Title
An Examination of the Hawaiian Health System and Social Mobility

Author
Murray, Katherine Anne

Publication Date
2014

Peer reviewed|Thesis/dissertation

An Examination of the Hawaiian Health System
and Social Mobility

by

Kate Murray

THESIS

Submitted in partial satisfaction of the requirements for the degree of

MASTER OF SCIENCE

in

Nursing

in the

An Examination of the Hawaiian Healthcare System and Social Capital

Kate Murray

Abstract

In light of the recent national roll out of the Affordable Care Act, which expands health insurance coverage to many Americans, we sought to evaluate the relationship between health insurance status and subjective social status among residents of Hawaii. Cross-sectional data from 738 residents of Hawaii were collected from nine community sites on the island of Hawaii via a verbally administered survey. This survey collected data about demographics, what the greatest health and social concerns are in Hawaii, and what the greatest strengths are of Hawaiian society. Participants were also asked to place themselves on a 10-rung ladder to assess their subjective social status, using the MacArthur Scale of Subjective Social Status. Frequencies and percents were calculated to describe perceived health and social problems. Multivariate linear regression was used to analyze the association between SSS (the dependent variable) and the primary independent variable (insurance status). Covariates were assessed using Student's t-test (ladder rank of SSS was normally distributed) or Chi-square test and included in the linear model if they were statistically related to the dependent or primary independent variable at $p<.10$ or found to be variables associated with SSS in the literature. In the final linear regression model, individuals with private insurance viewed themselves as higher on the ladder compared to those with Medicaid/Quest after controlling for age, education, and ethnicity. Those with greater than a high school degree also placed themselves significantly higher on the SSS ladder than those with a high school degree or less after controlling for health insurance, ethnicity, and age. Respondents between the ages of 27-64 years were lower on the SSS ladder than those 65 years

or older after controlling for health insurance, ethnicity, and education. Future work should be done to evaluate what other variables affect subjective social status so that we can have a more robust understanding of how social capital influences the health of individuals within their communities.

Table of Contents

Table of Tables and Figures

Introduction

US Perspective and the Affordable Care Act

Two significant pieces of the United States' Affordable Care Act (ACA), the Medicaid expansion and the nationwide opening of the Healthcare Marketplace, rolled out in January 2014 (The Henry J. Kaiser Family Foundation, 2013c). If all states participate in the Medicaid expansion, it is estimated that 21.6 million currently uninsured Americans would be newly covered by Medicaid, 52% of the total uninsured population (American Academy of Family Physicians, 2012). This landmark legislation is expected to expand the availability and uptake of health insurance throughout the United States (US) through numerous mechanisms built into the ACA, although the effect of increased access to insurance on health outcomes remains to be seen.

Hawaii's Health and Healthcare

Hawaii currently has the second lowest percentage of uninsured residents of any state in the US, falling behind only Massachusetts (The Henry J. Kaiser Family Foundation, 2013a). This is largely attributed to Hawaii's sweeping 1974 legislation that mandated employers to offer health insurance to all non-seasonal employees working twenty hours per week or more (Hawaii State Legislature, 2010). As of the most recent data collected in 2010, 8% of all residents of Hawaii are uninsured (The Henry J. Kaiser Family Foundation, 2013a), although this number does not begin to capture those with health insurance coverage who are underinsured.

In addition to employer-provided health insurance, Hawaii has a network of publicly-provided, as well as state-run, health insurance exchanges for those residents whose needs are not met by employer-provided plans (The Henry J. Kaiser Family Foundation, 2013b). The federal Medicaid program is called Quest in Hawaii and in 2013 more than 290,000 individuals,

20% of the 1.4 million individuals living in Hawaii, were enrolled in Quest (Quest Hawai'i, 2013). For an individual to be eligible for Quest, they need to meet the following eligibility requirements: be a resident of Hawaii, be a US citizen or legal immigrant, provide proof of citizenship status and identity, provide a social security number, not be incarcerated or live in another public institution, be under 65 and neither blind nor disabled, and not be eligible to receive employer-provided health insurance (Hawai'i Department of Human Services Med Quest Division, 2013). Additionally, to qualify for services, non-pregnant adults must have income levels less than or equal to 100% of the Federal Poverty Level (FPL) ($13,230 annually for one individual), children 18 and under must have a family income less than or equal to 200% of the FPL ($54,180 annually for a family of four), and pregnant women must have income less than or equal to 185% of the FPL ($24,475.50 annually for one individual) (Hawai'i Department of Human Services Med Quest Division, 2013).

The Hawaiian health insurance landscape is likely to change in the coming years once the ACA rolls out, both new health plans become available, and the penalty for being uninsured is implemented. However, even universal health insurance does not mean that individuals will universally have access to care. Hawaii struggles to retain the number of healthcare providers that are needed to fully serve the population of the islands (Schiff, Felsing-Watkins, Small, Takayesu, & Withy, 2012) with an estimated 20% fewer physicians than needed (Stephens, Withy, & Racsa, 2012). There are many reasons for this, including the high cost of living, the rural nature of much of the islands, and the relative isolation of island life so many miles from the mainland US (Pellegrin, 2012). Additionally, residents of Hawaii speak a number of languages and they come from a wide array of cultural and familial traditions, making it

challenging for some residents to access care they feel is culturally appropriate and meets their needs (Vogler, Altmann, & Zoucha, 2010).

Honolulu County, on the island of Oahu, contains the state capital and is the most densely populated county in the state of Hawaii, with more than 976,000 residents in 2012 (United States Census Bureau, 2012). Honolulu is much more urban than the state of Hawaii, with an estimated 1,587 people per square mile in Honolulu County compared to an average of 212 per square mile throughout the state (United States Census Bureau, 2012). The demographic breakdown of Honolulu County is well matched to the state of Hawaii as a whole, with 49.5% female, 15% over the age of 65 years, and 21% under the age of 18 years (United States Census Bureau, 2012). Asian-only residents make up a higher proportion of Honolulu County (43.3%) than the state as a whole (38.3%) and white residents make up a slightly lower proportion in the county (22.4%) compared to the state population (26.1%) (United States Census Bureau, 2012). More residents of Honolulu County were born outside of the US than residents of Hawaii overall (19.6% versus 17.8%). Approximately 28% of Honolulu County residents over 5 years of age speak a language other than English at home compared to 25.6% of all residents of Hawaii (United States Census Bureau, 2012).

Poverty is not an insignificant problem in Hawaii, with 10.2% of individuals (United States Census Bureau, 2012) and 17% of children (The Annie E. Casey Foundation, 2013) in Hawaii living below the poverty level. Additionally, in part due to the high cost of living and the barriers to migrating when living on an archipelago, homelessness is a problem in Hawaii. In the most recent 2013 count, approximately 4,500 homeless individuals live on the island of Oahu alone (Department of Human Services, Homeless Programs Office, 2013). Poverty and

homelessness both create significant barriers to accessing healthcare and other social services, even if an individual is insured.

Theoretical Framework

Social capital theory, as described by Pierre Bourdieu, is the theoretical grounding for this project (Bourdieu, 1983). The theory of social capital describes how individuals can harness their social assets to promote social mobility. Social capital can exist alongside financial capital but social capital is not based on economic advantage; it instead focuses on the benefits that come from establishing and nurturing relationships as well as the benefits of community engagement (Portes, 1998). Social capital theory is used for research and evaluation in settings as diverse as Madagascar (The World Bank, 2013), business management (Hitt, Lee, & Yucel, 2002), and urban health research (Eriksson & Emmelin, 2013).

Social capital has been associated with positive health outcomes in poor, urban populations, including work in Los Angeles that found that social capital and participation in community activities was associated with lower levels of depression in elderly Chinese and Korean immigrants when compared to those with less social capital and engagement (Kim, Auh, Lee, & Ahn, 2013). Research has also been done with adolescents in Hawaii that found that social capital that grounded the adolescent within his or her ethnic group was protective against intimate violence (Spencer et al., 2009). Social networks abound and they have significant effects on the health and wellbeing of individuals.

One of the goals of *Healthy People 2010* was to eliminate health disparities in the US (U.S. Department of Health and Human Services, 2010). While this lofty goal was not achieved by 2010, it did lead to a significant increase in research being done on health disparities in the US, as well as the creation of new metrics in the literature aimed at evaluating health disparities.

Subjective Social Status (SSS) is one of the metrics that emerged from the increase in health disparities research.

The MacArthur Scale of Subjective Social Status is a survey instrument that was designed to measure where individual see themselves within the hierarchy of their community by asking them to visually place themselves along a spectrum, specifically a ladder (The John D. and Katherine T. MacArthur Foundation, 2007). When individuals being interviewed for studies using the MacArthur Scale were asked what influenced their perception of their place on a rung of the ladder, respondents often mentioned volunteering or other giving activities, leadership roles, and parenting activities (The John D. and Katherine T. MacArthur Foundation, 2007). Along with traditional evaluations of socioeconomic status (SES), SSS provides an additional piece of the puzzle when evaluating the impacts on the health of individuals within their communities.

The MacArthur Scale of Subjective Social Status has been used in a variety of populations since its development, including elders in Taiwan (Hu, Adler, Goldman, Weinstein, & Seeman, 2005), low-income Mexican immigrants living in Texas (Franzini & Fernandez-Esquer, 2006), biracial adolescents in Ohio (Goodman, et al., 2003), and civil servants in London (Singh-Manoux, Adler, & Marmot, 2003). Throughout these varied projects, SSS has consistently been found to be a significant predictor of the health status of individuals, even when adjusted for covariates such as income, ethnicity, and gender. SSS provides a tested avenue to not only look at an individual's objective resources but also how that individual compares themselves to others in their community and how they see their relative assets and deficits.

The primary aim of this study is to explore the relationship between health insurance status and subjective social status among residents of Hawaii. The hypothesis is that those who

are on public health insurance or do not have insurance will have lower SSS than those who are insured. Second, other social determinants that influence the relationship between health insurance and SSS will be evaluated. Third, factors that residents of Hawaii use to describe their relative position on the SSS ladder will be explored. Finally, community perceptions of top health and social concerns and community strengths, and other measures of social capital that can be harnessed to address health concerns will be described.

Methods

Data for this cross-sectional study were collected in 2011 and 2012 in Honolulu County. Surveys were verbally administered using a semi-structured questionnaire to a convenience sample of community members. We chose to verbally administer the questionnaire so that literacy level of the respondents would not be a factor in participant selection.

Ethical Approval

The study was approved by both the Committee for Human Research at the University of California, San Francisco and Papa Ola Lokahi, a federally registered Institutional Review Board that reviews and approves research studies conducted with Native Hawaiians. Participants signed an informed consent before the interview and were informed they could decline to answer any questions and stop the survey at any time.

Participants

Residents of Hawaii (N=738) were recruited from nine community sites on the island of Oahu: The Association of Hawaiian Civic Clubs conference, the Children and Youth Day Fair, the Hispanic Heritage Festival, the Women's Expo conference, the Food Bank and the Ohana Learning Center in Palolo public housing, the Next Step Homeless Shelter, the Senior Fair, and

St. Philomena Health and Safety Fair. Both men and women aged 16 years or older were interviewed and all responses were confidential.

Procedure

Community members were approached by trained undergraduate nursing students from Chaminade University, Honolulu and asked to participate in a short, 30-item survey. Among the 1,106 who were approached, 738 individuals agreed to complete the survey (66.7% response rate), although the response rate differed by the nine community sites.

Measurements

The survey was adapted from one survey used to measure health equity, SSS, and social determinants of health in a cohort of undergraduate nursing students (Thompson, Jarvis, Sparacino, Kuo, & Genz, 2013). Questions were developed based upon research previously done in Hawaii (Matsunaga, et al., 1996; Zhang & Ta, 2009; Zhang, et al., 2010) and included demographic questions about length of residence in Hawaii and current occupation. Participants were also asked open-ended questions about which groups on Oahu are most impacted by health problems, what the greatest health and social concerns are in Hawaii, and what the greatest strengths are of Hawaiian society. Participants were not given a list of potential problems to select from, but instead offered up their largest concerns and responses were later grouped into themes, including the above. Responses collapsed into "communication barriers," for example, included "verbal language barriers" and "getting used to Hawaii dialect."

To assess SSS, we asked participants to state their position on a 10-rung ladder (1 through 10, with one being the lowest rung of society and ten being the highest). We showed them a picture of a vertical ladder and asked them to point to the rung that best described their current position. The instructions taken from Adler (2000) were "think of this ladder as

representing where people stand in our society. At the top of the ladder are the people who are the best off, those who have the most money, most education, and best jobs. At the bottom are the people who are the worst off, those who have the least money, least education, and worst jobs or no jobs" (Adler, Epel, Castellazzo, & Ickovics, 2000, pg. 587). We modified these instructions, asking community members to define what specifically would make them "better" or "worse" off, without providing examples of wealth, education and employment as pre-defined notions of "better" or "worse".

Data Analysis

Frequencies and percents were calculated to describe perceived health and social problems. Multivariate linear regression was used to analyze the association between SSS (the dependent variable) and the primary independent variable (insurance status). Covariates were assessed using Student's t-test (ladder rank of SSS was normally distributed) or Chi-square test and included in the linear model if they were statistically related to the dependent or primary independent variable at $p<.10$ or found to be variables associated with SSS in the literature. Covariates that were assessed for inclusion in the model included: sex (male or female), age (16-26 years old, 27-44, 45-64, or 65+), income (<$25000/year, $25000-$49999, $50000-$74999, $75000-$99999, $100000+), occupation (employed or unemployed), ethnicity (Hawaiian/Pacific Islander heritage or other), language (English as primary language, English as second language, or no English language proficiency), whether they were born in Hawaii, and place of interview (the Association of Hawaiian Civic Clubs, homeless shelter/food bank and learning center at Palolo housing complex, and health fairs).

Differences in proportions were tested with Chi-square statistics for categorical variables, t-tests or ANOVA for normally distributed continuous variables, and Mann Whitney U and

Kruskal-Wallis tests for non-normally distributed variables. A data coding manual was created prior to data entry to categorize text response answers for subsequent analysis. SAS 9.2 was used for data analysis.

Results

Of the 738 individuals surveyed, 67% were female and 54% were born in Hawaii (**Table 1**). Thirty-one percent of individuals reported being ethnically Native Hawaiian or Pacific Islander and more than 30% reported a first language other than English. Eighty-eight percent of all participants reported having current health insurance, although there was a range of 78% to 100% depending on the site where they were interviewed. The median age of respondents was 42 years old with those interviewed ranging from 16 to 91 years old. Additionally, a minority of participants (8.9%) reported less than a high school education.

We divided the respondents into three groups by their health insurance status: those who were uninsured, those with Medicaid/Quest, and individuals who carry non-Medicaid insurance, including military, employment-based, and Medicare. In bivariate analysis of independent variables that were significantly related to insurance status, all were all significantly associated with insurance status ($p < .05$) except for multiethnic/racial background and language spoken at home (**Table 1**). Those reporting no insurance were more likely to have not been born in Hawaii (37.6%, 46.5% and 58.5% respectively, $X^2(2)=16.5$, $p=.003$) and were less likely to be female (55.3% for uninsured, 71.5% for those receiving Medicaid/Quest and 68.2% otherwise insured, $X^2(2)=7$, $p=.03$). There was no significant difference between the ages of respondents by insurance status (medians 42 years old, 44 years old, and 42 years old respectively ($X^2(2)=.11$, $p=.94$). For respondents who reported income ($n=589$), those receiving Medicaid/Quest were most likely to report less than $25,000 a year (76.5%), as compared to those who were uninsured

(68.8%), and those otherwise insured (24.6%) ($X^2(2)=126.7$, $p<.001$), although this is limited by a 20% rate of nonresponse to this question. However, income and insurance were collinear ($r_s=-.37$, n=728 $p=.033$) and thus we did not include income as one of the predictors in the regression model.

When we examined SSS, we found a statistically significant difference between the groups with different health insurance coverage. SSS was normally distributed throughout the entire surveyed population, but not within individual insurance groups, so a Kruskal-Wallis one way analysis of variance was done ($X^2(2)=18.8$, $p<.001$).

We used multiple linear regression to model the relationship between study variables and our dependent variable, self-identified rung on the SSS ladder. Insurance, education, ethnicity, and age were included in the final model because they were significantly related to SSS in the initial bivariate analysis (**Table 2**). The final model included insurance status, whether the individual had completed more than a high school education, Hawaiian/Pacific Islander heritage, and age as independent variables associated with the dependent variable, SSS. The overall model was significant (F 7.8, Root MSE 1.87, $p < .001$) and 6.4% of the variance in SSS was explained by these four independent variables (**Table 3**). Those with private insurance viewed themselves as higher on the ladder compared to those with Medicaid/Quest after controlling for age, education, and ethnicity (β= -.538, t-test=.187, p=.004). Those with greater than a high school degree also placed themselves significantly higher on the SSS ladder than those with a high school degree or less (β=.533, t-test=.156, p=.0007) after controlling for health insurance, ethnicity, and age. Respondents between the ages of 27-64 were lower on the SSS ladder than those 65 years or older (β= -.585, t-test=-2.79, p=.005) after controlling for health insurance, ethnicity, and education.

Participants were asked to report what they perceived as the top social and health problems in Hawaii. Responses were relatively consistent across groups with regards to the top health problems in Hawaii. Diabetes, cancer, obesity, and cardiovascular disease were the top five among all three groups (**Figure 1**). There was similar agreement on the top social problems affecting residents of Hawaii, with substance abuse, homelessness, and both domestic violence and violent crime topping the lists (**Figure 2**). We did not find statistically significant differences among insurance groups when ranking either the top health or social problems.

Participants were asked what Hawaii's greatest strengths are and some consistent themes emerged among the responses. Among the most popular responses were Hawaii's great weather and outdoor spaces (11%), a strong sense of community support (10.5%), and that Hawaii is a family-oriented state (6.9%). Respondents also frequently referred to the "aloha spirit," referring to a spirit of peace and compassion, and "ohana," which refers to the binding and internal support in families.

Discussion

Statement of Principal Findings

In our study of community-dwelling residents of Oahu, we found that Medicaid (Quest) was significantly associated with lower social subjective status as compared to those with private insurance. Age and education were also associated with SSS after adjusting for ethnicity. In our analysis, Hawaiian/Pacific Islander was not significantly associated with SSS but was included in the model because it improved overall model fit. Being an immigrant, although significantly associated with insurance status in a bivariate analysis, was not significant in the overall model that included subjective social status and other sociodemographic variables. Our sample reflects the racial and ethnic composition of the state of Hawaii, which is socially and culturally diverse.

Thus, it is possible that immigration status does not have as strong of an impact on SSS as it would in a more racially and ethnically homogenous area of the US, where discrimination and marginalization may influence SSS (Baron-Epel & Kaplan, 2009; Reitzel et al., 2010; Sevillano, Basabe, Bobowik, & Aierdi, 2013). Additionally, when income was included in the multivariate model, it was collinear with insurance status for predicting SSS. In this setting of near universal health insurance coverage, insurance status appears to serve as a proxy for income, something that may prove helpful for future research in Hawaii where income data are not readily available.

Data were collected from people who were present at community fairs, in senior centers, and at low-income housing and homeless shelters, which may limit generalizability of findings. We surveyed members of the Association of Hawaiian Civic Clubs at their annual meeting, which may have increased representation of native Hawaiians, which we consider a strength of this study. Additionally, the surveys were verbally administered, relatively short in duration, and participants were interviewed at public events, which may influence the validity of our findings. However, we found similar results when this survey was self-administered, with no time limitations, to a group of student nurses (Thompson, et al., 2013). While our convenience sample proved to be a limitation, it also resulted in an economically and ethnically diverse community-based project. Nursing students from the community canvased a wide variety of community meeting sites and captured a cross section of Honolulu residents.

The prevalence of references to the aloha spirit and ohana as strengths of Hawaii, along with mention of community support and a focus on family, echoes back to the importance of social capital. We did not, however, find a statistically significant difference between insurance groups when looking at self-identified strengths of Hawaii, suggesting that social capital and community support are highly valued by this population regardless of insurance status.

When comparing our findings to prior research conducted with residents of Hawaii and Hawaiians who have migrated to other states, there was a common thread of complex factors that affect an individual's SSS (Lassetter, Callister, & Miyamoto, 2012; Leu et al., 2008; Liu & Alameda, 2011). For example, we anticipated that uninsured respondents would place themselves lower on the SSS ladder than those with either Medicaid/Quest or other insurance, but the heterogeneity of response among the uninsured did not give us a clear picture of this relationship. We know that SSS has a significant relationship with health outcomes and having a better understanding of what affects an individual's SSS may lead to the improvement of the health of both individuals and society (Adler et al., 2000; The John D. and Katherine T. MacArthur Foundation, 2007).

Future studies should explore other factors that potentially impact SSS that were not captured in this study, so that we may have a better understanding of relationship between social capital and SSS. The health of both individuals and communities in urban settings may be improved by better harnessing social capital. Additionally, evaluating the relationships between both ethnicity and immigration status and SSS in other contexts would be an important step for further research.

Conclusion and Implications for Future Practice

This study highlights some of the health and social problems identified by Hawaiian community members as well as internal strengths that can be used to address those problems. Researchers and clinicians should use a strength-based approach with community members and patients, instead of making assumptions about the value that resources such as income or insurance status may hold to others. Working with community members may help illuminate some of the critical elements of social capital for people living in Hawaii. Having that

information would allow for more targeted individual public health interventions to improve the wellbeing of communities and individuals. Social capital is not completely captured by traditional metrics used in public health and a better understanding of the roll it plays may lead to a more complete understanding of health and wellbeing.

Table 1 Sociodemographic characteristics of survey participants

	Total (N=728)	All Other Insurance (n=484)	Medicaid/ Quest (n=159)	Uninsured (n=85)	
Ladder rank (1-10 range), median (IQR)	7 (5-8)	7 (6-8)	6 (5-7)	6 (4-8)	F=10.4 p<.001
Born in Hawaii, n (%)	389 (53.4)	382 (58.5)	74 (46.5)	32 (37.6)	$X^2(2)$=16.5 p<0.001
Lived in Hawaii, mean years (IQR)	29.8 (10-45)	31.5 (12-46)	26.9 (10-40)	25.6 (7-42)	$X^2(2)$=7.1 p=.03
Age group, n (%)					
16-26	143 (19.6)	99 (20.5)	27 (17)	17 (20)	
27-64	471 (65.3)	293 (62.2)	118 (25)	60 (12.7)	
65 and older	107 (14.7)	88 (18.2)	13 (8.2)	6 (7.1)	$X^2(4)$=16.7
No response	7 (1)	4 (0.8)	1 (0.6)	2 (2.4)	p=.002
Ethnicity					
East Asian	303 (41.6)	222 (45.9)	51 (32.1)	30 (35.3)	
White	200 (27.5)	149 (30.8)	30 (18.9)	21 (24.7)	
Hawaiian/Pacific Islander	95 (13.1)	37 (7.7)	41 (25.8)	17 (20)	$X^2(6)$=50.7
Other	130 (17.9)	76 (15.7)	37 (23.3)	17 (20)	p<.001
Languages spoken					
First language					$X^2(2)$=24.7
English	489 (67.2)	354 (48.6)	92 (57.9)	43 (50.6)	p<.001
Highest education level achieved					
Less than high school	65 (8.9)	24 (5)	27 (17.1)	14 (16.5)	
High school/GED	343 (47.2)	204 (42.2)	93 (58.9)	46 (54.1)	
Associate's degree	102 (14)	78 (16.1)	18 (11.4)	6 (7.1)	
Bachelor's degree	127 (17.5)	103 (21.3)	11 (7)	13 (15.3)	
Master's degree	59 (8.1)	53 (11)	3 (1.9)	3 (3.5)	
Doctorate/MD	15 (2.1)	13 (2.7)	0 (0)	2 (2.4)	$X^2(14)$=79.4
Other	14 (1.9)	9 (1.9)	5 (3.2)	0 (0)	p<.001
Currently unemployed	280 (38.5)	131 (27.1)	131 (27.1)	41 (48.2)	$X^2(2)$=88.3 p<.001
Annual Income					
< 25,000	233 (32)	101 (20.9)	88 (55.4)	44 (51.8)	
$25,000 - $49,999	144 (19.8)	117 (24.2)	13 (8.2)	14 (16.5)	
$50,000 - $74,999	96 (13.2)	89 (18.4)	4 (2.5)	3 (3.5)	
$75,000 - $99,999	58 (8)	49 (10.1)	8 (5)	1 (1.2)	
$100,000 or more	58 (8)	54 (11.2)	2 (1.3)	2 (2.4)	$X^2(10)$=141
No answer	139 (19.1)	74 (15.3)	44 (27.7)	21 (24.7)	p<.001

Table 2: Association between independent variables and SSS as continuous dependent variable

Variable	β	p-value
Insurance Status		
Other/private insurance	.793	<.001
Uninsured	.424	.101
Medicaid/Quest	*reference*	.
Site of Enrollment		
Association of Hawaiian Civic Clubs	-.086	.769
Food Bank/Homeless Shelter	-.697	<.001
All other sites	*reference*	.
Education		
More than high school	.642	<.001
High school or less	*reference*	.
Employment		
Currently employed	.368	.0128
Unemployed	*reference*	.
Age (continuous)	.0039	.336
Age (years)		
16-26	reference	-
27-64	-.35	.058
65+	.296	.229
Gender		
Female	.0674	.661
Male	*reference*	.
Were they born in Hawaii?		
No	.048	.739
Yes	*reference*	.
Is English their first language?		
No	-.13	.396
Yes	*reference*	.
Do they speak any English?		
No	-.169	.7833
Yes	*reference*	.
Ethnicity		
Other	.508	.001
Hawaiian/Pacific Islander	*reference*	.

Table 3: Multivariate Linear Regression Analysis (SSS as continuous dependent variable) [n=696]

Parameter	β	**Standard Error**	**t Value**	**p-value**
Insurance Status				
Other/private insurance	.538	.19	2.88	.004
Uninsured	.414	.26	1.59	.112
Medicaid/Quest	*reference*	.	.	.
Education				
More than high school	.533	.156	3.42	.0007
High school or less	*reference*	.	.	.
Age (years)				
16-26	*reference*	.	.	.
27-64	-4.8	.186	-2.58	.01
65+	.105	.247	.43	.671
Ethnicity				
Other	.229	.16	1.44	.152
Hawaiian/Pacific Islander	*reference*	.	.	.

Figure 1 Top Five Health Problems in Hawaii [$X^2(46)=48.5$, $p=.37$]

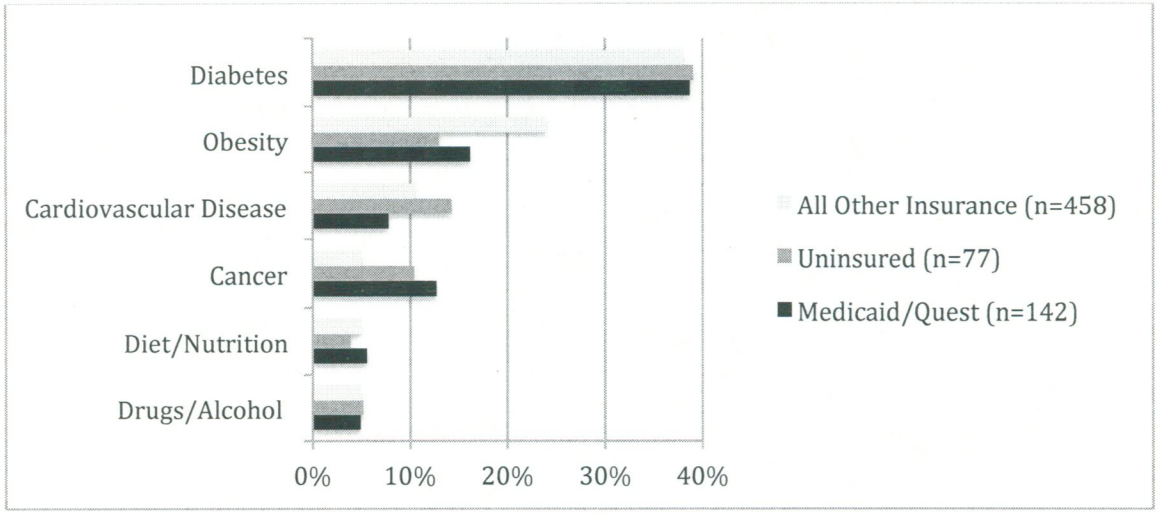
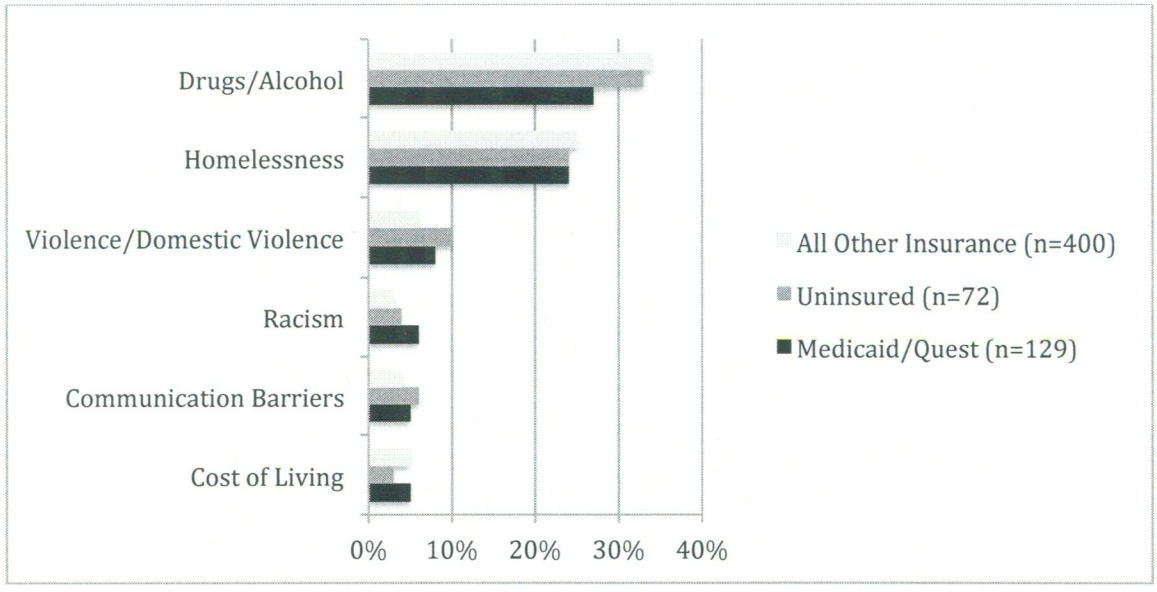


Figure 2 Top Social Problems in Hawaii [$X^2(62)=55.2$, $p=.72$]



References

Adler, N. E., Epel, E. S., Castellazzo, G., & Ickovics, J. R. (2000). Relationship of subjective and objective social status with psychological and physiological functioning: Preliminary data in healthy white women. *Health Psychology : Official Journal of the Division of Health Psychology, American Psychological Association, 19*(6), 586-592.

American Academy of Family Physicians. (2012). The Affordable Care Act: Medicaid Expansions & Healthcare Exchanges. Retrieved September 6, 2013, from http://www.aafp.org/dam/AAFP/documents/advocacy/coverage/aca/ES-MedicaidExpansion.pdf

Baron-Epel, O., & Kaplan, G. (2009). Can subjective and objective socioeconomic status explain minority health disparities in Israel? *Social Science & Medicine, 69*(10), 1460-1467. doi:10.1016/j.socscimed.2009.08.028.

Bourdieu, P. (1983). The Field of Cultural Production, or: the Economic World Reversed. *Poetics,* (12), 311-356.

Department of Human Services, Homeless Programs Office. (2013). *(Statewide Homeless Point-In-Time Count 2013 Methodology and Results.*).The State of Hawaii.

Eriksson, M., & Emmelin, M. (2013). What constitutes a health-enabling neighborhood? A grounded theory situational analysis addressing the significance of social capital and gender. *Social Science & Medicine (1982), 97*, 112-123. doi:10.1016/j.socscimed.2013.08.008; 10.1016/j.socscimed.2013.08.008

Franzini, L., & Fernandez-Esquer, M. E. (2006). The association of subjective social status and health in low-income Mexican-origin individuals in Texas. *Social Science & Medicine (1982), 63*(3), 788-804. doi:10.1016/j.socscimed.2006.01.009

Goodman, E., Adler, N. E., Daniels, S. R., Morrison, J. A., Slap, G. B., & Dolan, L. M. (2003). Impact of objective and subjective social status on obesity in a biracial cohort of adolescents. *Obesity Research, 11*(8), 1018-1026. doi:10.1038/oby.2003.140

Hawai'i Department of Human Services Med Quest Division. (2013). Quest Hawai'i Eligiblity. Retrieved 11/21, 2013, from http://www.med-quest.us/eligibility/EligPrograms_QUEST.html

Hawaii State Legislature. (2010). Chapter 393: Prepaid Health Care Act. Retrieved 8/12, 2013, from http://www.capitol.hawaii.gov/hrscurrent/Vol07_Ch0346-0398/HRS0393/HRS_0393-.htm

Hitt, M. A., Lee, H., & Yucel, E. (2002). The Importance of Social Capital to the Management of Multinational Enterprises: Relational Networks Among Asian and Western Firms. *Asia Pacific Journal of Management, 19*(2-3), 353-372.

Hu, P., Adler, N. E., Goldman, N., Weinstein, M., & Seeman, T. E. (2005). Relationship between subjective social status and measures of health in older Taiwanese persons. *Journal of the American Geriatrics Society, 53*(3), 483-488. doi:10.1111/j.1532-5415.2005.53169.x

Kim, B. J., Auh, E., Lee, Y. J., & Ahn, J. (2013). The impact of social capital on depression among older Chinese and Korean immigrants: Similarities and differences. *Aging & Mental Health, 17*(7), 844-852. doi:10.1080/13607863.2013.805399.

Lassetter, J. H., Callister, L. C., & Miyamoto, S. Z. (2012). Perceptions of health and well-being held by Native Hawaiian migrants. *Journal of Transcultural Nursing : Official Journal of the Transcultural Nursing Society / Transcultural Nursing Society, 23*(1), 5-13. doi:10.1177/1043659611423835.

Leu, J., Yen, I. H., Gansky, S. A., Walton, E., Adler, N. E., & Takeuchi, D. T. (2008). The association between subjective social status and mental health among Asian immigrants: investigating the influence of age at immigration. *Social Science & Medicine (1982), 66*(5), 1152-1164. doi:10.1016/j.socscimed.2007.11.028.

Liu, D. M., & Alameda, C. K. (2011). Social determinants of health for Native Hawaiian children and adolescents. *Hawaii Medical Journal, 70*(11 Suppl 2), 9-14.

Matsunaga, D. S., Enos, R., Gotay, C. C., Banner, R. O., DeCambra, H., Hammond, O. W., . . . Tsark, J. A. (1996). Participatory research in a Native Hawaiian community. The Wai'anae Cancer Research Project. *Cancer, 78*(7 Suppl), 1582-1586.

Pellegrin, K. L. (2012). A brief survey to identify priorities for improving clinician recruitment and retention: results from Hawai'i Island physicians. *Hawai'i Journal of Medicine & Public Health : A Journal of Asia Pacific Medicine & Public Health, 71*(4 Suppl 1), 45-49.

Portes, A. (1998). Social capital: Its origins and applications in modern sociology. *Annual Review of Sociology,* (24), 1-25.

Quest Hawai'i. (2013). 2013 Medicaid Enrollment. Retrieved December 12, 2013, from http://www.med-quest.us/PDFs/queststatistics/2013%20QUEST%20Enrollment.pdf

Reitzel, L. R., Mazas, C. A., Cofta-Woerpel, L., Vidrine, J. I., Businelle, M. S., Kendzor, D. E., Wetter, D. W. (2010). Acculturative and neighborhood influences on subjective social status among Spanish-speaking Latino immigrant smokers. *Social Science & Medicine (1982), 70*(5), 677-683. doi:10.1016/j.socscimed.2009.11.024.

Schiff, T., Felsing-Watkins, J., Small, C., Takayesu, A., & Withy, K. (2012). Addressing the physician shortage in Hawai'i: Recruiting medical students who meet the needs of Hawai'i's rural communities. *Hawai'i Journal of Medicine & Public Health : A Journal of Asia Pacific Medicine & Public Health, 71*(4 Suppl 1), 21-25.

Sevillano, V., Basabe, N., Bobowik, M., & Aierdi, X. (2013). Health-related quality of life, ethnicity and perceived discrimination among immigrants and natives in Spain. *Ethnicity & Health,* doi:10.1080/13557858.2013.797569

Singh-Manoux, A., Adler, N. E., & Marmot, M. G. (2003). Subjective social status: Its determinants and its association with measures of ill-health in the Whitehall II study. *Social Science & Medicine (1982), 56*(6), 1321-1333.

Spencer, J. H., Irwin, K., Umemoto, K. N., Garcia-Santiago, O., Nishimura, S. T., Hishinuma, E. S., & Choi-Misailidis, S. (2009). Exploring the hypothesis of ethnic practice as social

capital: Violence among Asian/Pacific Islander youth in Hawaii. *The International Journal of Social Psychiatry, 55*(6), 506-524. doi:10.1177/0020764008094429.

Stephens, L. D., Withy, K. M., & Racsa, C. P. (2012). Migration analysis of physicians practicing in Hawai'i from 2009-2011. *Hawai'i Journal of Medicine & Public Health : A Journal of Asia Pacific Medicine & Public Health, 71*(4 Suppl 1), 26-30.

The Annie E. Casey Foundation. (2013). *2013 KIDS COUNT Data Book.*

The Henry J. Kaiser Family Foundation. (2013a). Health Insurance Coverage of the Total Population. Retrieved August 12, 2013, from http://kff.org/other/state-indicator/total-population/

The Henry J. Kaiser Family Foundation. (2013b). State Exchange Profiles: Hawaii. Retrieved August 12, 2013, from http://kff.org/health-reform/state-profile/state-exchange-profiles-hawaii/

The Henry J. Kaiser Family Foundation. (2013c). Summary of the Affordable Care Act. Retrieved September 6, 2013, from http://kff.org/health-reform/fact-sheet/summary-of-new-health-reform-law/

The John D. and Katherine T. MacArthur Foundation. (2007). The MacArthur Scale of Subjective Social Status. Retrieved August 25, 2013, from http://www.macses.ucsf.edu/research/psychosocial/subjective.php

The World Bank. (2013). What is social capital. Retrieved November 21, 2013, from http://web.worldbank.org/WBSITE/EXTERNAL/TOPICS/EXTSOCIALDEVELOPMENT/

EXTTSOCIALCAPITAL/0,,contentMDK:20185164~menuPK:418217~pagePK:148956~piPK:216618~theSitePK:401015,00.html

Thompson, L. M., Jarvis, S., Sparacino, P., Kuo, D., & Genz, S. (2013). Perceptions of health equity and subjective social status among baccalaureate nursing students engaged in service-learning activities in Hawai'i. *Hawai'i Journal of Medicine & Public Health, 72*(10), 4-10.

U.S. Department of Health and Human Services. (2010). Disparities - Healthy People 2020. Retrieved August 25, 2013, from http://www.healthypeople.gov/2020/about/disparitiesAbout.aspx

United States Census Bureau. (2012). Honolulu County, Hawaii. Retrieved September 6, 2013, from http://quickfacts.census.gov/qfd/states/15/15003.html

Vogler, J., Altmann, T. K., & Zoucha, R. (2010). Native Hawaiian attitudes of culturally sensitive healthcare provider traits and behaviors. *Journal of Cultural Diversity, 17*(3), 90-98.

Zhang, W., McCubbin, H., McCubbin, L., Chen, Q., Foley, S., Strom, I., & Kehl, L. (2010). Education and self-rated health: An individual and neighborhood level analysis of Asian Americans, Hawaiians, and Caucasians in Hawaii. *Social Science & Medicine (1982), 70*(4), 561-569. doi:10.1016/j.socscimed.2009.10.055.

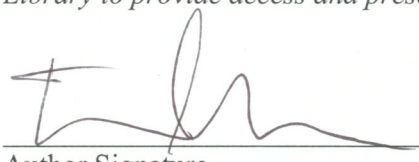
Zhang, W., & Ta, V. M. (2009). Social connections, immigration-related factors, and self-rated physical and mental health among Asian Americans. *Social Science & Medicine (1982), 68*(12), 2104-2112. doi:10.1016/j.socscimed.2009.04.012.

Publishing Agreement

It is the policy of the University to encourage the distribution of all theses, dissertations, and manuscripts. Copies of all UCSF theses, dissertations, and manuscripts will be routed to the library via the Graduate Division. The library will make all theses, dissertations, and manuscripts accessible to the public and will preserve these to the best of their abilities, in perpetuity.

Please sign the following statement:

I hereby grant permission to the Graduate Division of the University of California, San Francisco to release copies of my thesis, dissertation, or manuscript to the Campus Library to provide access and preservation, in whole or in part, in perpetuity.



Author Signature

3/12/2014

Date