCOTUS, Supreme Court of the United States; C-Code, Coordinating Committee on Opportunity, Diversity and Equity

made it difficult and nearly impossible for economically disadvantaged populations, racial/ethnic minorities, and women to attend medical school.[1,7,9]

Standards for Change

Despite the negative consequences of the 1910 Flexner Report, currently the benefits of standardization are contributing to the goal of achieving diversity as a sign of excellence within medical education. Accreditation of medical schools in the US and Canada today are regulated by the Liaison Committee on Medical Education (LCME), which was established in 1942 largely from concerns on shortened curriclula and increased enrollments due to World War II.[11] Accreditation by the LCME is a process of quality assurance for medical education programs and a requirement for most state boards as a condition for licensure. [11] The standards established by the LCME are created to ensure that medical education is complying to a level of education such that graduates gain professional competency and are prepared for the next stages of training. The LCME standards are continuously reviewed and adjusted according to societal and educational needs. Most recently, there has been a greater acknowledgment and increased public awareness for the need to rectify the impacts of systematic racism, as seen by the health disparities made apparent by the COVID-19 pandemic.

Although accreditation does not guarantee that medical schools include diversity in both its students and faculty, it does provide an expectation, structure, and standard for diversity efforts to be assessed during accreditation. As part of LCME standards (Element 3.3 - Diversity Programs and Partnerships), assessment includes programs targeting diverse groups; policies and practices focused on the recruitment, admission, retention, support for diverse student groups; and the recruitment, retention, and support of faculty to support a diverse student body. Assessments in these areas are flexible and should be appropriate for the population and regions for which the medical school serves.[12] Although Element 3.3 directly assesses ODE efforts, schools that stand out in addressing ODE examine opportunities across all the LCME standards. Having a holistic approach in ODE efforts within multiple levels and areas across medical education facilitates a process of change as an organization and also facilitaties the ability to identify new areas where ODE efforts can be expanded with broader collaborative efforts to achieve goals.[6,13]

Present Inequities in Medical Education

As medical schools strive to overcome past inequities, recent national data shows substantial strides in gender disparities. Female enrollment in US medical schools has gained momentum, surpassing male enrollment in last 4 years at 54% in academic year (AY) 2022-2023.[14] However, there has been little growth in racial diversity among medical school student enrollment within the last 40 years.[15] Large gaps continue to exist, particularly with Latinx (Hispanic), and Black groups, which make up the largest minority groups in the US. While Latinx individuals make up approximately 18.9% and Black account for 13.6% of the US population (2022),[16] Latinx students comprise 6.8% and Black students comprise 8.3% of the medical school enrollment in AY 2022-2023.[14] In a recent study by Taparra and Deville, medical student matriculant data between January 1, 2000 and December 31, 2020 reported by the AAMC was examined. Representative quotients (RQs) were used to determine the proportion of a subgroup compared with the US population: an RQ of 1 denoted equal representation; greater than 1, overrepresentation; and less than 1, underrepresentation. Medical students identifying as Native Hawaiian and Other Pacific Islander alone vs alone or in combination, had substantial underrepresentation with an RQ less than 0.5.[17]

Nationwide, medical school faculty continue to be dominated by White (61.8%) and male (56.1%) faculty members, with substantial underrepresentation of Black (3.8%) and Hispanic or Latinx (3.5%) full-time faculty members (2022). [18]

Medical Education in Hawai‘i

The state of Hawai‘i is ranked the most diverse state in the US (2020 US Census Bureau Diversity Index calculation) and has the highest percentage of racial diversity when compared to all other states.[19] The largest racial/ethnic group in the state of Hawai‘i (2020) was Asian (37.2%), followed by White (22.9%).[19] The state also has the highest Native Hawaiian and Other Pacific Islander population (10.8%) in the US.[19] However, despite the diversity of the population, health disparities and inequities continue to exist, which are often hidden in aggregated population statistics. For example, health disparities were made apparent during the coronavirus disease 2019 (COVID-19) pandemic where subgroups of aggregated population data (eg, Filipino, Vietnamese, Marshallese, and other Micronesian) revealed disproportionately higher cases and deaths related to COVID-19.[20]

As the only LCME accredited medical school in Hawai‘i, JABSOM has continuously strived to reflect the demographics of the state.[21] The school has the highest percentage of Asian (59.4%) and highest Native Hawaiian or Other Pacific Islander (1.9%) student enrollment compared to all other US medical schools (2022-2023 AY).[14] JABSOM also has higher percentages of Asian (53.1%) and Native Hawaiian or other Pacific Islander (7.3%) faculty members (2018-2019 AY), compared to overall faculty rates in US medical schools (19.2% and .1% respectively).[18] Despite the higher numbers of Native Hawaiian or Other Pacific Islander faculty members and students at JABSOM, this group continues to be underrepresented compared to the overall Hawai‘i population of this group (10.1%).[19]

Overall, JABSOM is making strides to truly reflect the state’s diversity in student enrollment and faculty. However, the school continues to show underrepresentation in particular groups that

are hidden in aggregated numbers. In particular, the Filipino population (alone or in combination) in Hawai‘i makes up approximately 25% of the state's population,[22] while comprising only 5% of JABSOM faculty members and 16% of the medical school entering class in AY 2021-2022.[21] JABSOM continues to strive for equity and diversity to rectify racist practices and policies that were often caused and influenced by the structural racism in the continental US, which have impacted Hawai‘i and the US Pacific.

Past and Present Commitment to Diversity at JABSOM

A commitment to diversity has always been central to JABSOM's mission. Opened initially as a 2-year college in medical sciences in 1965, the school later evolved into a 4-year medical degree granting school in 1973. From the school's inception, providing opportunities to underserved populations has been a priority. Under the first Dean of JABSOM, Dr. Windsor Cutting, a 2-year preclinical medical program was established that offered tutoring to disadvantaged students with the goal to advance them into the medical degree program. This program eventually evolved into the ‘Imi Ho‘ōla Program (a Hawaiian phrase meaning for "those who seek to heal"), whose mission is to improve health care in Hawai‘i and the Pacific by providing educational opportunities to students from disadvantaged backgrounds.[23] Currently, the program has been operating for 50 years and accepts 12 students annually who, upon successful completion, will matriculate into JABSOM as first-year medical students.[23,24]

The ‘Imi Ho‘ōla Program is just one example of the school's initiatives to increase diversity. The Native Hawaiian Center of Excellence, established in 1991, continues to work closely with Native Hawaiian pre-medical and medical students to increase the representation of Native Hawaiian students in medicine.[23] Within the medical school curriculum there are several opportunities for students to engage and work with rural and underserved communities. For example, the Hawai‘i Rural Health Program, which started in 2011, provides opportunities for first year medical students to spend 12 weeks learning and serving in rural communities on neighboring islands to O‘ahu, which is the urban hub of the state. Thus far, 21% of students who have participated in this program and graduated have returned to practice medicine in rural communities in Hawai‘i.[26] Another recent example of JABSOM's commitment to diversity is the creation of the ‘Apu Kaulike Task Force, which was created in July 2020. The goals of this task force include the following priorities: (1) to increase Native Hawaiian student representation within JABSOM that consistently reflects the demographics of Native Hawaiians within the state of Hawai‘i; (2) to establish JABSOM as a premier Indigenous place of learning by developing and sustaining culturally safe and inclusive policies, procedures, and programs that ensure Native Hawaiian student success; and (3) to engage a network of community stakeholders with shared goals of diversity, equity, and inclusion.

Coordinating Committee on Opportunity, Diversity, and Equity

As a continued commitment to diversity, in 2020 JABSOM leadership established the school-wide Coordinating Committee on Opportunity, Diversity and Equity (C-CODE). This committee was created and tasked to review institutional strategic priorities relevant to ODE and provide enhanced coordination and communication for initiatives and activities related to diversity and inclusion within JABSOM's programs and educational settings. Four priority areas for C-CODE were established: (1) community engagement and improving patient care to diverse populations; (2) curricular innovations for ODE non-clinical and clinical learners; (3) professional development and training in ODE for faculty and staff; and (4) recruitment and retention of diverse students.

Since the committee's inception, work has been conducted in several areas. For example, a new diversity website was created to serve as a central hub for the JABSOM community.[27] The website serves as an information portal for ODE news, and features events and learning opportunities, resources and articles, and data and reports. The committee has also contributed to new graduation objectives related to diversity, equity, and inclusion that were developed and proposed by the Office of Medical Education. These objectives aim for students to demonstrate a commitment and respect for ODE and include the following themes: (1) demonstrate that one values and understands how aspects of an individual's overlapping identities create unique lived experiences that may influence health and health care outcomes; (2) advocate for social, economic, educational, and policy changes that help achieve optimal learning, health, and well-being within the healthcare team and system; (3) mitigate implicit and explicit attitudes or stereotypes; (4) recognize and seek solutions for population-level differences in health outcomes, disease burden, and the distribution or allocation of resources; (5) practice anti-racism and critical consciousness in health care by advocating for policies, institutional practices, and cultural representations; (6) foster practices to create safe spaces to share voices without a fear of retribution; (7) collaborate to promote culturally inclusive and collaborative written and spoken communication; and (8) advocate for inclusive services and systems.

The C-CODE committee also participated in and helped administer the AAMC Council of Deans initiative on advancing, diversity, equity and inclusion (DEI), Diversity, Inclusion, Culture and Equity (DICE) Inventory.[28] The DICE Inventory was a coordinated effort to gain feedback from students, faculty, staff, and the community to document and gain an understanding of where JABSOM stands in regards to ODE. The inventory

data is a collection of existing resources that can be used to measure progress, identify current ODE initiatives, identify potential strengths and challenge areas, and prioritize efforts in achieving ODE goals and objectives for the medical school. In order to complete the inventory, meetings were scheduled with each department to provide data, and 3 working groups were established to provide additional input and review the data collected on: (1) institutional data, policies, and faculty and staff recruitment and retention; (2) communications and community engagement; and (3) student pathway programs, curriculum, and admissions. On completion of the inventory, an overall report was generated based on the results of all participating medical schools.[29] Out of 101 schools, JABSOM ranked over 10% higher in overall average score and achieved overall higher scores in all but 1 category (governance and leadership structures) as compared to other schools.

The establishment of the C-CODE demonstrates an active commitment to ODE at JABSOM. C-CODE is a strategic approach that provides oversight to ODE issues across the school. Members are represented by all areas of the school (faculty, staff, students, leadership) with the goal of achieving input from different points of view within the JABSOM community. A review of LCME accreditation consultation among 17 medical schools revealed that a shared or systematic commitment and responsibility that includes collaborative efforts from various offices, programs, and departments that engage faculty, staff and students is key to successful ODE efforts.[28] JABSOM continues to strive for an equitable and diverse environment for both students and employees with C-CODE serving as a concerted and collaborative effort to reach this goal.

Conclusion

Despite challenges in rectifying past discriminatory policies and procedures in US medical schools, evidence shows that progress is being made. As demonstrated by the DICE inventory report, 100% of the medical schools that participated reported admission policies that encourage diversity in student enrollment. Other areas of strength included commitment of senior leaders towards DEI, equitable employee benefits, and prioritizing DEI in the school's mission, vision or value statements. Areas identified as needing improvement include recruitment plans for diversity in faculty members, DEI promotion and tenure policies, and readily available diversity data to support DEI planning.[29]

At the John A. Burns School of Medicine (JABSOM), diversity has long been an integral component of the school, as demonstrated by the medical school's vision statement: *Maika'i Loa*: Attain Lasting Optimal Health for All (ALOHA) and the shared core value, which includes "Diversity and Inclusion: Respect for the entire spectrum of human experience." Recently in 2020, as an overarching theme for all JABSOM strategic goals, the following theme was added to the strategic plan: "[to] enhance diversity and opportunities within each goal in order to achieve equity in our JABSOM *'ohana* [family] and communities we serve." This overarching theme incorporates diversity, equity, and inclusion as key values across all of JABSOM's strategic missions and goals. Moving forward, the C-CODE, as well as the many diversity programs, activites, and efforts across JABSOM, will continue to strive to reduce inequities within the medical school and its community, with the ultimate goal to eradicate health disparities in Hawai'i and the US.

Conflict of Interest

None of the authors identify a conflict of interest.

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Native Hawaiian and Pacific Islander Youth Substance Use Prevention in Rural Hawai‘i

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Social Work in Action is a solicited column from the social work community in Hawai‘i. It is edited by HJHSW Contributing Editor Sophia Lau PhD, of the Thompson School of Social Work & Public Health at the University of Hawai‘i at Mānoa.

Background

On February 7, 2024, a 12-year old student in a rural public school on Hawai‘i Island was found unresponsive on a bench. Accounts from other students gave conflicting reports, but it is believed the student used an e-cigarette device before she became unresponsive, or potentially ate a cookie laced with some type of substance.[1] This troubling event underscores the continued reality of a significant public health concern in Hawai‘i, notably in rural communities – youth substance use.[2-3] National and local public health data consistently demonstrate that Native Hawaiian and Pacific Islander (NHPI) youth have disproportionately high rates of substance use and substance use disorder.[4-5] Rural Hawaiian youth are particularly at-risk because they reside in areas with elevated rates of use and are exposed to high-risk social environments, such as family offers to use substances and the normalization of marijuana use.[3,6-7]

Substance use initiation often occurs during adolescence, about age 13 or younger.[8] Early initiation of substance use is commonly associated with problematic substance use, such as substance use disorders, highlighting the critical need for research identifying the risk and protective factors for youth, and for efforts focused on youth substance use prevention. Overall in Hawai‘i, the substances most often reported for early initiation are alcohol, marijuana, e-cigarettes, and tobacco cigarettes.[8] An initial peak for early initiation of alcohol occurs at about 8 years of age, with a later peak at about age 13.[8] Initiation of marijuana, e-cigarette, and tobacco cigarette use occurs around age 13, while the peak for binge drinking primarily begins to occur about the age of 15-16.[8] According to the 2019-2020 Hawai‘i Student Alcohol, Tobacco, and Other Drug (ATOD) Survey, among ethnic groups in Hawai‘i, NHPI youth report the highest rate of cigarette and e-cigarette use, disproportionately high rates of moderate-to-heavy e-cigarette use, marijuana use, and binge drinking, as well as the highest need for substance use treatment.[8]

Youth substance use can increase the risk for injuries, violence, and disease, and it is often associated with sexual risk behaviors, poor mental health, and suicidality.[2] Preventing youth substance use can reduce these risks as well as the risk for later use of substances and the development of a substance use disorder.[2,5] NHPI rural youth, with their unique cultural and social context, face specific challenges in substance use prevention, particularly related to familial relationships.[3,9] Etiological studies have found that Hawaiian youth interact significantly more with their family members and receive more family support than their non-Hawaiian counterparts, findings that are consistent with the *‘ohana* (family) oriented value system centered within the Native Hawaiian culture.[10-12] These findings suggest that family factors play an important and influential role in the lives of Native Hawaiian youth and highlight the strong possibility that substance using behaviors among Native Hawaiian youth exist within a relational context.[10-12] Research with these youth reveal that family factors significantly contribute to their substance use decision-making, including both decisions to engage and decisions to abstain from substance use.

Parental influences on youths’ substance use, such as parental monitoring and parent/child conflict, are particularly significant for NHPI youth.[7] According to the 2019-2020 ATOD data, one of the strongest protective factors for youth is clear rules and consequences within the family about alcohol and drug use .[8] These findings demonstrate that it is critical to examine family factors that promote NHPI youth substance use resistance strategies, because these strategies have direct implications for youth substance use prevention.[3] However, few studies have specifically examined familial influences on NHPI youths’ substance use decision-making and behaviors in rural Hawaiian communities .[3,13-14] More culturally focused research is needed to examine these familial factors, especially parental influences, that contribute to substance use resistance for these youth and ways to meaningfully incorporate these factors into effective family-based substance use interventions.

Pilot Study

One current study seeking to examine these familial factors is titled, "Parental Influences in Youths' Tobacco and Drug Use Resistance in Rural Hawai'i." This pilot study is funded through Ola HAWAII (5U54MD007601-37), UH Mānoa's Research Centers in Minority Institutions (RCMI) Specialized Center and is led by a Native Hawaiian community researcher and Assistant Professor at Thompson School of Social Work and Public Health. A community based participatory research (CBPR) approach is utilized throughout the study design to insure the equitable representation of both academic and community expertise. Through individual, semi-structured interviews with parents of Native Hawaiian students on Hawai'i Island, and an innovative focus group called a Citizens' Panel,[15] this study seeks to identify parental influences on rural NHPI youths' resistance to tobacco and other substances.

The experimental plan for this project is guided by an innovative, multifaceted methodology that applies core CBPR principles, including co-learning, local relevance, mutual benefit, and long-term committment.[15] The study utilizes semi-structured interviews with Hawai'i Island parents or caregivers of Native Hawaiian youth, and a subsequent deliberative focus group (Citizens' Panel) consisting of Hawai'i Island parents or caregivers of Native Hawaiian youth and Native Hawaiian serving community-based service providers. The Citizens' Panel is a novel methodology that has been employed as the primary methodology in 2 federally funded projects in which the researchers aimed to better engage underrepresented groups in order to encourage stakeholders' input and decisions in the research process.[15] This CBPR approach engages public expertise and knowledge of community health needs, risks, and priorities to tailor public health research and interventions for greater relevance and impact on disadvantaged communities. It offers a systematic method for obtaining rich community insight into health disparities, shaping community-informed solutions, and affords disadvantaged communities influence over public health decision-making to stimulate grassroots change and health equity. The purpose of the individual interviews is to explore the role of parents in promoting youth substance use resistance, and the purpose of the Citizens' Panel is to rank order the identified parent priority areas. The goal of the study is to identify components that can be used as a foundation to develop future culturally grounded, family-based substance use prevention curricula.

This proposed study not only aims to improve NHPI health, but also reduce ethnic and geographic disparities in health by conducting community-driven, socio-behavioral, and translational research on rural Hawai'i Island. Additionally, it seeks to identify culturally relevant parent and caregiver priorities to support Native Hawaiian youth resistance strategies that can be incorporated into a future family centered, evidence-based, culturally grounded youth substance use prevention curriculum.

Conclusion

Research with rural NHPI youth demonstrates that substance use, including tobacco product use behaviors, are strongly influenced by their social context, particularly close relational networks of biological and ascribed (*hanai*) family members.[9,12,16] The closeness and intensity of these familial interactions across numerous social relationships function to magnify both risk and protection for these youth, with immediate and extended family members providing both exposure to or protection from illicit substances in the home, school, and community environments.[9,16] Though substance use for NHPI youth may be influenced by multiple factors, family factors seem to play a key and influential role in the use and resistance of substances for these youth.[3,9]

Research gaps remain which can inform effective prevention practices incorporating culturally relevant parent and caregiver supports for youth drug resistance strategies. This study will aid in addressing a gap in the culturally focused prevention literature and has important implications for complimenting existing school- and community-based youth-focused prevention interventions with the goal of reducing the health disparities seen in NHPI youth populations.

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Hawai‘i Journal of Health & Social Welfare
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Authors should also note that Hawaiian refers to people of Native Hawaiian descent. People who live in Hawai‘i are referred to as Hawai‘i residents.

Hawaiian words that are not proper nouns (such as keiki and kūpuna) should be written in italics throughout the manuscript, and a definition should be provided in parentheses the first time the word is used in the manuscript.

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