Health Access of Native Hawaiians and Pacific Islanders: Multilevel Analyses of Health Determinants Influencing Health Service Utilization and Insurance Coverage Rates

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BACKGROUND

- Healthcare access, including health service utilization and insurance coverage, for Native Hawaiians and Pacific Islanders (NHPI) in the U.S. are critical issues given the adverse health outcomes this community faces.

- NHPI have a high percentage of adults (37.4%) aged 18 and older that did not see a doctor in the last year – the highest among all racial groups (National Center for Health Statistics [NCHS], 2012).

- To date, approximately one in eight NHPI adults (12.9%) are uninsured, an insurance coverage rate that is lower than Whites (NCHS, 2012).

- However, federal reports historically struggle to capture adequate data on NHPI that could explain these phenomena, citing the population's small size (1.6 million, or .04% of the total U.S. population), geographic concentrations, and inefficient traditional data collection methods (NCHS, 2017; U.S. Census Bureau, 2018).

PURPOSE and SIGNIFICANCE

- **The overarching goal of this research is to improve our understanding of novel health determinants causing 1. low health service utilization rates and 2. low health insurance coverage rates (two outcome variables) of Native Hawaiians and Pacific Islanders in the U.S.**

- Furthermore, we propose to analyze differences in health determinants across two groups of intersecting identities: 1. NHPI subgroups (Samoans, Tongans, Fijians, Native Hawaiians, etc.) and 2. generation status (immigrant, 1st, 2nd, 3rd-generation, etc.) using multilevel modeling and hierarchical multiple regression analyses.

- Findings will yield insight that can inform public policy and healthcare professionals about this severely underrepresented population in health research.

PRELIMINARY FINDINGS

- Exploratory analyses utilizing the NHPI National Health Interview Survey public use data indicate that individual-level characteristics (e.g., reported health status, how well English is spoken, any limitation) and demographics (e.g., age, sex, highest level of school completed, etc.) determine whether NHPI 1. have health insurance coverage or not and 2. are confident that they can obtain affordable care or not.

- However, the survey and its publications do not include nor explore broader sociocultural influences relating to the abovementioned health factors.

- Inclusion of variables that reflect the unique historical and sociocultural background of NHPI could potentially elucidate specific health determinants driving patterns of poor healthcare access beyond individual-level variables.

Table 1. Multiple Regression Analyses Predicting Coverage Status and Obtaining Affordable Coverage

Predictors	Model 1 (n = 2497) Coverage Status			Model 2 (n = 2030) Obtaining Affordable Coverage		
	SE	β		SE	β	
(Intercept)	.070		***	.362		***
Age	.000	.038		.002	−.025	
Sex	.010	.016		.041	.016	
Reported health status	.005	.007		.026	.057	*
Highest level of school completed	.004	.061	**	.018	−.112	***
Total earnings last year	.002	.009		.011	−.143	***
U.S. citizenship status	.024	−.104	***	.122	.038	
How well English is spoken	.017	−.029		.085	.019	
Any limitation - all persons, all conditions	.025	−.013		.132	−.028	
Problems paying medical bills	.013	.175	***	.065	−.205	***
Health insurance offered at workplace	.013	−.251	***	.071	−.065	**
Model summary	R²	FΔ		R²	FΔ	
	.136	39.277	***	.111	25.158	***

Notes: * p < .05, ** p < .01, *** p < .001

RESEARCH QUESTIONS and HYPOTHESES

- **RQ1:** What are the most influential health determinants contributing to patterns of low health service utilization and low insurance coverage rates among NHPI in the U.S.?
- **H1:** Health determinants reflecting NHPI cultural values will predict 1. health service utilization and 2. health insurance coverage status over and above factors that do not reflect the cultural backgrounds of study participants.

- **RQ2:** What are the respective efficacies of the selected health determinants between distinct subgroups of NHPI and across different generation statuses?
- **H2:** Multilevel analyses between different NHPI subgroups and generation statuses will identify disparate health factors influencing 1. health service utilization and 2. health insurance coverage across distinct NHPI subgroups and generational cohorts.

THEORETICAL FRAMEWORK (Adapted from the National Institute on Minority Health and Health Disparities)

Domains of Influence	Model 1 NHPI + Subgroups	Model 2 NHPI + Generation Status
1. Biological 2. Behavioral	Individual-Level Determinants	Individual-Level Determinants
3. Physical/Built Environment	Interpersonal-Level Determinants	Interpersonal-Level Determinants
4. Sociocultural Environment	Community-Level Determinants	Community-Level Determinants
5. Healthcare System	Societal-Level Determinants	Societal-Level Determinants
Health Outcomes	1. Health Service Utilization and 2. Insurance Coverage Status	

ANALYTIC PLAN

1. *Assess for univariate normality across all continuous variables.*
2. *Bivariate correlations matrix with descriptive statistics.*
3. *Compute internal consistency reliability estimates for continuous scale scores.*
4. *Conduct two multiple hierarchical regression analyses using SPSS Statistics.*

MEASURES

Predictor Variables:
- **Individual-Level:** Religious Centrality (Manuela and Sibley, 2015) and Health Literacy (Kutner et al., 2003).
- **Interpersonal-Level:** Medical Mistrust (LaVeist, Isaac and Williams, 2009) and Service Preference (Aronson et al., 2016).
- **Community-Level:** Cultural Efficacy (Manuela and Sibley, 2015) and Pacific Connectedness and Belonging (Manuela and Sibley, 2015).
- **Societal-Level:** Racial Discrimination (Krieger et al., 2005) and Perceived Societal Wellbeing (Manuela and Sibley, 2015).

Criterion Variables:
- Health Service Utilization and Insurance Coverage Status (NCHS, 2019).

PARTICIPANTS

- We propose to collect data from a sample of 500 adult NHPI (aged 18 years and older).

- Data will be collected from consenting, adult respondents who meet the following inclusion criteria: (a) self-identify as Native Hawaiian or other Pacific Islander (e.g., Samoan, Tongan, Fijian, Chamorro, Tahitian, etc.); (b) are aged 18 years and over.

- The sampling strategy will be based on previous studies that have achieved success in recruiting understudied NHPI samples (Allen, Conklin and Kane, 2017; Kaholokula et al., 2018).

Scan QR code for references.