

Health of Pacific Islanders in Southern Utah: SUPIC Survey 2019



UTAH DEPARTMENT OF
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Office of Health Disparities

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Background

Social environments are well-documented predictors of inequitable health differences (Office of Disease Prevention and Promotion [ODPHP], 2020 1a). The components of social environments and their interactions, constitute the social determinants of health. Examples of acknowledged social determinants of health include neighborhood safety, access to quality education, access to health care services, access to healthy food sources, poverty, insurance status, social cohesion, employment, housing status, etc. (ODPHP, 2020; Centers for Disease Control and Prevention, 2019).

In Utah, Native Hawaiians and Pacific Islanders (NHPI) experience many health disparities. Several negative social determinants have been observed among NHPI when compared with Utah as a whole; and include poverty (leading to potential inaccessibility to nutritious meals and medical care), lack of health insurance, decreased preventive services (e.g., certain cancer screenings and prenatal care), and child poverty (Diez, 2016; Bennet, 2011). Although Utah NHPI were not compared with Utah overall in the Utah Pacific Islander 2011 report, the authors found a significant percentage of NHPI experience poor social cohesion, lacking language resources in medical settings, and adverse childhood experiences (Bennet, 2011). In correlation with social determinants of health, NHPI in Utah also experience greater burdens of disease and disease factors such as births to adolescents, low birth weight, increased infant mortality, fewer preventive screenings, reduced physical activity, chronic alcohol use, high blood pressure, diabetes, and tuberculosis (Diez, 2016; Bennet, 2011).

Purpose

The majority of Utah NHPI live in Salt Lake and Utah counties but several smaller populations are found throughout the state (Utah Department of Health [UDOH], n.d.). As health often varies by characteristics of distinct locations, it is important to consider whether increased health disparities exist among NHPI communities living in different areas of the state. There are a considerable number of NHPI residing in Washington County, Utah. To the authors' knowledge, data on the health status of this population is limited. The purpose of this survey was to evaluate the social determinants of health among NHPI in Washington County, Utah, and to compare it with Utah overall and Utah NHPI. Additionally, data was disaggregated to examine differences in survey response by predominant social determinants and characteristics.

Methodology

The Utah Department of Health (UDOH) Office of Health Disparities (OHD), Southern Utah Pacific Islander Coalition (SUPIC), and the University of Utah Physician Assistant Program (UPAP) collaborated to create the Health of Pacific Islanders in Southern Utah: SUPIC Survey 2019. SUPIC community leaders prompted the creation of the survey in order to better understand the needs of their community. Due to their community presence, SUPIC invited UPAP to assist with the data collection. Subsequently, UPAP approached OHD for assistance with survey creation and data analysis.

The survey was created in August 2018 using the online survey software SurveyMonkey. The survey contained 46 questions and was a combination of multiple choice, yes/no, and open answer questions. Questions 1-15 mirror questions asked in the Utah Behavioral Risk Factor Surveillance System. Questions 16-46 were created by OHD and UPAP, and aimed to gather information specific to the target population. The survey collected data on demographics, education, finances, housing, neighborhood safety, stress, food security, health coverage, and perceived needs and issues. The survey was offered in English, Samoan, and Tongan.

The survey was opened for responses on August 29, 2018 and closed February 2, 2019. Data was collected by UPAP students and members of SUPIC. Collection methods included electronic invitation (personal computers, smart phones, etc.), in person interviews, and by distributing hard copy versions of the survey that were then entered manually into SurveyMonkey. Data was gathered using convenience sampling in the city of St. George. The survey was administered at SUPIC and other community events, online through organization websites, and via participant word-of-mouth.

Analysis

Data analysis was conducted by OHD. Analysis consisted of totaling responses and calculating the mean values for variables. No statistical tests to compare means were employed. All analysis was descriptive. Responses to questions that were open answer, e.g., write-in answer, were categorized, coded, and reported.

Results

In the five-month data collection period, 191 responses were recorded. Of those who responded, 155 completed the survey. On average, it took participants seven minutes to complete the survey. Only completed surveys (155) were considered in analysis. The majority of completed surveys were done in English (98%) and approximately 2% of respondents completed the Samoan survey.

Demographics

Demographics of the 155 completed surveys are found in the table below. In addition to the response data, and where possible, Utah overall and Utah NHPI data were gathered to provide a comparison for the survey group. Comparison data was extracted from the United States Census Bureau and the Public Health Indicator Based Information System (IBIS) reports. Any difference in data metrics are noted within corresponding cells. Notable differences have been highlighted.

Within the demographics table, data has been disaggregated by several categories: household income, primary language, and gender; in order to observe potential health impacts.

Demographics: Health of Pacific Islanders in Southern Utah: SUPIC Survey 2019						
Table 1.1						
AGE (years)	Overall Response (%)	Filtered by Household Income (= <\$35,000/year) (%)	Filtered by English as a Second Language (ESL) (%)	Filtered by Gender (Female and Other)	Utah Overall (%)*	Utah PI (%)**
18-25	12.26	26.15	10.87	15.38	18-64 59.3%	18-64 52%
26-35	17.46	18.46	15.22	16.67		
36-45	40.65	29.23	36.61	35.9		
46-55	14.19	10.77	15.22	15.38	65 and older 10.3%	65 and older 2.7%
56-65	6.45	4.62	8.7	6.41		
66 and older	9.03	10.77	17.39	10.26		

Demographics: Health of Pacific Islanders in Southern Utah: SUPIC Survey 2019 Cont.

GENDER	Overall Response (%)	Filtered by Household Income <\$35,000/year) (%)	Filtered by English as a Second Language (ESL) (%)	Filtered by Gender (Female and Other)	Utah Overall (%)*	Utah PI (%)**
Male	49.68	44.62	63.04	n/a	50.30%	52.10%
Female	49.03	53.85	34.78	n/a	49.70%	47.90%
Other	1.29	0	2.17	n/a	n/a	n/a
MARITAL STATUS	Overall Response (%)	Filtered by Household Income <\$35,000/year) (%)	Filtered by English as a Second Language (ESL) (%)	Filtered by Gender (Female and Other)	Utah Overall (%) †	Utah PI (%) †
Married	67.74	43.08	71.74	58.97	55.60%	59.60%
Divorced	9.03	15.38	6.52	11.54	9.20%	8.80%
Widowed	3.23	4.62	8.7	5.13	3.70%	1.80%
Separated	2.58	6.15	4.35	0	1.20%	0.90%
Never Married	15.48	27.69	8.7	21.79	30.30%	28.90%
Unmarried Couple	1.94	3.08	0	2.56	n/a	n/a
ORIGIN	Overall Response (%)	Filtered by Household Income <\$35,000/year) (%)	Filtered by English as a Second Language (ESL) (%)	Filtered by Gender (Female and Other)	Utah Overall (%) ‡	Utah PI (%) ‡
Native Hawaiian	25.81	20	0	29.49	0.08%	8.84%
Guamanian or Chamorro	0	0	0	0	0.01%	1.45%
Samoan	58.06	63.08	76.09	56.41	0.32%	36%
Tongan	8.39	9.23	13.04	6.41	0.36%	40.10%
Other PI	7.74	7.69	10.87	7.69	0.12%	13.60%

Demographics: Health of Pacific Islanders in Southern Utah: SUPIC Survey 2019 Cont.						
ENGLISH AS FIRST LANGUAGE	Overall Response (%)	Filtered by Household Income (\leq \$35,000/year and non-student) (%)	Filtered by English as a Second Language (ESL) (%)	Filtered by Gender (Female and Other)	Utah Overall (%) ^{*Δ}	Utah PI (%) ^{†Δ}
Yes	70.32	67.69	0	78.21	85.20%	55%
No	29.68	32.31	100	21.79	14.80%	45%
YEARS LIVING IN UTAH	Overall Response (%)	Filtered by Household Income (\leq \$35,000/year) (%)	Filtered by English as a Second Language (ESL) (%)	Filtered by Gender (Female and Other)	Utah Overall (%)	Utah PI (%)
Less than 2	10.97	15.38	13.04	10.26	n/a	n/a
2 to 5	13.55	21.54	17.39	11.54	n/a	n/a
5 to 10	15.48	9.23	13.04	16.67	n/a	n/a
More than 10	60	53.85	56.52	61.54	n/a	n/a
<p>[*]Census Data 2013-2017, ^{**}Census Data 2018, [†]Census Data 2017, [‡]Census Data 2010-2014 ^ΔCensus Bureau data did not use the exact wording i.e. "English as a first language" in their data collection. Rather, "Speak English Only," was used.</p>						

Social Determinants of Health

The Social Determinants of Health (SDOH) collected in this survey include: education, occupation, house ownership, moving location within the past year, ability to make monthly payments (mortgage, rent, utilities), neighborhood safety, food insecurity, health coverage (medical and dental), access to primary care, and stress.

Survey participants were filtered in three categories:

- Household income (more than \$35,000/year vs. less than \$35,000/year),
- Gender (male vs. female/other)
- Primary language (English vs. other Pacific Islander languages)

Summary of Findings

- Survey respondents make less money than Utahns overall and Utah NHPI. In conjunction with income, considerable percentages of respondents reported being unable to pay for needed medical services, renting rather than owning a home, missing housing payments, and inability to purchase food, especially fruits and vegetables.
- Among participants, and when disaggregated by income, primary language, and gender, those who were low-income deviated the most from overall participants. When compared with overall participants low-income respondents reported a higher frequency and severity of poor social determinant conditions than the other two categories.
- Education attainment of respondents was equal to or greater than Utah overall and Utah NPHI. The high school graduation percentage among respondents was higher than both Utah overall and Utah NHPI. Overall, respondents reported a higher percentage of college education attainment than Utah NHPI but a lower percentage than Utah overall.
- The percentage of those with medical coverage, although similar, was less among respondents when compared with Utah overall and Utah NHPI. Among respondents, those with lower income reported lower rates of medical and dental coverage.
- Respondents listed several factors that, if addressed, would improve life quality. Some of the most common include: financial literacy, education, health care, diabetes, and culturally/linguistically appropriate health services.

Findings

Noteworthy findings will be organized according to subset: categories, perceived needs/issues, and comparison groups. As previously mentioned, the categories examined in this analysis are income, primary language, and gender; and the comparison groups include Utah overall and Utah NHPI. The perceived needs of individuals were coded and grouped together to determine the most common answers. Each subset (three categories, perceived needs/issues, and comparison groups) will be explored by education, financial, housing, neighborhood safety, stress, food security, health coverage, and perceived needs. Per subset, some categories will be excluded where no obvious differences were noted.

Categories

Income

The results of the survey were filtered by income. Household income was defined by the survey as “the combined incomes of all people sharing a particular household.” The term low-income will be used to represent respondents who reported an annual income of less than \$35,000.

- Financial
 - The overall percentage of respondents who are self-employed is more than five times greater than the percentage of those who are low-income and self-employed.
 - The percentage of low-income respondents who reported being out of work for one year or more was 2.4 times greater than overall respondent percentage.
 - Low-income respondents reported being unable to work 3.94 times more than overall respondents.
 - 97% more overall respondents reported finishing the month with money left compared with low-income respondents.
- Housing
 - Overall respondents reported owning a home rather than renting 2.3 times more than low-income respondents.
 - Low-income respondents reported arrangements other than owning or renting a house by more than 78% of any other group.
 - When compared with overall respondents, 47% more low-income respondents report moving 1 to 2 times within the past 12 months.
 - When compared with overall respondents, 48% more low-income respondents reported being unable to pay mortgage, rent, or utility bills within the previous 12 months.
- Stress
 - When compared with overall respondents, 59% more low-income respondents reported feeling stress all of the time.
- Food Security
 - Twenty-six percent of low-income respondents reported that in the past 12 months food often ran out and they were unable to purchase more. This occurred in 76% more low-income respondents than overall respondents.
 - Twenty-six percent of low-income respondents reported being unable to afford fruits and vegetables. And 36% fewer low-income respondents reported that affording fruits and vegetables was never a problem when compared with overall respondents.

- Health Coverage
 - Fifty-one percent of low-income respondents reported having medical insurance, 28% fewer when compared with the medical insurance status of overall respondents.
 - Thirty-two percent of low-income respondents reported having dental insurance, 46% fewer when compared with the dental insurance status of overall respondents.
 - Fifty-one percent of low-income respondents reported not having a primary care provider (PCP), (defined as a health care practitioner physician, physician assistant, nurse practitioner, or nurse where you usually go when you have common medical problems) compared with 32% of overall respondents who reported not having a PCP.
 - When compared with overall respondents, 37% more low-income respondents reported an occasion in the past 12 months they needed medical care but were unable to obtain it due to cost.

Primary Language

The results of the survey were filtered by primary language; which was determined in the survey by asking whether English was the participants' first language. The acronym ESL (signifying English as a second language) will represent the individuals who indicated English was not their first language.

- Financial
 - The percentage of ESL respondents who reported being out of work for one year or more was over 3 times greater than overall respondents.
 - Overall respondents reported earning an annual income of greater than \$50,000, 31% more than ESL respondents.
 - Overall respondents reported finishing the month with money left 28% more than ESL respondents.
- Housing
 - When compared with ESL respondents, 39% more overall respondents reported owning a home rather than renting.
- Neighborhood Safety
 - No group reported feeling extremely unsafe; but ESL respondents reported feeling unsafe 2.6 more times than overall respondents.
 - The lowest percentage of respondents who reported feeling extremely safe in their neighborhood was the ESL group. When compared with ESL respondents, 27% more overall respondents reported feeling extremely safe in their neighborhood.

- Stress
 - When compared with all other response groups, ESL respondents reported the least amount of stress (defined as feeling tense, restless, nervous, or anxious, or unable to sleep at night because his/her mind is troubled all the time within the past 30 days).
- Food Security
 - Nineteen percent of ESL respondents reported in the past 12 months food often ran out and they were unable to purchase more. This occurred in 32% more ESL respondents when compared with overall respondents.
 - Twenty-two percent of ESL respondents reported being unable to afford fruits and vegetables. And 31% fewer ESL respondents reported that affording fruits and vegetables was never a problem when compared with overall respondents.
- Health Coverage
 - Forty-six percent of low-income respondents reported not having a PCP compared with 32% of overall respondents not having a PCP.

Gender

Survey results were filtered by gender. The listed survey options for gender included male, female, and other. The phrase female/other will be used to represent respondents who reported either female or other.

- Financial
 - Female/other participants reported their occupation as homemaker, almost two times more than the overall respondents.
 - Overall respondents reported finishing the month with money left over 37% more than female/other participants.
- Housing
 - When compared with overall respondents, 20% female/other respondents reported being unable to pay mortgage, rent, or utility bills within the previous 12 months.
- Food Security
 - Eighteen percent of female/other respondents reported that in the past 12 months food often ran out and they were unable to purchase more. This occurred in 21% more female/other respondents when compared with overall respondents.

Perceived Needs and Issues

Participants were asked in an open-ended/write-in format about the needs and issues faced by their communities with regard to health and social factors.

TOP FIVE NEIGHBORHOOD NEEDS	Overall Response (%)	Filtered by Household Income (=\leq\$35,000/year) (%)	Filtered by English as a Second Language (ESL) (%)	Filtered by Gender (Female and Other) (%)
1	Financial literacy classes	Access to dental care	Financial literacy classes	Health professionals who understand my culture
2	Health professionals who understand my culture	Financial literacy classes	Health professionals who understand my culture	Financial literacy classes
3	Low cost or free exercise facilities	Low cost or free exercise facilities	Education about healthy eating	Education about healthy eating
4	Education about healthy eating	Health professionals who understand my culture	Health professionals who understand my language	Low cost or free exercise facilities
5	Access to healthy foods in schools	Access to primary care Access to healthy foods in schools	Access to mental health treatment/ Low cost or exercise facilities	Access to dental care

Perceived Issues Table 2.2

TOP THREE GENERAL ISSUES THAT NEED TO BE ADDRESSED TO IMPROVE QOL	Overall Response (%)	Filtered by Household Income (= <\$35,000/year) (%)	Filtered by English as a Second Language (ESL) (%)	Filtered by Gender (Female and Other)(%)
1	Education	Good health	Health care	Education
2	Health care	Affordable health care	Education	Finance
3	Jobs	Housing	Jobs	Health care
TOP THREE HEALTH ISSUES	Overall Response (%)	By Household Income (= <\$35,000/year) (%)	By ESL (%)	By Gender (Female and Other) (%)
1	Diabetes	Diabetes	Diabetes	Diabetes
2	Obesity	Obesity	Healthy life-styles	Gout
3	Healthy life-styles	Mental health	High blood pressure	Cancer

Utah Overall

Survey results were compared with the estimated overall population of Utah where data was available.

- Education
 - Overall respondents and each social determinant group had higher high school graduation percentages than Utah overall (92.1%).
 - Twenty-three percent of overall respondents reported having graduated from college (four years or more), which is 35% fewer than the percentage of Utah overall.
- Financial
 - Overall respondents reported an annual household income of less than \$10,000 2.63 times more than Utah overall.
 - Overall respondents reported an annual household income greater than \$50,000 37% less than Utah overall.
 - The percentage of annual household incomes greater than \$75,000 among Utahns overall is 2.2 times greater than overall respondents.
- Housing
 - The percentage of Utahns overall who reported owning a home rather than renting was 3.8 times greater than overall respondents.

- Health Coverage
 - The percentage of overall Utahns who reported having medical insurance was 25% greater than overall respondents. Overall, 89.2% of Utahns have medical insurance.
 - Utah overall and all respondents reported similar percentages of having an established PCP. Survey respondents reported that 64% had an established PCP compared with 73.4% of the general Utah population.
 - When compared with Utah overall, the percentage of overall respondents who reported inability to pay for needed medical services in the previous 12 months was over 3 times greater.

Utah NHPI

Survey results were compared with the estimated population of Utah NHPI where data was available.

- Education
 - Overall respondents and each social determinant group, had higher high school graduation percentages than Utah NHPI (93.7%).
 - The respondent college graduation percentage exceeds that of Utah NHPI by at least 29% in each social determinant group except for low-income respondents. Low-income respondents reported having graduated from college 38% less than Utah NHPI.
- Financial
 - Overall respondents reported an annual household income of less than \$10,000 4.64 times more than Utah NHPI.
 - Overall respondents reported an annual household income greater than \$50,000 34% less than Utah NHPI.
 - The percentage of annual household incomes greater than \$75,000 among Utah NHPI is 1.9 times greater than overall respondents.
- Health Coverage
 - The percentage of Utah NHPI who reported having medical insurance was 17% greater than overall respondents. Overall, 83.6% of Utah NHPI have medical insurance.
 - Utah NHPI and all respondents reported similar percentages of having an established PCP. Survey respondents reported that 64% had an established PCP compared with 67.6% of the general Utah population.
 - When compared with Utah NHPI, the percentage of overall respondents who reported inability to pay for needed medical services in the previous 12 months was 89% greater.

Discussion

Results of the SUPIC survey suggest the social environments of NHPI living in Washington County, Utah, differ from Utah's general population and Utah NHPI. Furthermore, when examined by social determinants, there were many differences among the survey group when results were disaggregated. Understanding these differences is a necessary step to inform potential interventions.

Poverty is a well-documented and impactful social determinant of health (ODPHP, 2020). Causes of poverty among NHPI are not well-documented, but, as shown among respondents, poverty is common. As the most prevalent social determinant in our analysis, it is important to understand causes of poverty and potential solutions. Despite reporting education levels that are equal to, or in some cases better than, Utah overall and Utah NHPI, respondents reported higher poverty. This finding is paradoxical, as literature supports the correlation that more education equates to less poverty (United Nations Educational, Scientific, and Cultural Organization, 2014). Self-reported factors that may impact poverty of respondents include: housing (i.e., long-term wealth building/equity), healthcare/dental insurance, chronic disease such as diabetes, and financial literacy. An important potential confounder to consider when comparing income is cost of living. Regardless, poverty is likely the product of a complex web of factors, and attempting to address this issue from different angles may provide respondents and the community they represent, with increased health opportunities.

Contrary to some findings in the literature, ESL respondents reported the least stress compared with overall respondents (Wyatt, et. al., 2015). Although the racial/ethnic groups are different, there was a study conducted among Indigenous people of Canada that found use of native language was a mental health protective factor (McIvor, 2009). Another study found similar mental health protective factors among some East and Southeast Asian cultures (Wyatt et. al., 2015). In many respects, language is the essence of culture; language is used to represent emotion, continue tradition, and expound belief. Literature on culture acting as a mental health protective factor, is more readily available and may serve as proxy for language, as culture and language are deeply interconnected. Studies have found several mental health protective factors among racial ethnic minorities: cultural connectedness, social support, and family cohesion/support (Wyatt, et. al., 2015; Henson, et. al., 2016; Gariépy. et. al., 2018). The cause of low stress among ESL respondents is not known but the literature suggests that promoting cultural connection through tradition and language may be an effective strategy to improve mental health.

Respondents reported fewer established PCPs and less medical insurance coverage than Utah overall and Utah NHPI. Two factors that may explain poorer access to healthcare among respondents are physician density and culturally competent providers. Washington County has 5.8 PCPs per 10,000 people compared to Utah with 4.4 and the U.S. average of 7.6 (Utah Department of Health, Indicator-Based Information System for Public Health, 2019). An analysis of PCP density and Washington County NHPI population mapping, may explain some of the barriers to establishing a PCP. One of the most commonly reported needs of respondents was for health professionals who understand the language and culture of their patients. Healthy People 2020 recognizes the lack of cultural competency as a primary barrier to care (Office of Disease Prevention and Promotion [ODPHP], 2020 1b). Respondent feedback on their healthcare experience suggests that one barrier they experience could be a lack of culturally-competent care. Additional variables not captured in this survey that may contribute to understanding healthcare access, especially insurance status, include type of work and consequent benefits, Medicaid/Medicare eligibility, and patient navigation services. Further analysis of PCP and insurance status is necessary to understand specific barriers faced by respondents and their community.

Approximately half of respondents reported food insecurity, i.e., food quality and quantity, due to financial challenges. Literature suggests that food insecurity faced by respondents may have been caused by financial and geographic barriers. In addition to respondents reporting more poverty than Utah overall and Utah NHPI, literature supports that healthy food tends to be more expensive than nutrient poor foods (Rao, et. al., 2013; Kern, et. al., 2017). Geographically, there are various census tracts within Washington County that the United States Department of Agriculture (2019) has labeled as food deserts. Respondents' ability to secure adequate nutrition may be impacted by the cost of healthy food and food availability in their communities.

Limitations

There are three limitations that must be considered when interpreting these findings. First, the data analysis presented in this report was descriptive. Only the percentages and counts are given; and although valuable comparisons are provided, differences cannot be considered statistically significant. Second, many of the measured variables comparison data were unavailable. Due to data collection methods, differing definitions, or unmeasured characteristics, not all variables measured in the survey could be compared with overall Utah and Utah NHPI. Finally, the data was collected using convenience sampling. Although the survey sample was moderately large and demographic distribution reasonable, we cannot be certain that the sample was representative of the NHPI population in Washington County. Despite these limitations the results have merit in potential contributions of intervention development, needs assessment, and research direction.

Recommendations

Combating health disparities is key to improving health of disadvantaged populations and communities as a whole. Results of this survey have prompted recommendations in the following areas: research, healthcare access, and intersectionality.

Ambient research and variables specific to NHPI in southern Utah must be further researched in order to inform potential interventions. Specific variables that merit further investigation include: causes of poverty, healthcare access, PCP accessibility, protective factors of culture, housing, and food insecurity.

Several actions may increase access to medical and dental resources. First, further assessment would reveal insurance sources (e.g., employment) and determine the number of people who qualify for government insurance, (e.g., Medicaid and Medicare). Identifying the gaps will reveal where and how resources should be leveraged. Second, cultural and linguistic trainings could be delivered to healthcare providers in the area. The U.S. Department of Health and Human Services (HHS) provides free online cultural and linguistic training for medical and dental healthcare professionals; and the training can provide professionals with needed continuing medical education hours (United States Department of Health & Human Services, n.d.). The HHS training program is based upon the National Standards for Culturally and Linguistically Appropriate Services (CLAS); the training can be found at: <https://thinkculturalhealth.hhs.gov/education/physicians> (United States Department of Health & Human Services, n.d.). Additionally the Utah Department of Health, Office of Health Disparities, has developed a CLAS toolkit to support organizations that aim to implement CLAS standards in Utah; the toolkit can be found at: <https://health.utah.gov/disparities/data/language-culturepdf/CLASTOOLKIT.pdf> (Fitisemanu, n.d.). Finally, patient navigation/informational resources that include free, income-based care, or telehealth may be beneficial to increase access. For example, University of Utah Health and Intermountain Healthcare, two large providers of Utah health services, both offer telehealth options (Intermountain Healthcare, 2020; University of Utah Health, 2020). Implementing the aforementioned strategies may increase health/dental care access and would demonstrate to the community that the health system hears them (i.e. see tables on community needs, etc.).

The participant group reported worse social conditions when compared to Utah overall and Utah NHPI. Examining the participant group closer, revealed that many sub groups experienced worse social conditions when compared to overall respondents. As stated, poverty impacted more variables than gender or ESL, but all categories influence social determinants of health. These results validate an approach to focus on populations that are at an intersection of social disadvantages. For example, a person belonging to the respondent group who is poor and ESL may have fewer social resources and poorer health than the average respondent. Populations who experience layers of social disadvantage often have worse health outcomes when compared to the general population (Turan et al, 2019). The survey respondents demonstrated potential negative health impacts due to their social characteristics; and therefore interventions among this population should contain considerations of race/ethnicity, gender, language, income level, cultural beliefs, etc.

Results from the SUPIC survey have illuminated areas of need among the respondent group and continual research should be gathered to obtain health information on NHPI in Southern Utah. The results are impactful and support evidence of the influence social determinants have on health status. In order to improve the health of these communities relevant interventions should be examined, continual health status data should be collected, collaborations with Southern Utah NHPI population should be maintained, and a network of community partners, including legislature, should be created.

Refereces

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Appendix

Results Tables:

Education and Finance Table 3.1						
Education	Overall Re- sponse (%)	By House- hold Income (=<\$35,000/ year) (%)	By ESL (%)	By Gender (Female and Other)(%)	Utah Over- all*	Utah PI*
Never attended school	0	0	0	0	n/a	n/a
Elementa- ry (1-8th grade)	0	0	0	0	n/a	n/a
Some high school (9-11 grades)	1.29	3.08	0	1.28	n/a	n/a
High school graduate	27.74	36.92	34.78	23.08	92.10%	93.70%
Some col- lege (1-3 years) or tech. school	48.39	50.77	43.48	56.41	n/a	n/a
College graduate (4 or more years)	22.58	9.23	21.74	19.23	34.60%	14.90%
THE MONTH USUALLY ENDS	Overall Re- sponse (%)	Filtered by Household Income (=<\$35,000/ year) (%)	Filtered by English as a Second Lan- guage (ESL) (%)	Filtered by Gender (Female and Other) (%)	Utah Overall	Utah PI
With money left	33.55	16.95	26.09	24.36	n/a	n/a
With just enough	48.39	50.85	52.17	52.56	n/a	n/a
With not enough	18.06	32.2	21.74	23.08	n/a	n/a

Education and Finance Cont. Table 3.1

Occupation	Overall Response (%)	By Household Income (= <\$35,000/year) (%)	By ESL (%)	By Gender (Female and Other)(%)	Utah Overall	Utah PI
Employed for wages/salaries	63.23	58.46	54.35	56.41	77%, ages 18-64*	n/a
Self-employed	9.03	1.54	8.7	6.41	n/a	n/a
Out of work for one year or more	0.65	1.54	2.17	0	20.2% (ages 16-64)**	n/a
Out of work for less than one year	0.65	1.54	0	0	n/a	n/a
Homemaker	7.1	7.69	5.52	14.1	16% not divided out by category, ages 18-64*	n/a
Student	4.52	9.23	4.35	5.13		n/a
Retired	12.26	13.85	21.74	14.1		n/a
Unable to work	1.56	6.15	2.17	3.85	.038% ages 18-64*	n/a
Annual Household Income	Overall Response (%)	By Household Income (= <\$35,000/year) (%)	By ESL (%)	By Gender (Female and Other)(%)	Utah Overall**	Utah PI**
Less than \$10,000	11.61	27.69	15.35	12.82	4.40%	2.50%
\$10,000 to <\$15,000	7.1	16.92	6.52	6.41		
\$15,000 to <\$20,000	3.23	7.69	4.35	5.13		
\$20,000 to <\$25,000	9.03	21.54	6.52	15.38		
\$25,000 to <\$35,000	10.97	26.15	13.04	6.41		
\$35,000 to <\$50,000	18.06	n/a	23.91	20.51	13%	16.40%
\$50,000 to <\$75,000	20.65	n/a	17.39	16.67	20.70%	23.30%
\$75,000 or more	19.35	n/a	13.04	16.67	42.60%	37%

*Census Data 2017, ** Census Data 2013-2017

Housing, Neighborhood Safety, and Stress Table 4.1

OWN OR RENT A HOME	Overall Response (%)	Filtered by Household Income (= <\$35,000/year) (%)	Filtered by English as a Second Language (ESL) (%)	Filtered by Gender (Female and Other)(%)	Utah Overall*Δ	Utah PI*Δ
Own	42.58	18.46	30.43	42.31	70.40%	47%
Rent	49.68	67.69	63.04	50	29.60%	53%
Other arrangements	7.74	13.85	6.57	7.69	n/a	n/a
MOVING location within the past 12 months	Overall Response (%)	Filtered by Household Income (= <\$35,000/year) (%)	Filtered by English as a Second Language (ESL) (%)	Filtered by Gender (Female and Other)(%)	Utah Overall	Utah PI
None	74.19	61.54	65.22	73.08	n/a	n/a
1 or 2	21.94	32.31	26.09	24.36	n/a	n/a
3 to 5	2.58	3.08	4.35	1.28	n/a	n/a
More than 5	0	0	0	0	n/a	n/a
Don't know	1.29	3.08	4.35	1.28	n/a	n/a
NOT ABLE to pay mortgage, rent or utilities at least once a month within the past 12 months	Overall Response (%)	Filtered by Household Income (= <\$35,000/year) (%)	Filtered by English as a Second Language (ESL) (%)	Filtered by Gender (Female and Other) (%)	Utah Overall	Utah PI
Yes	34.19	50.85	39.13	41.03	n/a	n/a
No	62.58	42.37	56.52	55.13	n/a	n/a
Don't know	3.23	6.78	4.35	3.85	n/a	n/a
NEIGHBORHOOD SAFETY	Overall Response (%)	By Household Income (= <\$35,000/year) (%)	Filtered ESL (%)	By Gender (Female and Other)(%)	Utah Overall	Utah PI
Extremely safe	38.71	33.85	30.43	41.03	n/a	n/a
Safe	58.06	61.54	60.87	57.69	n/a	n/a
Unsafe	3.23	4.62	8.7	1.28	n/a	n/a
Extremely unsafe	0	0	0	0	n/a	n/a

Housing, Neighborhood Safety, and Stress Cont. Table 4.1

STRESS (nervous, anxious, unable to sleep. Past 30 days)	Overall Response (%)	Filtered by Household Income (= \leq \$35,000/year) (%)	Filtered by English as a Second Language (ESL) (%)	Filtered by Gender (Female and Other)(%)	Utah Overall	Utah PI
None of the time	10.97	4.62	21.74	6.41	n/a	n/a
A little of the time	25.81	16.92	21.74	21.79	n/a	n/a
Some of the time	32.26	33.85	36.96	34.62	n/a	n/a
Most of the time	19.35	26.15	13.04	24.36	n/a	n/a
All the time	11.61	18.46	6.52	12.82	n/a	n/a
*Census 2010						
ΔCensus data did not include categories for other housing arrangements.						

Food Insecurity (Past 12 months) Table 5.1

Food did not last and did not have money to get more	Overall Response (%)	Filtered by Household Income (= \leq \$35,000/year) (%)	Filtered by English as a Second Language (ESL) (%)	Filtered by Gender (Female and Other)(%)	Utah Overall	Utah PI
Often true	14.84	26.15	19.57	17.95	n/a	n/a
Sometimes true	38.71	53.85	45.65	34.62	n/a	n/a
Never true	46.45	20	34.78	47.44	n/a	n/a
COULD NOT AFFORD FRUITS OR VEGETABLES	Overall Response (%)	Filtered by Household Income (= \leq \$35,000/year) (%)	Filtered by English as a Second Language (ESL) (%)	Filtered by Gender (Female and Other) (%)	Utah Overall	Utah PI
Often true	15.48	26.15	21.74	14.1	n/a	n/a
Sometimes true	33.55	41.54	43.48	39.74	n/a	n/a
Never true	50.97	32.31	34.78	46.15	n/a	n/a

Health Coverage Table 6.1

MEDICAL INSURANCE	Overall Response (%)	Filtered by Household Income (= <\$35,000/year) (%)	Filtered by English as a Second Language (ESL) (%)	Filtered by Gender (Female and Other) (%)	Utah Overall*Δ	Utah PI*Δ
Yes	70.97	50.77	67.39	70.51	89.20%	83.60%
No	26.45	43.08	30.43	26.92	10.80%	16.40%
Don't know	2.58	6.15	2.17	2.56	n/a	n/a
DENTAL INSURANCE	Overall Response (%)	Filtered by Household Income (= <\$35,000/year) (%)	Filtered by English as a Second Language (ESL) (%)	Filtered by Gender (Female and Other) (%)	Utah Overall	Utah PI
Yes	59.35	32.31	52.17	56.41	n/a	n/a
No	38.71	63.08	45.65	42.31	n/a	n/a
Don't know	1.94	4.62	2.17	1.28	n/a	n/a
PRIMARY CARE PROVIDER	Overall Response (%)	Filtered by Household Income (= <\$35,000/year) (%)	Filtered by English as a Second Language (ESL) (%)	Filtered by Gender (Female and Other) (%)	Utah Overall	Utah PI
Yes, only one	41.94	24.62	39.13	35.9	73.40%	67.60%
Yes, more than one	21.94	16.92	13.04	25.64	2014-2018**	2014-2018**
No	32.26	50.77	45.65	35.9	26.6**	32.4**
Don't know	3.87	7.69	2.17	2.56	n/a	n/a
NEED A DOCTOR BUT DID NOT GO BECAUSE THE COST (Past 12 months)	Overall Response (%)	Filtered by Household Income (= <\$35,000/year) (%)	Filtered by English as a Second Language (ESL) (%)	Filtered by Gender (Female and Other) (%)	Utah Overall	Utah PI
Yes	45.81	63.08	50	52.56	14.2%**	24.3%**
No	50.97	32.31	47.83	43.59	85.8%**	75.7%**
Don't know	3.23	4.62	2.17	3.85	n/a	n/a

*Census Data 2013-2017

**Retrieved Mon, 16 March 2020 from the Utah Department of Health, Indicator-Based Information System for Public Health Web site: <http://ibis.health.utah.gov>

ΔIndividuals included in data collection were civilian and non-institutionalized.

Survey:

**Community Voices: Pacific Islanders/Hawaiian Natives
SURVEY**

1. Are you currently?

- Employed for wages/salaries
- Self-employed
- Out of work for 1 year or more
- Out of work for less than a year
- A homemaker
- A student
- Retired
- Unable to work

2. What is the highest grade or year of school you completed?

- Never attended school
- Grades 1 through 8 (Elementary)
- Grades 9 through 11 (Some high school)
- Grade 12 or GED (High school graduate)
- College 1 year to 3 years (Some college or technical school)
- College 4 years or more (College graduate)

3. What is your annual household income* from all sources? *Household income is the combined incomes of all people sharing a particular household

- Less than \$10,000
- \$10,000 to less than \$15,000
- \$15,000 to less than \$20,000
- \$20,000 to less than \$25,000
- \$25,000 to less than \$35,000
- \$35,000 to less than \$50,000
- \$50,000 to less than \$75,000
- \$75,000 or more

4. During the last 12 months, was there a time when you were not able to pay your mortgage, rent or utility bills?

- Yes
- No
- Don't know/not sure

5. In general, how do your finances work out at the end of the month? Do you find that you usually:

- End up with some money left over
- Have just enough money to make ends meet
- Do not have enough money to make ends meet

6. Do you own or rent a home?

- Own
- Rent
- Other arrangements

7. In the last 12 months, how many times have you moved from one home to another?

- None (Did not move in past 12 months)
- 1 or 2
- 3 to 5
- More than 5
- Don't know/Not sure

8. How safe from crime do you consider your neighborhood?

- Extremely safe
- Safe
- Unsafe
- Extremely unsafe

9. "The food that I bought just didn't last, and I didn't have money to get more." Was that often, sometimes, or never true for you in the last 12 months?

- Often true
- Sometimes true
- Never true

10. "I couldn't afford to include vegetables and fruits with my meals." Was that often, sometimes, or never true for you in the last 12 months?

- Often true
- Sometimes true
- Never true

11. Stress means a situation in which a person feels tense, restless, nervous, or anxious, or is unable to sleep at night because his/her mind is troubled all the time. Within the last 30 days, how often have you felt this kind of stress?

- None of the time
- A little of the time
- Some of the time
- Most of the time
- All of the time

12. Do you have any kind of health care coverage, including MEDICAL health insurance, prepaid plans such as HMOs, government plans such as Medicare, Medicaid, or CHIP?

- Yes
- No
- Don't know/Not sure

13. Do you have any kind of DENTAL health insurance, prepaid plans such as HMOs, government plans such as Medicare, Medicaid, or CHIP?

- Yes
- No
- Don't know/Not sure

14. Do you have one person you think of as your personal doctor or health care provider*? *A health care practitioner (physician, physician assistant, nurse practitioner, or nurse) where you usually go when you have common medical problems)

- Yes, only one
- More than one
 - No
- Don't know/Not sure

15. Was there a time in the past 12 months when you needed to see a doctor but could not because of cost?

- Yes
- No
- Don't know/Not sure

YOUR NEIGHBORHOOD

According to your personal experience, rank the level of need for each of the following areas as they exist within your current neighborhood:

16. Need of parks

- a. High
- b. Low
- c. No need
- d. Don't know

17. Need of places to go for a walk

- a. High
- b. Low
- c. No need
- d. Don't know

18. Need of low cost or free exercise facilities

- a. High
- b. Low
- c. No need
- d. Don't know

19. Need of access to public transportation

- a. High
- b. Low
- c. No need
- d. Don't know

20. Need of housing assistance programs

- a. High
- b. Low
- c. No need
- d. Don't know

21. Need of affordable day care for children

- a. High
- b. Low
- c. No need
- d. Don't know

22. Need of affordable day care for adults and seniors

- a. High
- b. Low
- c. No need
- d. Don't know

23. Need of affordable senior housing

- a. High
- b. Low
- c. No need
- d. Don't know

24. Need of access to healthy foods in stores

- a. High
- b. Low
- c. No need
- d. Don't know

25. Need of access to healthy foods in schools

- a. High
- b. Low
- c. No need
- d. Don't know

26. Need of access to healthy foods in restaurants

- a. High
- b. Low
- c. No need
- d. Don't know

27. Need of education about healthy eating

- a. High
- b. Low
- c. No need
- d. Don't know

28. Need of financial literacy classes

- a. High
- b. Low
- c. No need
- d. Don't know

29. Need of English as a second language classes

- a. High
- b. Low
- c. No need
- d. Don't know

30. Need of access to primary care

- a. High
- b. Low
- c. No need
- d. Don't know

31. Need of access to dental care

- a. High
- b. Low
- c. No need
- d. Don't know

32. Need of access to specialty medical care

- a. High
- b. Low
- c. No need
- d. Don't know

33. Need of access to substance abuse treatment

- a. High
- b. Low
- c. No need
- d. Don't know

34. Need of access to mental health treatment

- a. High
- b. Low
- c. No need
- d. Don't know

35. Need of access to health professionals who understand my culture

- a. High
- b. Low
- c. No need
- d. Don't know

36. Need of access to health professionals who speak my language

- a. High
- b. Low
- c. No need
- d. Don't know

DEMOGRAPHICS

37. How long have you lived in Utah?

- Less than 2 years
- Between 2 and 5 years
- Between 5 and 10 years
- More than 10 years

38. In what county do you currently live? _____

39. What is the zip code where you currently live?

- Zip code # _____
- Don't know

40. What is your age?

- 18-25 years old
- 26-35 years
- 36-45 years
- 46-55 years old
- 56-65 years
- 66 and older

41. Are you?

- Male
- Female
- Other

42. Do you consider yourself?

- Native Hawaiian
- Guamanian or Chamorro
- Samoan
- Tongan
- Other Pacific Islander

43. Is English your first language?

- Yes
- No

44. Are you?

- Married
- Divorced
- Widowed
- Separated
- Never married
- A member of an unmarried couple

45. According to your experience as a Pacific Islander/Hawaiian Native living in Utah, what are the top three GENERAL issues that need to be addressed in order to improve the quality of life for Pacific Islanders/Hawaiian Natives in Utah?

- 1
- 2
- 3

46. According to your experience as a Pacific Islander/Hawaiian Native living in Utah, what are the top three HEALTH issues that need to be addressed in order to improve the quality of life for Pacific Islanders/Hawaiian Natives in Utah?

- 1
- 2
- 3

You have completed the survey. Thank you for your answers!