Self-Reported Health among Foreign-Born Elderly: Predictive Factors and Objective Comparisons

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ABSTRACT: This study compares self-reported health between foreign-born and native elders (aged 51 and older) using the adult sample of the 2001 California Health Interview Survey (CHIS). This data source provides a unique opportunity to address questions of the role acculturation plays in immigrant health ratings. Not only do the files contain information on acculturation (e.g., English ability and time spent in the U.S.), they identify immigrants by nativity (naturalized versus non-citizen). The latter variable allows for within group comparisons across the immigrant elderly population. Inclusion of objective measures of health (e.g., smoking history, doctor's visits, presence and number of health conditions) permit evaluation of the accuracy in self-reports. Using logistic regression, the study suggests that acculturation plays an important role in influencing immigrants' reported health. However, objective indicators suggest that these reports do not merely reflect somatization of stressors but, rather, reflect true underlying health status.

Introduction

Numerous studies document the incongruence between elderly persons' subjective self-ratings of their own health status versus more objective measures such as physicians' assessment, presence and severity of chronic conditions and functional difficulties (Maddox, 1962; Gibson, 1991). Research suggests that these inconsistencies may reflect more positive health outlooks among segments of the elderly population that offer protective effects for mortality (Borawski et al., 1996). Identifying individuals with more pessimistic health outlooks in late adulthood may offer some opportunity to design interventions to improve health profiles into old age and further the trend toward a compression of morbidity (Myers and Manton, 1984; Fries, 1988).

Studies examining racial and ethnic differences in self-reported health among the elderly indicate significant cultural differences, with Latinos, for instance, more likely to self-report relatively poor physical health in the face of generally positive objective health ratings (Angel and Guarnaccia, 1989). In general, studies find that older immigrants report poorer health than either native-born elders or "veteran immigrants" (Carmel, 2001; Angel et al., 2001; Gross et al., 2001). These findings support a number of interpretations.

Research clearly documents a greater tendency toward somatization of mental health stressors among Latino sub-populations (Escobar, 1987). The immigration process involves significant disruption of traditional social roles and places new arrivals in a culturally unfamiliar environment. Adaptation to these conditions likely becomes more difficult when moves occur at later ages. In fact, studies of foreign-born elderly suggest that individuals who emigrate at or near retirement age face a greater risk of depressive symptoms than their native-born counterparts (Aroian et al., 1998; Black et al., 1998; Gonzalez et al., 2001). Although Latinos predominate in the total foreign-born population (51%) they represent only 31% of the elderly foreign-born population (He, 2002). However, Mexico accounts for the largest percentage (22%) of immigrants aged 65 and older admitted for permanent residence in the U.S. in Fiscal Year 2000 (U.S. Immigration and Naturalization Service, 2002). These data suggest

possible differences between the foreign-born and recent immigrants. Clearly, the generally lower self-ratings on physical health may, in part, reflect somatization of mental stressors among certain segment of the foreign-born elderly population but this cannot explain the findings entirely.

The lower self-assessed health for immigrants could also indicate selection effects for more infirmed elderly. Carmel (2001) identified the "open doors" and financial support policies for Jewish immigrants to Israel as mechanisms for selection of less-healthy immigrants. Although United States' immigration policy does not offer these incentives, citizens may sponsor their parents for immigration, which could support the entry of less healthy individuals. Data from the Bureau of Citizenship and Immigration Services (formerly the Immigration and Naturalization Service) indicates that among the 51,555 persons aged 65 and older admitted for permanent residence in the United States in Fiscal Year 2002, 82% entered as immediate relatives of U.S. citizens (U.S. Bureau of Citizenship and Immigration Services, 2003).

Representing around 8.5% of the total U.S. population aged 65 and older (He, 2002; Hetzel and Smith, 2001; U.S. Bureau of the Census, 2002) immigrants make up a sizable portion of the elderly population. Understanding the factors associated with poorer self-ratings among foreign-born elderly would assist in the development of interventions to improve the long-term health outcomes for this important and growing segment of the elderly population. Using data available through the California Health Interview Survey, the present study provides an opportunity to determine what roles acculturation, objective health indicators and socioeconomic factors play on elders' health ratings.

California provides a particularly suitable setting for studies of elderly immigrant groups. According to data from the U.S. Census Bureau, at nearly 3.6 million California boasted the largest population of individuals aged 65 and older among all the states (U.S. Census Bureau, 2001). In addition, California has been a prime destination not only for immigrants generally but for elderly immigrants more specifically (Rogers et al., 1999). Estimates suggest that approximately ¼ of the elderly population in California are foreign-born (Lee et al., 2003). The immigrant population of the

state is also highly diverse, with large numbers of recent and more temporally distant arrivals as well as numerous sending regions.

To summarize, the following study uses sociodemographic and health data for elderly residents of the state of California to address two primary research questions. First, do non-citizens give lower self-ratings of health than either native-born or naturalized citizens? Prior research suggests an affirmative response. In fact, we might go so far as to predict that while non-citizens report the worst health, native-born elderly rate their health the highest, with naturalized citizens falling in-between. Assuming this to be the case, the second question asks, "what accounts for this pattern of responses?" Do non-citizen and more recently arrived elderly represent a less-healthy segment of the population or are they simply more likely to somatize the stressors inherent in the immigration process?

Methods

Data

Data for this study were derived from the 2001 California Health Interview Survey (CHIS), a telephone survey of 55,428 households drawn from every county in California (California Health Interview Survey, 2002). The survey utilized random-digit dialing and provides a sample that is representative of California's non-institutionalized population living in households with a telephone. Interviews were conducted between November 2000 and October 2001 with one adult and one adolescent aged 12-17 (for a sample of 5,801) per household. Additional information was collected for one child under the age 12 in each qualified household from the adult most knowledgeable about that child (with a sample size of 12,592). Over-sampled populations included American Indians and Alaska natives, Japanese, Vietnamese, South Asians, Koreans and Cambodians. Data were weighted to the 2000 United States' Census. Analyses for the present study were limited to the adult component.

These data were chosen for analysis because they contain data on ethnically diverse individuals in large numbers and because they provide some means of differentiating by nativity. Past studies utilizing self-rated health measures contrasted native born with foreign-born individuals and utilized indicators such as English language usage and time since arrival to identify acculturation levels (Angel et al., 2001). The CHIS permits analyses of three groups: 1) native born individuals, 2) naturalized citizens and 3) non-citizens. Using this indicator in combination with a variable specifying years spent in the U.S. permits more refined analyses by acculturation level.

Presumably, foreign-born individuals who chose to become citizens are more acculturated to the United States than other foreign-born persons. As discussed at greater length below, analyses revealed very different sociodemographic characteristics across the three study groups. Comparison of three measures of acculturation appears to confirm the supposition that naturalized citizens are generally more similar to native born individuals than non-citizens. Larger percentages of naturalized persons have resided in the U.S. for 10 years or longer, speak only English at home and speak English well or very well, when compared with non-citizens (see Table 1 below).

Dependent Variable

The present study examines self-reported health among individuals aged 51 and older, with comparisons across the three study populations. The dependent variable is the same global health rating used in prior studies (Idler and Benyamini, 1997). Respondents were asked, "In general, would you say your health is excellent, very good, good, fair or poor?" with a code of "1" indicating "excellent" health and "5" for "poor" health. For purposes of analysis, responses were dichotomized in "fair/poor" self-rated health and "good/very good/excellent" health. This approach has been verified in similar earlier studies (Angel et al., 2001; Finch et al., 2002; Ren et al., 1996; Chandola, 2000).

Independent Variables

The independent variables utilized in multivariate analyses include demographic, social support, acculturation and objective health characteristics of respondents. Demographic variables include age, gender and race/ethnicity. Various studies document a positive relationship between self-reported health and age (Benyamini et al., 2000; Idler, 1993). Some research supports a "selective survival" hypothesis, suggesting that positive self-assessments in the very old offer positive predictive capability for identifying "biologically elite" individuals who overcome mortality risks and survive to extreme old age (Haug et al., 1989). The following study utilizes three age groups: 51-64, 65-74 and 75 or older. We may expect a U-shaped pattern of responses to self-assessment in these age groups, with pre-retirement individuals not quite to the age when chronic conditions become prevalent and individuals 75 years and older representing a selectively health population. Research is not conclusive regarding self-reported health by gender. Some studies find that older women report the best health while others find a more positive outcome for men (Idler, 1993; Fillenbaum, 1979; Hansell and Mechanic, 1991; Ferraro, 1993). The racial/ethnic categories utilized in the study include the following: white, Latino, Asian and Pacific Islander and other. The distribution of sending countries within the foreign-born elderly population suggests that for the purposes of this analysis Latinos predominate and that Asians/Pacific Islanders will more likely fall in the category of naturalized citizens. Therefore, whites should report the best health and Latinos the worst, with Asians/Pacific Islanders in-between.

The analysis includes a number of social support measures, under the assumption that social capital provides protective effects both for the immigration process and for health outcomes more generally. The analysis contrasts married individuals with those not currently married (i.e., divorced, separated or widowed) and persons who never married. Research supports a protective effect for marriage so married persons should have the highest self-reported health. Alternatively, those with marital disruption (i.e., not currently married) face a possible additional stress so they might be expected

to have the worst health standing. Similarly, those living alone lack the direct support of others so they may experience poorer health than individuals residing with other people. On the other hand, crowded living conditions could represent an economic-related stress that could also impair health. Therefore, the analysis examines the following three categories of household size: living alone, 2 people living together and 3 or more people.

Research suggests that work becomes a less important predictor of health status with increasing age. Therefore, work status is included in the analysis as something between a source of social support and an economic factor. The following categories were used to assess work status: at work, without a job and not looking, with a job but not at work, without a job but looking. Among the study population, individuals without a job and not looking likely reflect retired persons. Although reasons for retirement may differ (e.g., personal health considerations, need to care for an infirmed spouse), we might assume that those individuals without a job and not looking are relatively content with their work status (although other concerns might influence their health).On the other hand, those with a job but not at work may face physical disability or illness keeping them from work. Similarly, those without a job but looking for work likely deal with the stress of being unemployed. These latter two categories should find the individuals with the poorest health. Finally, the work environment and the necessity to work (particularly among the oldest age groups) may introduce additional stressors that lead to lower health ratings. However, the greater economic security that comes from gainful employment suggests that individuals in this work category should fare better than those with work but not on the job and unemployed persons.

Prior research documents the fact that better educated and those with better financial standing experience better health than their less-educated, poorer counterparts. These socioeconomic factors likely reflect access issues (e.g., better knowledge of health and health care systems as well as the financial means to meet health care needs). In a similar fashion, residence in a metropolitan area likely leads to improved access to health care professionals. The study addresses all of these factors, using five

categories for education attainment (less than a high school degree, high school degree, some college, college degree and post college), two for metropolitan residence (metropolitan versus non-metropolitan) and four for poverty level (0-99%, 100-199%, 200-299% and 300+% of the federal poverty level).

Indicators used to assess acculturation level were measured across all three study populations in some cases and only for foreign-born persons in other instances. All respondents identified the language usually spoken in their home (English only, Spanish only, English and Spanish and Other) and described whether and for what reasons they felt they had ever experienced discrimination (never experienced, experienced due to race, ethnicity or language and experienced due to some other reason). Ability to speak English (well/very well versus not well) and number of years spent in the U.S. (less than 10 years versus 10 years or longer) were recorded only for foreign-born respondents.

A variety of variables describe objective measures of health and access to health care. Access measures include current insurance coverage (yes or no) and having a usual place of care (yes or no). Objective health indicators include participation in moderate exercise over last 30 days (less than 1 time, 1-3 times or more than 3 times), smoking history (every day, some days, not at all), body mass index (normal, over or underweight and obese), number of doctor's visits in the last 12 months (none, 1-2, 3-4 and 5 or more) and the number of health conditions a doctor ever told the respondent they had (none, 1-3 and 4 or more). The health conditions used in the latter indicator included arthritis, asthma, diabetes, hypertension, heart disease and cancer due to the chronicity of these conditions and their prevalence among elderly persons. The aforementioned objective measures are used as predictors of health as well as to test for possible somatization effects.

Statistical Analysis

Analyses were completed using Release version 8.02 of the SAS System, including the FREQ and GENMOD procedures (SAS Institute Inc., 2000; Allison, 1999). Bivariate analyses examined differences across nativity for each category of the independent variables using the Chi-squared test

statistic. Having dichotomized the dependent variable, multivariate analyses tested the odds of reporting "fair/poor" health versus "good/very good/excellent" health specifying a logit link in the GENMOD procedure.

Results

Table 1 includes descriptive statistics for all the variables included in the analysis, broken down by immigrant status. Native born individuals represent the largest segment of the study population at 85% with non-citizens forming the smallest group (4%) and naturalized citizen the balance (11%). The results indicate that the three study groups form very distinct population sub-groups with naturalized citizens more similar to native born persons in some cases and non-citizens in other cases. Non-citizens are generally younger than individuals from the other two groups, with 72% of non-citizens in the youngest age group (51-64) compared with around 50% for native born and naturalized citizens. Females form the majority of respondents across all three groups, reflecting the gender distribution of the elderly population nationally. The three groups differ considerably by racial/ethnic composition with whites by far predominating among the native born (82%), Latinos forming the majority for non-citizens (53%) and naturalized citizens more evenly distributed across categories, with large numbers of whites, Latinos and Asians/Pacific Islanders. Distributions by marital status and work status appeared similar across immigrant groups and very few respondents reported ever feeling discriminated against.

For the remainder of the variables, significant differences arose across study groups. The findings highlight the much lower socioeconomic status, lower levels of acculturation and inferior access to health care among non-citizens but some contrasting indicators for health status. A far greater percentage of non-citizens than naturalized citizens or natives attained less than a high school degree (53%, 24% and 10%, respectively). Similarly, non-citizens were far more likely to report household income at 0-99% of the federal poverty level (34%, versus 18% for naturalized and 8% for native citizens) and more crowded living conditions (45% of non-citizens reported 3 or more individuals living

in the household compared with 30% for naturalized citizens and 15% for natives). As noted above, non-citizens were less likely to speak only English in the home, were more likely to have arrived in the U.S. within the last 10 years (18% as opposed to 2% among foreign-born persons who naturalized) and were far less likely to say they could speak English well or very well (48% versus 82% for naturalized citizens).

Non-citizens were twice as likely as natives and 1.5 times as likely as naturalized citizens to rate their overall health as only "fair" or "poor." On nearly every indicator of health status, non-citizens fared worse than members of the other two groups. These more recent arrivals were less likely than others to have engaged in moderate exercise but were equally likely as natives to smoke every day and to report a body mass index that put them in the obese range. Although non-citizens were the least likely to have visited a physician in the last 12 months and reported the presence of the fewest health conditions these factors may be more indicative of insufficient access to care than superior health, particularly given the fact that far fewer non-citizens than either natives or naturalized citizens reported either current access to health insurance or a usual place of care. The fewer number of physician visits may stem from these access barriers which would, in turn, impact the report of health conditions as these reports require a physician's diagnosis.

Table 2 examines the percentage of each immigrant group reporting "fair/poor" self-rated health for each category of the independent variables. As reported above, the results indicate that non-citizens are twice as likely as natives and one and one-half times as likely as naturalized citizens to report "fair/poor" health. With very few exceptions, the results indicate that immigrants, particularly non-citizens, are far more likely to rate their health as "fair" or "poor" than natives. Not unexpectedly, the results indicate that, across immigrant categories, individuals of lower socioeconomic status and more chronic conditions report lower health ratings. Individuals with less than a high school degree, those at 0-99% of the federal poverty level and persons with more doctor's visits and a higher number of health conditions all consistently rate their health more poorly than others (with the effects particularly

apparent among non-citizens). The results also confirm the deleterious effects of discrimination on health with those reporting any experience with discrimination more likely to rate their health poorly (Williams et al., 2001; Williams, 2000; Noh et al, 1999; Krieger, 1990).

Contrary to the findings of prior studies, the results from this bivariate analysis suggest that more-acculturated elders do not fare any worse than natives, however, less acculturated immigrants *do* appear to experience worse health. Immigrants who speak only English at home or who report speaking English well or very well are equally likely as natives to report fair/poor health (around 20%). On the other hand, those immigrants who speak only Spanish at home and those who have not obtained citizenship are far more likely than natives (or naturalized citizens) to report worse health.

Results from multivariate analyses, performed using logistic regression of "fair/poor" self-rated health on the set of independent variables, appear in Table 3. In order to counteract the disproportion influence on model estimates that native born respondents would have in a pooled model separate analyses were run for each group. Comparison across columns indicates the factors that influence a poor health rating.

For the sake of model parsimony, categories for some independent variables were collapsed. Due to the small number of Asians/Pacific Islanders in the native group and "others" in the two immigrant groups, these categories were combined in multivariate models. As relatively smaller numbers of elders possess a college or graduate degree, the educational attainment variable contrasted three categories: less than a high school degree, high school degree and some college. Poverty level and household size were dichotomized to contrast below 200% of the federal poverty level versus 200% or greater and persons living alone versus others, respectively. Prior research suggests 200% of the poverty level as an appropriate cut-off with the "economically vulnerable" population (i.e., those defined as "poor" and "near poor") reporting annual incomes above the poverty threshold but less than twice the poverty level (Williams et al., 2001).

Similarly, analyses contrasted those who never smoked with all others and individuals with a normal body mass index versus others. Finally, participation in exercise, number of doctor's visits and number of health conditions were treated as continuous variables. In addition, work status correlated strongly with age, given that the majority of individuals included in the sample were at or near retirement age. For this reason, work status was excluded from multivariate analyses.

The results indicate that nearly all of the independent variables significantly influence self-reported health among natives but that only a handful impact the health rating of immigrants (either naturalized or non-citizen). The results for natives conform to general expectations. Although previous research reports mixed findings, the results of this analysis suggest that older women experience better health than older men, at least among natives. Younger age, the married state, metropolitan residence and participation in moderate exercise are associated with better reported health while racial/ethnic minorities, those with lower education and income, those experiencing discrimination and poor health/health habits (e.g., smoking) are associated with poorer health. One unexpected finding is that those with insurance are more likely to say their health is only fair or poor. However, this may result through the inability to determine causality. Possibly, those who perceive their health more negatively feel a greater need to obtain insurance. This reasoning would also explain the findings for physician's visits and presence of health conditions as those with more conditions are likely to make more frequent doctor's visits and require insurance coverage.

Results across immigrant groups suggest that similar factors influence the report of health among foreign-born elderly. As with natives, immigrants with lower educational attainment and household income are more likely to rate their health as "fair" or "poor." Similarly, those with more frequent doctor's visits and a greater number of chronic conditions report poorer health. Insurance status and participation in moderate exercise influenced health rating for naturalized citizens in the same way as natives but did not affect health outcomes for non-citizens. Neither having smoked nor having a body mass index outside the normal range influenced immigrant health. The results indicate a positive

relationship between acculturation and health rating. English language ability was one of the strongest predictors of health rating among the foreign-born population.

Discussion

The results of this study confirmed prior research finding poorer health ratings for foreign-born elderly. Additionally, the present study suggests that acculturation plays an important role in determining health status. Poor facility with the English language was one of the strongest predictors of negative health ratings. In addition to some of the commonly used measures of acculturation (e.g., years spent in the U.S. and English language ability) this study used immigration status as an indicator of relative acculturation. The results clearly support the assumption that for this study population, immigrant status serves as a highly appropriate proxy for acculturation level. Naturalized citizens were far more likely to use English at home and rate their English ability as very good. Similarly, non-immigrants typically arrived in the U.S. more recently. These findings offer significant evidence for the need to differentiate by immigration status. Studies that contrast natives with foreign-born miss the important influences and factors that citizenship status connote.

The results do not support a somatization effect for foreign-born elderly health. The objective health indicators (i.e., number of health conditions, number of doctor's visits, etc.) appeared to conform to individual health ratings. In fact, non-citizens (disproportionately Latinos) who rated their health as fair or poor experienced far more doctor's visits and a greater number of prior health conditions. However, the vast majority of respondents arrived in the U.S. 10 or more years prior to being interviewed. The fact that non-citizens rated their health more poorly than members of the other two groups does not necessarily support the negative selection effect for elderly immigrants. Rather, this finding provides supports the interpretation of acculturation's effect, as discussed above.

Limitations and Strengths

The cross-sectional nature of the study design significantly impairs the ability to draw causal inferences regarding health predictors and status. As with similar studies, this design does not permit an interpretation of whether lower socioeconomic status leads to poorer perceived health or whether poorer health causes lower economic standing, for example. Similarly, the CHIS contains very limited information on context of arrival for immigrants. Elderly immigrants with frequent prior visits or a long history of residence in the U.S. likely differ in their experiences of the acculturation process than more recent, first-time arrivals. Evidence from longitudinal research is required to adequately address these issues.

Another limitation concerns the lack of qualitative data. Reliance on survey data limits the ability to examine ethnic differences in what self-report of health means (Gibson, 1991; Angel et al., 1989; Jylha et al., 1998). Although much research has been conducted in the area of meaning in health self-reports the best approach for a study of this nature would be to combine qualitative and quantitative methods to better inform the meaning and significance of self-assessed health. Particularly when the populations under consideration incorporate such diverse groups, qualitative interpretation is necessary.

The data used in this study were limited to residents of California. Although the data set includes weights for extrapolating findings to the national population, a representative sample of foreign-born persons would be preferable for this type of analysis. Latinos, particularly Mexicans, heavily predominate among immigrants to southwestern states (Guzman, 2001; Ramirez et al., 2003). Focussing on California limits the ability to draw conclusions regarding alternative sending countries.

Conclusions

Evidence from longitudinal research, such as the New Immigrant Study (Jasso et al., 2000), will provide much richer evidence of how the immigration process interacts with various aspects of the acculturation process. Until these (or similar) data become available, immigration researchers and others

interested in the health outcomes for racial and ethnic minority groups, must continue to build evidence for likely relationships. In the meantime, this study confirms the need for greater differentiation among foreign-born populations in assessments of health and well being.

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Table 1: Demographic Characteristics of Study Population: Unweighted

	Native Born		Naturalized		Non-Citizen	
	N	**%**	**N**	**%**	**N**	**%**
Total	*19,347*	*85.2*	*2,424*	*10.7*	*951*	*4.2*
Age						
51 - 64	9,716	50.2	1,335	55.1	682	71.7
65 - 74	4,986	25.8	636	26.2	186	19.6
75+	4,645	24.0	453	18.7	83	8.7
Gender						
Male	7,703	39.8	962	39.7	406	42.7
Female	11,644	60.2	1,462	60.3	545	57.3
Race/Ethnicity						
White	15,762	81.5	970	40.0	244	25.7
Latino	1,270	6.6	716	29.5	499	52.5
API	310	1.6	686	28.3	193	20.3
Other	2,005	10.4	52	2.2	15	1.6
Marital Status						
Married	9,655	50.0	1,427	59.0	542	57.1
Never Married	1,006	5.2	121	5.0	73	7.7
Not Currently Married	8,635	44.8	872	36.0	334	35.2
Work Status						
At work	7,246	37.5	987	40.7	410	43.1
No work/not looking	11,369	58.8	1,343	55.4	484	50.9
With job/not at work	494	2.6	55	2.3	22	2.3
No work/looking	238	1.2	39	1.6	35	3.7
Educational Attainment						
< High School Degree	1,902	9.8	572	23.6	504	53.0
High School Degree	5,241	27.1	528	21.8	160	16.8
Some College	5,901	30.5	539	22.2	125	13.1
College Degree	3,276	16.9	488	20.1	102	10.7
Post College	3,027	15.7	297	12.3	60	6.3
Metro Residence						
Metro	16,151	83.5	2,234	92.2	847	89.1
Non-Metro	3,196	16.5	190	7.8	104	10.9
Federal Poverty Level						
0-99%	1,625	8.4	443	18.3	322	33.9
100-199%	3,998	20.7	614	25.3	286	30.1
200-299%	3,122	16.1	355	14.7	122	12.8
300+%	10,602	54.8	1,012	41.8	221	23.2
Household Size						
1 Person	7,441	38.5	671	27.7	209	22.0
2 People	8,960	46.3	1,030	42.5	314	33.0
3 or More People	2,946	15.2	723	29.8	428	45.0
Language Spoken at Home						
English Only	17,433	90.1	669	27.6	169	17.8
Spanish Only	35	0.2	238	9.8	326	34.3
English and Spanish	1,069	5.5	420	17.3	152	16.0
Other	807	4.2	1,096	45.2	303	31.9
Ability to Speak English						
Well/Very Well	19,252	100.0	1,660	82.4	372	48.4
Not Well	0	0.0	355	17.6	397	51.6

Table 1 continued…

Years in U.S.						
Less than 10	NA	NA	41	1.7	168	17.7
10 or More	NA	NA	2,376	98.3	780	82.3
Experienced Discrimination						
Never	18,185	95.7	2,265	95.1	875	93.9
Due to Race/Ethnicity/Language	54	0.3	29	1.2	19	2.0
Other Reason	768	4.0	87	3.7	38	4.1
Global Health Self-Rating						
Excellent/Very Good/Good	14,978	77.5	1,662	68.7	515	54.4
Fair/Poor	4,345	22.5	759	31.4	432	45.6
Currently Have Insurance						
Yes	18,484	95.5	2,216	91.4	685	72.0
No	863	4.5	208	8.6	266	28.0
Moderate Exercise Last 30 Days						
Less than 1 Time	8,666	45.0	1,347	55.9	599	63.5
1 to 3 Times	6,595	34.3	651	27.0	190	20.1
4 or More Times	3,988	20.7	414	17.2	155	16.4
Ever Smoke						
Every day	2,235	11.6	155	6.4	120	12.6
Some days	490	2.5	71	2.9	33	3.5
Not at all	16,617	85.9	2,198	90.7	798	83.9
Body Mass Index						
Normal	7,408	38.9	1,068	45.3	309	37.7
Over/Under Weight	7,536	39.5	926	39.3	320	39.1
Obese	4,115	21.6	363	15.4	190	23.2
Doctor's Visits in Last 12 Months						
None	1,688	8.8	264	11.1	174	18.7
1 to 2	6,572	34.4	828	34.8	318	34.2
3 to 4	4,769	25.0	616	25.9	183	19.7
5 or More	6,073	31.8	671	28.2	256	27.5
Number of Health Conditions						
None	4,231	21.9	714	29.5	337	35.4
1 to 3	11,229	58.0	1,367	56.4	497	52.3
4 or More	3,887	20.1	343	14.2	117	12.3
Have a Usual Place of Care						
Yes	18,485	95.7	2,263	93.4	789	83.1
No	836	4.3	160	6.6	161	17.0

Source: California Health Interview Survey (2001 Adult File)

Table 2: Percent Reporting Fair/Poor by Immigration Status: Unweighted

	Native Born %	Naturalized %	Non-Citizen %
Total	*22.5*‡	*31.3*‡	*45.4*‡
Age			
51 - 64	17.9‡	28.8‡	45.0‡
65 - 74	22.6‡	31.6‡	45.7‡
75+	31.9‡	38.2‡	48.2‡
Gender			
Male	20.7‡	29.1‡	41.4‡
Female	23.6‡	32.8‡	48.4‡
Race/Ethnicity			
White	20.3	20.7	18.4
Latino	33.2‡	46.1‡	61.9‡
API	16.8‡	31.5‡	38.9‡
Other	33.8	23.1	20.0
Marital Status			
Married	18.2‡	28.8‡	43.4‡
Never Married	21.9‡	30.6‡	41.1‡
Not Currently Married	27.3‡	35.3‡	50.0‡
Work Status			
At work	9.4‡	20.9‡	34.1‡
No work/not looking	31.0‡	39.1‡	55.0‡
With job/not at work	15.2‡	25.5‡	50.0‡
No work/looking	24.8	35.9	42.9
Educational Attainment			
< High School Degree	49.9‡	56.3‡	65.1‡
High School Degree	26.8	29.4	29.4
Some College	21.6	27.1	23.2
College Degree	12.8‡	18.2‡	18.6‡
Post College	9.8‡	15.8‡	15.0‡
Metro Residence			
Metro	21.5‡	30.5‡	44.5‡
Non-Metro	27.1‡	40.5‡	52.9‡
Federal Poverty Level			
0-99%	50.8‡	54.9‡	67.1‡
100-199%	34.7‡	40.9‡	47.9‡
200-299%	25.4	30.1	32.0
300+%	12.6‡	15.6‡	18.1‡
Household Size			
1 Person	26.5‡	31.6‡	40.7‡
2 People	19.5‡	29.5‡	38.9‡
3 or More People	21.5‡	33.6‡	52.6‡
Language Spoken at Home			
English Only	21.8	19.1	18.9
Spanish Only	45.7‡	62.2‡	70.2‡
English and Spanish	32.2‡	39.8‡	50.0‡
Other	21.8‡	28.8‡	31.4‡

Table 2 continued…

Ability to Speak English			
Well/Very Well	22.3	19.9	17.7
Not Well	NA	63.1	68.0
Years in U.S.			
Less than 10	NA	51.2	47.0
10 or More	NA	30.9‡	45.0‡
Experienced Discrimination			
Never	21.1‡	30.1‡	43.5‡
Due to Race/Ethnicity/Language	50.0	48.3	63.2
Other Reason	40.0‡	40.2‡	68.4‡
Currently Have Insurance			
Yes	27.5‡	40.0‡	57.5‡
No	5.2‡	12.4‡	31.5‡
Moderate Exercise Last 30 Days			
Less than 1 Time	31.3‡	38.5‡	52.3‡
1 to 3 Times	14.6‡	22.0‡	34.2‡
4 or More Times	16.0‡	21.7‡	31.6‡
Ever Smoke			
Every day	30.4‡	25.8‡	47.5‡
Some days	27.1	31.0	39.4
Not at all	21.2‡	31.7‡	45.4‡
Body Mass Index			
Normal	18.4‡	25.4‡	31.4‡
Over/Under Weight	20.2‡	30.8‡	42.5‡
Obese	33.3‡	44.1‡	58.4‡
Doctor's Visits in Last 12 Months			
None	11.5‡	14.0‡	32.2‡
1 to 2	10.0‡	19.8‡	33.3‡
3 to 4	21.0‡	30.0‡	53.0‡
5 or More	38.9‡	50.8‡	61.3‡
Number of Health Conditions			
None	6.2‡	13.6‡	25.2‡
1 to 3	19.9‡	33.9‡	53.3‡
4 or More	47.7‡	58.0‡	70.1‡
Have a Usual Place of Care			
Yes	22.8‡	31.6‡	46.8‡
No	15.8‡	26.9‡	39.1‡

Source: California Health Interview Survey (2001 Adult File) Note: ‡ - Denotes significant differences by nativity at $p < 0.01$ using the Chi-Squared test.

Table 3: Logistic Regression Analysis for Self-Rated Health Fair/Poor among Elderly

	Native Born		Naturalized		Non-Citizen	
	Estimate	**95% CI**	**Estimate**	**95% CI**	**Estimate**	**95% CI**
Age (vs. 75+)						
51 - 64	-0.257*	(-0.37 , -0.15)	0.072	(-0.28 , 0.43)	0.323	(-0.42 , 1.06)
65 - 74	-0.321*	(-0.43 , -0.21)	-0.306	(-0.67 , 0.06)	-0.114	(-0.89 , 0.66)
Gender (vs. Male)						
Female	-0.150*	(-0.24 , -0.06)	-0.130	(-0.40 , 0.14)	0.167	(-0.24 , 0.58)
Race/Ethnicity (vs. White)						
Latino	0.468*	(0.32 , 0.62)	0.172	(-0.20 , 0.54)	0.060	(-0.66 , 0.78)
Other	0.233*	(0.12 , 0.35)	0.199	(-0.13 , 0.53)	-0.073	(-0.77 , 0.63)
Marital Status (vs. Not Married)						
Married	-0.161†	(-0.29 , -0.03)	-0.316	(-0.68 , 0.05)	0.397	(-0.09 , 0.89)
Never Married	0.093	(-0.09 , 0.28)	0.150	(-0.43 , 0.73)	-0.145	(-0.96 , 0.67)
Educational Attainment (vs. Some College)						
< High School Degree	0.876*	(0.75 , 1.01)	0.410†	(0.00 , 0.82)	0.840*	(0.22 , 1.46)
High School Degree	0.365*	(0.27 , 0.46)	0.067	(-0.25 , 0.38)	0.135	(-0.49 , 0.76)
Metro Residence (vs. Non-Metro)						
Metro	-0.173*	(-0.28 , -0.07)	0.014	(-0.43 , 0.46)	0.187	(-0.44 , 0.81)
Federal Poverty Level (vs. 200%+)						
Less than 200%	0.730*	(0.64 , 0.82)	0.554*	(0.27 , 0.83)	0.773*	(0.28 , 1.27)
Household Size (vs. 2+ People)						
Alone	0.013	(-0.11 , 0.14)	-0.184	(-0.57 , 0.20)	0.069	(-0.50 , 0.64)
Ability to Speak English (vs. Well/Very Well)						
Not Well	---	---	1.335*	(0.95 , 1.72)	1.541*	(0.94 , 2.14)
Years in U.S. (vs. < 10)						
10 or More	---	---	-0.628	(-1.53 , 0.28)	-0.123	(-0.65 , 0.40)
Experienced Discrimination						
Yes	0.707*	(0.54 , 0.88)	0.247	(-0.29 , 0.78)	1.126*	(0.29 , 1.96)
Currently Have Insurance						
Yes	0.622*	(0.42 , 0.82)	0.727*	(0.24 , 1.21)	0.233	(-0.29 , 0.76)
Moderate Exercise Last 30 Days	-0.367*	(-0.42 , -0.31)	-0.377*	(-0.55 , -0.20)	-0.176	(-0.44 , 0.09)
Ever Smoke (vs. Not at all)						
Some	0.491*	(0.38 , 0.60)	0.141	(-0.28 , 0.56)	0.454	(-0.08 , 0.99)
Body Mass Index (vs. Normal)						
Over/Under Weight	0.222*	(0.13 , 0.31)	0.157	(-0.10 , 0.42)	0.241	(-0.21 , 0.70)
Doctor's Visits Last 12 Months	0.592*	(0.55 , 0.64)	0.584*	(0.44 , 0.72)	0.328*	(0.11 , 0.54)
Number of Health Conditions	0.962*	(0.89 , 1.03)	1.034*	(0.81 , 1.25)	1.122*	(0.76 , 1.48)
Have a Usual Place of Care						
Yes	0.152	(-0.08 , 0.39)	0.003	(-0.58 , 0.58)	-0.179	(-0.79 , 0.43)
Sample Size	4,345		759		432	
-2 Log Likelihood	15,665.1		1,648.3		652.8	

Source: California Health Interview Survey (2001 Adult File) Note: † - $p < 0.05$, * - $p < 0.01$