An Overview of Korean Immigrants' Health in the United States

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Koreans are the fifth largest Asian group in the United States (U.S.), following Chinese, Indians, Filipinos, and Vietnamese (Min 2012). However, there seems to be no comprehensive study that has examined Korean immigrants' health, nor any studies that have compared their health to other Asian immigrant groups as well as native-born Whites. This is mainly due to data limitations; Koreans are often included as a single "Asian" category in most recent national health data, such as the National Health Interview Survey (NHIS) or National Health and Nutrition Examination Survey (NHANES). For example, since 1995, the NHIS data does not specify Korean ethnicity. For some reason, it only distinguishes Chinese and Filipinos from other Asian groups. Another national survey, the National Latino and Asian American Study (NLAAS) 2002-2003 also separates only some Asian groups with a relatively large number of respondents (e.g., Chinese, Filipino, and Vietnamese) and includes Korean with other Asian groups with relatively smaller numbers (e.g., Japanese and East Indian).

Analyzing the most suitable data sources, this paper intends to provide an overview on a variety of topics related to the health of Korean immigrants, including their health status, health conditions, health behaviors, health insurance status, and healthcare utilization. This paper also compares various aspects of Korean immigrants' health with native-born non-Hispanic Whites—who are assumed to be the healthiest and most privileged group in terms of various health-related issues—and other Asian immigrant subgroups.

Three main data were used in this paper. First, most statistical tables were based on analyses of the 2016 California Health Interview Survey (CHIS). This population-based survey

asked various health-related questions; the sample included 21,055 California residents from 58 countries. One of the main advantages of utilizing this data is that it includes significant numbers of foreign-born Koreans. It also has a large enough number of other foreign-born Asian groups, which allows for comparative analysis regarding immigrants' various health-related issues in the United States. The main limitation of this data is that it only includes individuals who reside in California. However, given the fact that the Los Angeles metropolitan area has the largest Korean population in the U.S. (Min 2012), it can be still considered as appropriate data to be analyzed for this paper.

Second, the 2003 New Immigrant Survey (NIS) was analyzed when some health-related variables were not possible from the 2016 CHIS data. The 2003 NIS data only includes new and legal immigrants who became permanent residents during the 2003-2004 period. Thus, immigrants who have lived in the U.S. for a long time are not included in this data. Although the NIS data asks extensive questions about a number of topics (e.g., pre-immigration experiences, immigration history, employment, etc.), the sample only includes a small number of Korean immigrants (N=142). Furthermore, it is not feasible to compare Korean immigrants to native-born Whites or other racial and ethnic groups, as the NIS data only includes immigrants. Yet, despite these limitations, the NIS data includes many useful questions about immigrants' health and healthcare utilization. Last, I analyzed the 2011-2015 American Community Survey (ACS) data to compare Korean immigrants' health insurance status with that of native-born non-Hispanic Whites and other immigrant groups. The ACS was considered as the most useful for this particular analysis because it contains a larger number of foreign-born Korean and other groups than the first two data sets.

All statistical analyses were performed using Stata 13. The same descriptive analyses of each health-related variable has been conducted for foreign-born Koreans, native-born non-Hispanic Whites, and other foreign-born Asian groups with a substantial sample size (e.g., Filipino, Chinese, and Vietnamese) to compare various health features of Korean immigrants to those groups. I also conducted Chi-squared tests to see whether some variables (e.g., educational level, English proficiency, and age) have an association with Korean immigrants' health.

Health Status

Table 1 shows that Korean immigrants reported worse overall health status than native-born non-Hispanic Whites and most other Asian immigrant groups. Slightly more than a quarter of Korean immigrants have excellent or very good health, whereas more than half of native-born non-Hispanic Whites reported that their current health status is excellent or very good. Following the native-born non-Hispanic Whites, 42% of Chinese immigrants and 40% of Filipino immigrants show high rates of having excellent or very good health conditions. Vietnamese was the only Asian immigrant group who are more likely to have poorer self-rated health than Korean immigrants; only 17% reported that they have excellent or very good health. The percentage of Korean immigrants who answered that their current health status is poor (13.4%) is more than double that of native-born non-Hispanic Whites (5.5%) and more than four times that of Chinese immigrants (3.9%). The only group with a higher rate of self-reported poor (19.8%) than Koreans (13.4%) were the Vietnamese.

Table 1. Self-reported Health Status of Korean Immigrants, Compared with Native-born Non-Hispanic Whites and Other Asian Immigrant Groups (%)

	Native-born non-Hispanic White	All immigrants	Asian immigrants	Korean	Filipino	Chinese	Vietnamese
Excellent	18.0	13.6	13.2	10.5	13.6	14.5	4.6
Very Good	33.4	19.9	22.7	16.7	27.2	27.4	12.0
Good	30.3	32.9	33.0	33.3	37.1	33.9	29.2
Fair	12.9	26.1	22.4	26.1	14.1	20.5	34.4
Poor	5.5	7.5	8.8	13.4	8.0	3.9	19.8
N	10,758	5,633	1,947	276	213	650	349

Source: 2016 California Health Interview Survey (CHIS)
Survey questionnaire: Would you say that in general your health is excellent, very good, good, fair, or poor?

Previous studies have indicated that several important factors are associated with an individual's self-reported health status. First, scholars have found that socioeconomic status is associated with self-reported health status. Analyzing the 1986-1994 National Health Interview Survey (NHIS), McGee et al. (1999) confirmed that this relationship is significant among Whites, Blacks, Hispanics, Asian/Pacific Islanders, and Native Americans. Focusing on Asian immigrants only, Gong et al. (2012) have indicated that subjective socioeconomic status rather than conventional socioeconomic status has a strong relationship with one's self-rated physical health. Second, perceived discrimination has a significant relationship with poor self-reported health among minorities, including Asian, Black, and Latino adults. Last, immigrants' acculturation is associated with their self-reported health. For example, Lee et al. (2000) have found that Korean men with a higher level of acculturation show better self-reported health than their less acculturated counterparts. Many scholars have used English proficiency as a measure of immigrants' acculturation, and have found that it is significantly associated with their self-reported health as well. Pottie et al. (2008) found that new immigrants to Canada with poor proficiency in English or French have worse self-reported health; furthermore, the impact of

language proficiency is more significant for female immigrants than male immigrants. Furthermore, bilingual Latino and Asian immigrants have better self-rated health than their monolingual counterparts, which includes those who speak only English or only their native language (Schachter et al. 2012).

Considering these factors, it is understandable why Korean immigrants show worse self-reported health than native-born non-Hispanic Whites and most other Asian immigrant groups. While one's educational level or type of employment are assumed as important measures of one's socioeconomic status, the proportion of immigrants with high school degrees or less was higher among Korean immigrants (38.0%) than native-born non-Hispanic Whites and most other Asian groups. Table 2 shows that only Vietnamese immigrants, the only group who had worse health status than Koreans, show lower educational attainment than Korean immigrants. Furthermore, Korean immigrants have the highest rates of not being in the labor force and being self-employed. Lastly, except for Vietnamese immigrants, Korean immigrants had the worst English proficiency among all Asian immigrant groups. The analysis of the Chi-squared test confirms that Korean immigrants' self-reported health status has a significant association with their educational level, type of employment, and English proficiency.

Table 2. Socioeconomic Status and English Proficiency of Korean Immigrants, Compared with Other Asian Immigrant Groups (%)

	Native-born non-Hispanic White	All immigrants	Asian immigrants	Korean	Filipino	Chinese	Vietnamese
Educational Attainment							
High school or below	24.8	52.3	31.2	38.0	22.1	19.2	63.6
Some college/AA	29.2	14.6	14.6	8.3	24.9	11.7	12.6
BA	26.8	20.0	32.5	36.6	43.2	34.9	18.1
MA/PhD	19.2	13.4	21.7	17.0	9.9	34.2	5.7
Type of employment							
Not in labor force/unemployed	53.8	46.4	55.4	69.9	43.3	53.7	67.9
Private	25.1	36.9	29.1	16.7	39.9	28.8	23.8
Government	8.3	6.1	6.6	3.3	11.3	8.3	3.2
Self-employed/family business/farm	12.8	10.6	8.9	10.1	5.5	9.2	5.1
% self-employed among all employees	25.2	17.4	17.5	29.0	11.2	18.6	12.5
English Proficiency							
Speak only English	92.5	12.6	9.2	4.7	16.9	9.4	3.7
Very well/well	7.4	42.1	54.0	40.6	69.5	60.0	28.4
Not well/not at all	0.1	45.3	36.7	54.7	13.6	30.6	67.9
N	10,758	5,633	1,947	276	213	650	349

Source: 2016 California Health Interview Survey (CHIS)

Paradoxically, Table 3 shows that the proportion of immigrant respondents who indicated having excellent childhood health status was the highest among Korean immigrants. More than three-quarters of Korean immigrants responded that their childhood health was excellent or very good. However, compared with their health before coming to the U.S., the vast majority of Korean immigrants (80%) answered that their current health status is about the same or worse. The proportion of Korean immigrants who indicated having worse health status at the time of the survey compared to before they came to the U.S. (16.8%) was about as three times higher than the Filipino (4.7%) or Vietnamese (4.6%) immigrant groups. When their current health status

was compared to a year before the survey, about 15% of Korean immigrants said that their current health was worse than the previous year. This is striking because only 4% of Filipinos, 8% of Chinese, and 5% of Vietnamese indicated that their current health was worse than the previous year. This finding suggests that new Korean immigrants tend to experience serious downgrades in socioeconomic status or have more difficult times acculturating to U.S. society.

Table 3. Comparative Health Condition of Korean Immigrants, Compared with Other Asian Immigrant Groups (%)

	All immigrants	Asian immigrants	Korean	Filipino	Chinese	Vietnamese
Childhood health status [a)]						
Excellent	52.8	48.2	51.1	50.2	39.8	30.5
Very Good	27.4	30.3	29.2	33.0	39.3	26.4
Good	15.7	17.9	13.9	15.4	14.4	38.2
Fair	3.5	3.1	5.1	1.4	5.6	5.0
Poor	0.6	0.4	0.7	0.0	0.9	0.0
N	8,240	2,535	137	430	450	220
Compared before coming to the U.S. [b)]						
Better	21.0	20.4	19.7	23.0	15.9	18.6
About Same	70.0	71.3	63.5	72.3	73.9	76.8
Worse	9.0	8.3	16.8	4.7	10.2	4.6
N	8,225	2,537	137	430	452	220
Compared with a year ago [c)]						
Better	17.1	15.6	15.3	22.7	9.7	13.2
About Same	76.8	78.4	70.1	73.3	82.5	81.8
Worse	6.1	6.0	14.6	4.0	7.8	5.0
N	8,242	2,538	137	431	452	220

Source: 2003 New Immigrant Survey (NIS) data

Questionnaire: a) Consider your health while you were growing up, from birth to age 16. Would you say that your health during that time was excellent, very good, good, fair, or poor? b) Compared with your health right before you most recently came to the United States to live, would you say that your health is better now, about the same, or worse? c) Compared with your health a year ago, would you say that your health is better now, about the same, or worse?

Health Conditions

An individual's health conditions, especially chronic diseases, are important because they influence one's daily life as well as healthcare utilization. In this section, the prevalence of Korean immigrants' health conditions (e.g., hypertension, diabetes, and heart disease) is

presented and compared with those of native-born non-Hispanic Whites and other Asian immigrant groups. Table 4 indicates that similar patterns are observed when Korean immigrants' hypertension and heart disease rates are compared to those of other racial and ethnic groups; Koreans have higher hypertension and heart disease rates than native-born non-Hispanic Whites and other Asian immigrant groups, except Vietnamese. This similarity is probably due to the fact that hypertension is one of the most influential factors that can lead to heart disease among Korean immigrants (Kim et al. 2001).

Table 4. Hypertension, Diabetes, Heart Disease Status of Korean Immigrants, Compared with Native-born Non-Hispanic Whites and Other Asian Immigrant Groups (%)

	Native-born Non-Hispanic White	All immigrants	Asian immigrants	Korean	Filipino	Chinese	Vietnamese
Hypertension [a)]							
%	42.3	37.2	40.3	46.4	43.2	39.5	48.4
Heart Disease [b)]							
%	13.3	8.5	9.1	9.1	8.5	8.5	12.9
Diabetes [c)]							
%	10.2	14.9	13.9	15.2	19.7	9.7	15.5
Elderly (65 years old or older)							
%	46.2	29.6	41.6	58.0	32.4	42.2	50.7
N	10,758	5,633	1,947	276	213	650	349

Source: 2016 California Health Interview Survey (CHIS)
Note: Borderline hypertension was coded as hypertension
Survey questionnaire: a) Has a doctor ever told you that you have high blood pressure? b) Has a doctor ever told you that you have any kind of heart disease? c) {Other than during pregnancy, has/Has} a doctor ever told you that you have diabetes or sugar diabetes?

Previous studies have shown that older adults are more likely to have hypertension and heart disease. The analysis (chi-squared test) of the data also confirms that respondents who are 65 years or older are more likely to have hypertension and any kind of heart disease ($p<.001$) than their younger counterparts. It is striking that almost half of Korean immigrants are living with high blood pressure, but their higher hypertension rate is likely to be associated with the

fact that the proportion of the elderly is much higher among Koreans compared to other racial and ethnic groups. Nearly 60% of Korean immigrants are 65 or older, while the proportion is less than 50% for other racial and ethnic groups.

Previous studies have examined various issues related to Korean immigrants' hypertension. In a study by Han et al. (2007), over 400 middle-aged Korean Americans had high blood pressure; however, they found that only slightly more than half (55%) of their middle-aged Korean sample had undergone therapy to lower their blood pressure. Furthermore, they found that more female Koreans had taken measures to lower their blood pressure than their male counterparts. According to their study, middle-aged Koreans with high blood pressure considered consuming less salt, exercising, and taking medication as important behavioral factors to manage their high blood pressure. Their insurance status and medical history of high blood pressure were two important factors to explain healthcare utilization among Korean immigrants with high blood pressure (Song et al. 2010).

In another study, Ton et al. (2011) compared knowledge and beliefs regarding cardiovascular disease among Chinese, Korean, and Vietnamese adult immigrants in Seattle. During the focus group discussions, Koreans pointed out having an "unbalanced American lifestyle" with less exercise and emotional change (e.g., stress) as notable risk factors for high blood pressure and heart disease. Another study (Kim et al. 2001) distinguished six risk factors for cardiovascular disease among Korean Americans or Korean immigrants aged 60 to 89 in Maryland. This study found that high blood pressure had the biggest impact on Koreans' cardiovascular disease. The next important factors were high blood cholesterol, being overweight, having inactive lifestyles, diabetes, and smoking. Based on their findings of Korean immigrants' knowledge and risk factors of heart attacks, Hwang et al. (2008) argued that there

should be proper health education for Korean immigrants, especially the elderly, those who have less education, and those who have no prior family history of heart attacks.

Table 4 illustrates that Korean immigrants have a higher diabetes rate (15.2%) than native-born non-Hispanic Whites (10.2%) and Chinese immigrants (9.7%). However, it is still lower than Filipinos (19.7%) and Vietnamese (15.5%). This finding is congruent with a previous study that found that Asian Americans have higher diabetes rates than non-Hispanic Whites (Islam et al. 2013). Previous studies on Korean immigrants' diabetes seem to be twofold. First, scholars have argued that better cultural and linguistic approaches are needed not only for the prevention (Choi et al. 2013) but also for the management behaviors of diabetes (Cha et al. 2012). Moreover, they have emphasized the importance of social and family support (Choi and Rankin 2009; Song et al. 2012) on Korean immigrants' control of diabetes, especially in terms of diet (Choi 2009), which has turned out to be positively associated with lowering the level of glucose among Korean immigrants with type 2 diabetes. Second, several scholars have conducted community-based intervention trials on diabetes with different methods in different geographical areas, such as using bilingual nurse counseling in the Baltimore-Washington DC area (Kim et al. 2009), offering workshops on diabetes in New York City (Islam et al. 2013), and a community-based self-help intervention program in the Baltimore-Washington DC area (Song et al. 2012).

Health Behaviors

Intake of food is one of the important everyday health behaviors that influences various aspects of health, including diabetes, hypertension, and overweight/obesity. After their migration to the

U.S., immigrants often experience "dietary acculturation," which refers to changes in their diet. In this section, I examine the frequency of Korean immigrants' fast food and soda consumption, which are often considered as examples of "westernized" or "Americanized" food. Their frequency of "Americanized" food consumption is compared to that of native-born non-Hispanic White and other Asian immigrant groups. Moreover, previous studies that have explored associated factors to immigrants' food consumption and dietary acculturation are discussed in this section. This section also examines the smoking, drinking, and exercise behaviors of Korean immigrants, all of which have influence on health conditions.

Table 5 shows that slightly more than half of Korean immigrants (55.1%) had fast food during the past week at the time of the survey. It is surprising that their rate of fast food consumption is higher than that of native-born non-Hispanic Whites (51.0%) and other Asian immigrant groups, such as Chinese (42.5%) and Vietnamese (30.1%). Only Filipino immigrants (65.3%) showed higher rates of fast food consumption than Korean immigrants. However, among those who actually consumed fast food during the past week at the time of the survey, Korean immigrants showed the lowest number of all the groups. Soda consumption follows a similar pattern; Korean immigrants (40.2%) show a higher rate than native-born non-Hispanic Whites (38.3%), Chinese immigrants (32.0%), and Vietnamese immigrants (24.3%), but lower than Filipino immigrants (53.1%). However, Koreans had a lower rate of soda consumption on average than any other groups who actually consumed soda during the last month at the time of the survey. There seems to be no study that examines the associated factors to Korean adult immigrants' fast food or soda consumption, so there needs to be a future study for that.

Table 5. Fast Food and Soda Consumption of Korean Immigrants, Compared with Native-born Non-Hispanic Whites and Other Asian Immigrant Groups (%)

	Native-born Non-Hispanic White	All immigrants	Asian immigrants	Korean	Filipino	Chinese	Vietnamese
Had fast food past week [a)]							
%	51.0	56.4	47.8	55.1	65.3	42.5	30.1
Number of Times Ate Fast Food Past Week (among those who had it) [a)]							
Mean	2.4	2.3	2.1	1.8	2.6	1.9	2.1
Had Soda last month [b)]							
%	38.3	49.0	36.6	40.2	53.1	32.0	24.3
Number of Times Drink Soda Last Month [b)]							
Mean	1.8	1.8	1.7	1.3	2.3	1.5	1.3
N	10,758	5,633	1,947	276	213	650	349

Source: 2016 California Health Interview Survey (CHIS)

Questionnaire: a) Now think about the past week. In the past 7 days, how many times did you eat fast food? Include fast food meals eaten at work, at home, or at fast-food restaurants, carryout or drive through. b) During the past month, how often did you drink regular soda or pop that contains sugar? Do not include diet soda.

Despite their relatively high fast food and soda consumption, the results in Table 6 suggest that Korean immigrants show a lower level of dietary acculturation than other Asian immigrant groups. For example, the mean score of similarity in diet after Korean immigrants' migration to the U.S. is 7.6, with 1 meaning completely different and 10 meaning exactly the same in terms of diet. Following Korean immigrants, Chinese immigrants (6.9) showed lower dietary acculturation than Filipinos (5.6) or Vietnamese (5.5). Furthermore, less than 40% of Korean immigrants answered that they now eat what they rarely ate before coming to the U.S., compared to 58.6% for the Filipino immigrant group. In another question related to dietary acculturation, only 16.2% of Korean immigrants answered that there is something they ate regularly before migration that they rarely ate after immigrating to the United States. In other words, the vast majority of them have stuck to the diet (presumably largely Korean) they ate before migrating. One important thing to consider is that Filipino immigrants who also show high fast food and soda consumption show the highest dietary acculturation among all Asian

immigrant groups. The results of Table 5 and 6 imply that Korean immigrants' high fast food and soda consumption is not truly coming from dietary acculturation.

Table 6. Dietary Acculturation of Korean Immigrants, Compared with Other Asian Immigrant Groups (%)

	All immigrants	Asian immigrants	Korean	Filipino	Chinese	Vietnamese
Similarity in diet (1=completely different; 10=exactly the same) [a)]						
Mean	5.8	6.5	7.6	5.6	6.9	5.5
N	8,170	2,518	135	429	447	219
Rarely ate before U.S. [b)]						
%	48.9	43.9	39.7	58.6	33.6	31.1
N	8,204	2,532	136	430	450	219
Ate regularly before U.S. [c)]						
%	42.8	38.8	16.2	61.3	32.8	28.0
N	8,202	2,526	136	431	448	218

Source: 2003 New Immigrant Survey (NIS) data
Survey questions: a) Using a scale from one to ten where 10 indicates exactly the same and 1 means completely different, how would you compare the similarity in the diet in the food you now normally eat in the United States with the food you normally ate in your home country? b) Is there something you eat a lot now that you rarely ate before you came to the United States? c) Is there something you ate regularly before coming to the United States that you rarely eat now?

Previous studies have found several associated factors to the diet acculturation of Chinese immigrants, who, like Korean immigrants, show a low level of diet acculturation: food quality, cost, and availability (Satia et al. 2000), higher education, higher income, longer stay in the U.S., and better English proficiency (Lv and Cason 2004). Studies that have examined Korean immigrants' dietary acculturation have found that Korean immigrants' higher adaptation of American culture and retention of Korean culture have a positive association with their consumption of American food (Lee et al. 1999a,b; Kim and Chan 2004; Yang et al. 2005), regardless of whether the foods are healthy or unhealthy (Jasti et al. 2011). According to previous studies, Korean immigrants consume more beef, dairy products, coffee, soda, and bread after migration (Kim et al. 2000), and less fish and rice (Kim et al. 2000). Kim and Chan (2004) compared two groups of Korean immigrants—low- and high- acculturated—and they have found

that the low-acculturated group is more likely to have rice, various kinds of *chigae* (Korean pot stew), *kimchi* (fermented Korean vegetables), and spinach, etc. On the other hand, high-acculturated groups tend to have more bread, cereal, sweets (candies, chocolate, and soft drinks), and so on. Chinese (Satia et al. 2000) and Korean immigrants (Lee et al. 1999b; Lynn et al. 2000) are most likely to have Americanized food for breakfast. Elderly Korean immigrants tend to eat at least two Korean meals a day in the U.S. (Lee et al. 2009).

Other important health behaviors that should be considered critical are smoking and drinking. In that regard, Table 7 and 8 show that Korean immigrants have relatively healthier behaviors than native-born non-Hispanic Whites and other immigrant groups. First, as previous studies have found, foreign-born immigrants and foreign-born Asians have lower smoking rates than native-born Whites (Baluja 2003; Kuerban 2016). Recent Korean immigrants who have lived in the U.S. less than 10 years are more likely to smoke now than their old-timer counterparts (Kim et al. 2000). Considering Korean immigrants, Table 7 shows that they have significantly lower rates of smoking (4.7%) than native-born non-Hispanic Whites (12.3%) and most other Asian immigrant groups. Only Chinese immigrants (4.2%) show slightly lower smoking rates than Korean immigrants.

Table 7. Smoking Status of Korean Immigrants, Compared with Native-born Non-Hispanic Whites and Other Asian Immigrant Groups (%)

	Native-born Non-Hispanic White	All immigrants	Asian immigrants	Korean	Filipino	Chinese	Vietnamese
Current Smoker (%)							
All	12.3	8.2	6.1	4.7	8.9	4.2	8.3
Male	13.8	13.6	10.9	9.6	14.3	7.6	16.2
Female	11.1	3.9	1.9	1.7	4.9	1.2	0
Smoking (%)							
Inapplicable (not smoked 100 or more cigarette in entire life)	54.1	73.5	80.0	80.1	74.7	83.4	75.6
Everyday	9.4	4.8	4.2	2.9	6.6	2.9	5.7
Some days	2.9	3.4	1.9	1.8	2.4	1.2	2.6
Not at all	33.7	18.3	13.9	15.2	16.4	12.5	16.1
N	10,758	5,633	1,947	276	213	650	349

Source: 2016 California Health Interview Survey (CHIS)
Questionnaire: Do you now smoke cigarettes every day, some days, or not at all?

Scholars have noted that Asian immigrants show a greater gender gap in smoking (Gorman et al. 2014; Kuerban 2016) than other groups. Regarding Korean immigrants, Kim et al. (2000) confirm that smoking is predominantly done by males and that the vast majority (almost 90%) of female Korean Americans have never smoked. Table 7 supports these earlier findings: only 1.7% of female Korean immigrants are current smokers, whereas about 10% of male Korean immigrants are smokers. To explain this gender gap, Kim et al. (2005) have pointed out that smoking is a common and core component of Korean men's society and of their gender identity.

Along with their relatively healthier smoking behavior, Korean immigrants' drinking behavior seems to be healthy as well when compared to other immigrant groups. Table 8 shows that only about half of Korean immigrants had ever drunk alcoholic beverages, compared to 61.4% of all Asian immigrant groups, on average. Among Asian immigrants, Vietnamese

immigrants show the highest drinking rate (87.3%) followed by Chinese (75.2%) and Filipinos (60.6%). Another study also found that Vietnamese immigrants are likely to have the highest risk of drinking than other Asian groups (Mikimoto 1998). Korean immigrants' drinking behavior is similar to what Lubben et al. (1989) found earlier. According to their study, about 58% of Korean immigrants were abstainers. Several factors were found to be associated with Korean immigrants' drinking habits; acculturation was positively associated with drinking among female Korean immigrants in California (Song et al. 2004), and practicing a religion was negatively associated with heavy drinking among Korean elderly immigrants in Canada (Kim 2012).

Table 8. Drinking Status of Korean Immigrants, Compared with Other Asian Immigrant Groups

	All	Asian	Korean	Filipino	Chinese	Vietnamese
Alcohol consumption						
%	61.4	68.4	50.4	60.6	75.2	87.3
N	8,244	2,538	137	431	452	220

Source: 2003 New Immigrant Survey (NIS) data
Survey questions: Do you ever drink any alcoholic beverages such as beer, wine, or liquor?

In contrast to their healthier smoking and drinking behaviors, Table 9 shows that Korean immigrants are the least likely to engage in light exercise, such as walking, dancing, gardening, golfing, or bowling. In fact, Korean immigrants show the highest rates of having *no* light exercise (24.1%) compared to other Asian immigrant groups. However, when it comes to vigorous exercise (e.g., aerobics, running, swimming, or bicycling), Korean immigrants show the highest frequency. They show the lowest rates of *not* practicing vigorous exercise and highest rates of practicing it every week among all Asian immigrant groups. This pattern is similar to what some previous studies have found. For example, Hofstetter and his associates (2008) have found that Korean immigrants show lower rates of walking exercise than other ethnic groups, but are likely to engage in vigorous physical activity. According to their study, being female, the low

level of acculturation, being married, and low educational level were negatively associated with practicing vigorous exercise among Korean immigrants. A study that has reviewed associated factors to immigrants' physical activity also pointed out the significant relationship between the level of acculturation and physical activity (Gerber et al. 2012). Yet another study, which only includes female middle-aged Korean immigrants in Central Texas, has found that there is no significant association between the level of acculturation and physical activity (Yang et al. 2007). To promote Korean immigrants' physical activity, Kim et al. (2014) have suggested that they join Korean clubs specializing in physical activities, such as badminton and tennis.

Table 9. Frequency of Physical Exercise of Korean Immigrants, Compared with Other Asian Immigrant Groups (%)

			Foreign-born				
	All	Asian	Korean	Filipino	Chinese	Vietnamese	Indian
Light Exercise [a)]							
Never	23.9	22.3	24.1	22.4	21.3	19.6	20.9
Per Week	73.1	74.8	70.0	74.1	76.1	78.6	76.2
Per Month	2.6	2.5	4.4	3.3	2.2	0.9	2.7
Per Year	0.4	0.4	1.5	0.2	0.4	0.9	0.2
N	8,202	2,524	137	428	451	220	673
Vigorous Exercise [b)]							
Never	63.9	68.8	65.7	71.6	67.5	83.1	65.9
Per Week	31.2	25.8	29.9	22.8	24.3	15.1	29.3
Per Month	3.8	4.0	3.7	4.4	6.4	0.9	3.4
Per Year	1.1	1.4	0.7	1.2	1.8	0.9	1.4
N	8,200	2,521	137	429	449	219	669

Source: 2003 New Immigrant Survey (NIS) data
Survey questions: a) How often do you participate in light physical exercise such as walking, dancing, gardening, golfing, bowling etc.? b) How often do you participate in vigorous physical exercise or sports such as aerobics, running, swimming, or bicycling?

Health Insurance and Healthcare Utilization

Having health insurance is a critical part of one's life because it is closely related to healthcare utilization. However, despite its significance, immigrants show a lower rate of being insured than the native-born population (Buchmueller et al. 2007; Thamer et al. 1997). Immigrants' insured

status is known to be associated with many reasons, such as their employment status (Buchmueller et al. 2007), length of stay in the U.S. (Choi 2006; Thamer et al. 1997), and their legal status (Prentice et al. 2005). Compared to other immigrant groups, scholars have found that Korean immigrants have a lower rate of having health insurance (Carrasquillo et al. 2000). Moreover, scholars have pointed out Korean immigrants' lower health insurance rate and its relation to their lower healthcare access in the U.S. (Choi 2013; Hill et al. 2006; Jang et al. 2005; Ryu et al. 2001; Sohn and Harada 2004).

Table 10 shows the health insurance status of Korean immigrants, compared with native-born non-Hispanic Whites, native-born Asians, and other immigrant groups. As many previous studies have found (Anderson and Bulatao, 2004; Carrasquillo et al., 2000; Huang, 2013; Ryu et al., 2001), Korean immigrants show a low rate of having health insurance (79.8%) and it is significantly lower than that of native-born non-Hispanic Whites (91.2%), native-born Asians (89.9%), Filipino immigrants (90.0%), Chinese immigrants (87.4%), and Vietnamese immigrants (83.2%). Korean immigrants' health insurance rate is only slightly higher than the average of the total foreign-born population, but this is likely due to Latino immigrants' overall rates of having health insurance compared to Asian immigrants (Alegría et al. 2006). Along with Vietnamese immigrants (57.6%), Korean immigrants show considerably lower rates of having private health insurance (62.9%) probably due to their high self-employment rate. Regarding public health insurance, Korean immigrants have lower Medicaid rate but higher Medicare rate than most other Asian immigrant groups.

Table 10. Health Insurance Status of Korean Immigrants, Compared with Native-born Non-Hispanic Whites, Native-born Asian, and Other Asian Immigrant Groups (%)

	Native-born		Foreign-born					
	Non-Hispanic White	Asian [b)]	All	Asian	Korean	Filipino	Chinese	Vietnamese
Any	91.2	89.9	75.5	86.6	79.8	90.0	87.4	83.2
Private	75.5	79.0	56.5	68.9	62.9	75.9	66.8	57.6
Medicaid	10.3	10.1	14.9	14.1	11.4	10.5	16.1	21.9
N	8,203,630	134,893	1,784,203	479,594	43,689	77,016	105,787	45,425
Medicare[a)]	97.7	95.2	91.8	90.8	94.1	90.6	90.9	94.4
N	2,108,155	14,115	308,025	77,939	7,689	15,949	18,770	6,963

Source: 2011-2015 American Community Survey from IPUMS (Ruggles, et al. 2015)
*Steven Ruggles, Katie Genadek, Ronald Goeken, Josiah Grover, and Matthew Sobek. Integrated Public Use Microdata Series: Version 6.0 [dataset]. Minneapolis, MN: University of Minnesota, 2015. http://doi.org/10.18128/D010.V6.0.
a) Older adults who are 65 years or older are included in this analysis.
b) Only single race Asian was included in the analysis.

Asian immigrants show lower rates of having health insurance than native-born Whites. In addition, they also show much lower healthcare utilization compared to non-Hispanic Whites and native-born Asians (Clough et al. 2013). However, Table 11 shows that Korean immigrants have the highest healthcare utilization rate of all Asian immigrant groups, yet it is lower than that of native-born non-Hispanic Whites. About 86% of Korean immigrants have ever visited a doctor during the last year (at the time of the survey), compared to 83% of Filipino, 82% of Chinese, and 84.3% of Vietnamese immigrants. Korean immigrants also visited doctors most frequently, as nearly one-fifth have visited doctors nine times or more during the past year. Furthermore, the majority of Korean immigrants have a constant, regular source of healthcare. Only Chinese immigrants (91.5%) show a higher rate of having a regular source of healthcare than Korean immigrants (87.3%).

Table 11. Healthcare Utilization of Korean Immigrants, Compared with Native-born Non-Hispanic Whites and Other Asian Immigrant Groups (%)

	Native-born Non-Hispanic White	All immigrants	Asian immigrants	Korean	Filipino	Chinese	Vietnamese
Have usual source of healthcare [a)]							
%	92.3	81.9	86.1	87.3	86.8	91.5	76.2
N of doctor visits past year [b)]							
None	12.3	19.8	17.9	14.1	16.9	18.0	15.7
1 times	16.7	19.8	19.0	13.4	26.8	20.3	14.6
2 times	16.9	16.4	16.1	13.8	15.0	16.9	14.6
3 times	12.2	12.2	12.8	16.7	12.7	14.6	10.3
4 times	10.3	10.4	11.2	12.3	9.4	7.4	17.8
5 times	5.7	4.8	5.5	3.6	5.2	7.7	5.2
6 times	6.5	4.9	4.1	4.4	3.8	4.1	4.9
7-8 times	4.0	2.7	3.2	4.4	3.8	2.8	3.1
9 times or more often	15.4	9.0	10.2	17.3	6.4	8.2	13.8
N	10,758	5,633	1,947	276	213	650	349

Source: 2016 California Health Interview Survey (CHIS)

Questionnaire: a) Is there a place that you usually go to when you are sick or need advice about your health? During the past 12 months, did you visit a hospital emergency room for your own health? Now think about general doctors. b) During the past 12 months, did you have any trouble finding a general doctor who would see you? During the past 12 months, how many times have you seen a medical doctor}?

As mentioned earlier, Korean immigrants' insured status has been a strong contributing factor to their healthcare utilization in the U.S. (Choi 2013; Hill et al. 2006; Jang et al. 2005; Ryu et al. 2001; Sohn and Harada 2004). Conversely, Korean immigrants' uninsured status, as well as their language barrier, has a negative effect on their healthcare utilization in the U.S. (Jang 2016; Kim and Yoon 2012). However, Table 10 and 11 suggest that despite Korean immigrants' having lower rates of being insured than other Asian immigrant groups, they have higher rates of healthcare utilization than other groups. This discrepancy is likely to come from their great preference for and high dependency on co-ethnic doctors. According to a study conducted in the New York-New Jersey area, about two-thirds of Korean immigrants have a preference for co-ethnic doctors, and more than 80% of those with family doctors actually had either a first-, 1.5-,

or second-generation Korean as their family doctor (Jang 2016). By seeing co-ethnic doctors in the U.S., Korean immigrants are able to solve the two biggest barriers to their healthcare utilization: health insurance and language barrier. On the one hand, Korean immigrants feel more comfortable discussing their uninsured status with co-ethnic doctors. Sometimes, uninsured Koreans even get discounts on their medical bills if they pay cash. On the other hand, they have no communication barrier with co-ethnic doctors. Korean immigrants' dental care utilization follows a similar pattern, probably due to similar reasons for their general healthcare utilization.

As Table 12 illustrates, despite their much lower rate of having dental insurance (35.1%) than native-born non-Hispanic Whites (58.2%) and other Asian immigrant groups, Korean immigrants show relatively high dental care utilization; only 3.6% of Korean immigrants answered that they have never visited a dentist. Comparing younger and elderly Korean Americans, Lee and Kiyak (1992) have found that elderly Koreans have visited a dentist more recently than their younger counterparts, but their visits were not for a check-up or preventive purposes. Rather, their visits were for prosthodontics for emergency care. Strong family networks and poor self-rated oral health were indicated as associated factors to older Americans' dental care utilization (Jang et al. 2014).

Table 12. Dental Care Utilization of Korean Immigrants, Compared with Native-born Non-Hispanic Whites and Other Asian Immigrant Groups (%)

	Native-born Non-Hispanic White	All immigrants	Asian immigrants	Korean	Filipino	Chinese	Vietnamese
Any dental insurance [a)]							
%	58.2	47.2	55.1	35.1	64.3	59.8	52.4
Time since the last visit to dentist [b)]							
Never	0.7	4.4	4.88	3.62	5.63	2.77	9.46
6 months ago or less	64.6	49.1	55.73	58.70	49.77	62.62	43.84
More than 6 months up to 1 year ago	11.95	17.66	15.77	13.41	19.25	15.85	16.05
More than 1 year up to 2 years ago	7.59	11.04	10.17	7.61	10.8	8.31	14.33
More than 2 year up to 5 years ago	7.81	9.68	7.81	10.14	7.51	6.15	10.32
More than 5 years ago	7.34	8.11	5.65	6.52	7.04	4.31	6.02
N	10,758	5,633	1,947	276	213	650	349

Source: 2016 California Health Interview Survey (CHIS)
Questionnaire: a) Do you now have any type of insurance that pays for part or all of your dental care? b) About how long has it been since you visited a dentist or dental clinic? Include hygienists and all types of dental specialists.

Korean immigrants also show a much higher healthcare utilization rate of alternative medicine than other immigrant groups. Table 13 shows that more than half of Korean immigrants (57.7%) have ever received acupuncture, compared to only 12.2% of Chinese, 8.2% of Vietnamese, and 4.2% of Filipino immigrants. Korean immigrants also show a higher rate of receiving chiropractic treatment (14.0%) compared to other Asian immigrant groups. Regarding use of traditional or holistic medicine, only Chinese immigrants (39.3%) show slightly higher rates than Korean immigrants (38%), while Filipino and Vietnamese immigrants show much lower rates. These numbers are higher than what Hill et al. (2006) have found earlier; about a quarter of Koreans in California use traditional medicine. This is probably because Korean

immigrant respondents in the New Immigrant Survey (NIS) data are "new" immigrants who have lived in the U.S. comparably shorter than survey respondents included in earlier studies.

Table 13. Healthcare Utilization (Alternative Medicine) of Korean Immigrants, Compared with Other Asian Immigrant Groups (%)

	All Immigrants	Asian Immigrants	Korean	Filipino	Chinese	Vietnamese
Acupuncture [a)]						
%	6.1	9.3	57.7	4.2	12.2	8.2
N	8,217	2,532	137	429	452	220
Chiropractic [b)]						
%	9.1	5.5	14.0	3.5	5.8	2.7
N	8,228	2,536	136	430	452	220
Traditional Medicine [c)]						
%	8.8	20.0	38.0	9.1	39.3	13.2
N	8,229	2,534	137	429	451	220

Source: 2003 New Immigrant Survey (NIS) data
Survey questions: a) Have you ever received acupuncture? b) Have you ever received chiropractic care? c) Have you ever received traditional medicine, such as Chinese, Ayurvedic, American Indian, etc.?

Age, the level of acculturation, and health insurance status have been pointed out as being three important associated factors to Korean immigrants' practice of alternative medicine. First, being old was positively associated with practicing alternative medicine (Kim et al., 2002; Pourat et al., 1999) due to the higher chance for the elderly to have chronic diseases. Second, Korean immigrants with a higher level of acculturation are more likely to prefer or practice alternative medicine (Kim and Chan 2004; Miller 1990). However, another study (Hill et al. 2006) has discovered that less acculturated Koreans are more likely to practice traditional medicine. Last, having health insurance was both positively (Pourat et al. 1999) and negatively (Hill et al. 2006), but significantly associated with Korean immigrants' practice of alternative medicine.

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