

Diet and Nutrition among Asian Americans: Challenges and Opportunities

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ABSTRACT

Asian Americans is a minority population contributing approximately 4% to the total population of the United States, however it is one of the fastest growing populations. Although Asian Americans as a group have socioeconomic profiles that are similar to white Americans, significant variations exist within and across Asian ethnic groups. The top ten leading causes of death for Asian Americans include cancer, heart diseases, stroke, unintentional injuries, diabetes, influenza and pneumonia, chronic lower respiratory disease, suicide, nephritis, and septicemia. The prevalence of obesity is lower among Asian Americans, however this should be taken with considerations specific to Asians. High salt and low calcium consumption seem to be dietary risk factors for Asian Americans, although dietary patterns are changing with acculturation. Factors affecting dietary patterns are discussed in this paper. A proactive nutrition education approach for Asian Americans should be promoting maintaining “healthy” aspects of ethnic diets and adopting “healthy” American diets. Collaboration with nutrition educators in Asian countries would be helpful to overcome limited resources available for researching and developing nutrition education messages and materials for Asian Americans. (*J Community Nutrition* 8(2): 90~95, 2006)

KEY WORDS: diet · nutrition · obesity · Asian Americans.

Current Socio-Demographic Profile of the Population

While the first Asians in the US are believed to be Filipino sailors in Louisiana back in 1750, and many Asians have come to America since then, the majority of Asian Americans came after the 1965 Immigration and Nationality Act (Waddell 1998). This legislation opened the gate for non-white individuals to immigrate to America (Waddell 1998). Compared to the European counterparts, Asian Americans have a relatively short immigration history with approximately 69% of Asian Americans having been born outside of the US (US Census Bureau 2003). Asian Americans have suffered discrimination and hardship as they have established themselves in a new country. For example, the Chinese Exclusion Act of 1882 prohibited individuals with a Chinese he-

ritage from becoming a citizen, solely based on their ethnicity.

Currently, there are approximately 11.9 million Asian Americans living in the US, comprising 4% of the total population. Asian Americans is one of the fastest growing ethnic groups (Brewer & Trudy 2001; US Census Bureau 2002). The percentage of Asian Americans is projected to grow to 11% of the total population by 2050. Asian Americans is a very heterogeneous population that came from at least 29 countries. Over 100 different languages and religions are practiced. The largest Asian American ethnic group is Chinese contributing 23.8% of Asian American population, followed by Filipino, Asian Indian, Vietnamese, and Korean Americans (US Census Bureau 2004). Asian Americans tend to live in large cities or metropolitan areas, evidence by the fact that about half of all Asian Americans live in just the six metropolitan areas: Los Angeles, New York, San Francisco, Honolulu, Washington DC-Baltimore, and Chicago (Le 2005a). This residential pattern, however, may be changing; more Asian Americans are moving to suburban or rural places and to the states without many existing Asian American populations.

Asian Americans as a group appear to do well according to the reported socioeconomic and demographic characteri-

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stics. Among those who were 25 or older, 19.6 percent of Asian Americans reported to have education less than high school graduate, which is slightly higher than 15.3% in white Americans, but lower than in any other minority population (Le 2005b). The same trend was found in income level and public assistance. This appearance gave Asian Americans a nickname of “model minority”, however, a different picture emerges when ethnic groups within Asian Americans are considered separately. While Asian Indian Americans reported 12.6% of the ethnic group having less than high school graduation education, \$26,000 as median personal income, and 0.9% on public assistance, Cambodians, Hong, or Laotians reported 52.7%, \$16,000, and 9.9%, respectively. That is, a wide disparity was observed within the group of Asian Americans.

As mentioned above, Asian Americans have a relatively short immigration history. In 2004, only 24.1% of Asian Americans reported that they had entered America before 1980 (US Census Bureau 2004). This translates to a higher portion of the population being foreign-born and having limited English proficiency. Compared to 11.1% of the total population being foreign-born, a total of 68.9% of Asian Americans are foreign-born. Among those who are 5 years of age or older, more than a third (39.5%) of Asian Americans speak a language other than English at home and rate their spoken English less than “very well (US Census Bureau 2004)”. Communication barriers stemming from the limited English proficiency have been a serious issue in public health.

Current Health Profiles with the Emphasis on Diet-Related Chronic Diseases

The leading causes of death in Asian Americans are not

vastly different from those of the total population with two notable exceptions (Table 1). The number one leading cause of death in Asian Americans is cancer, not heart disease which is the number one leading cause of death in the total population. Suicide is ranked as the eighth leading cause of death in Asian Americans, however suicide is not one of the top 10 leading causes of death in the total population (NCHS 2004).

While Asian/Pacific Islanders experience lower mortality and mobility rates overall compared with other minority groups, they do experience higher death and incidence rates for certain cancers such as stomach and liver cancer (NCHS 2004). It should be also noted that cancer rate profiles of ethnic groups in Asian or Pacific Islanders do vary. In addition to the diseases listed as part of the top ten leading causes of death in Table 1, Asian Americans have disproportionately high prevalence of chronic obstructive pulmonary disease, Hepatitis B, HIV/AIDS, tobacco smoking, and Tuberculosis, according to the Office of Minority Health (2005)

The current status of obesity among Asian Americans is difficult to determine because no nationally representative data are available for Asian Americans, unlike other minority populations such as African Americans or Hispanic Americans. Nationally representative data on African Americans and Hispanic Americans are available in most nation-wide datasets such as Nutrition and Health Examination and Survey. Small scale studies (Cheng, Lee 2005; Jonnalagadda, Diwan 2002; Lauderdale, Rathouz 2000; Lee, Sobal, Frongillo 2000; Popkin, Udry 1998; Singh et al. 1997) conducted in different regions with different study designs and methods indicate that the proportion of Asian Americans who are overweight is comparable to that of total population, while obesity prevalence among Asian Americans is low

Table 1. Ten leading causes of death in the U.S. in 2002 for Asian Americans or Pacific Islanders

	Asian Americans or Pacific Islanders	Rank in the total population
1	Cancer	2
2	Heart disease	1
3	Stroke	3
4	Unintentional injuries	5
5	Diabetes	6
6	Influenza and pneumonia	7
7	Chronic lower respiratory disease	4
8	Suicide	(not one of the top 10 leading causes)
9	Nephritis, Nephrotic syndrome, and Nephrosis	9
10	Septicemia	10

Source: National Center for Health Statistics. 2004

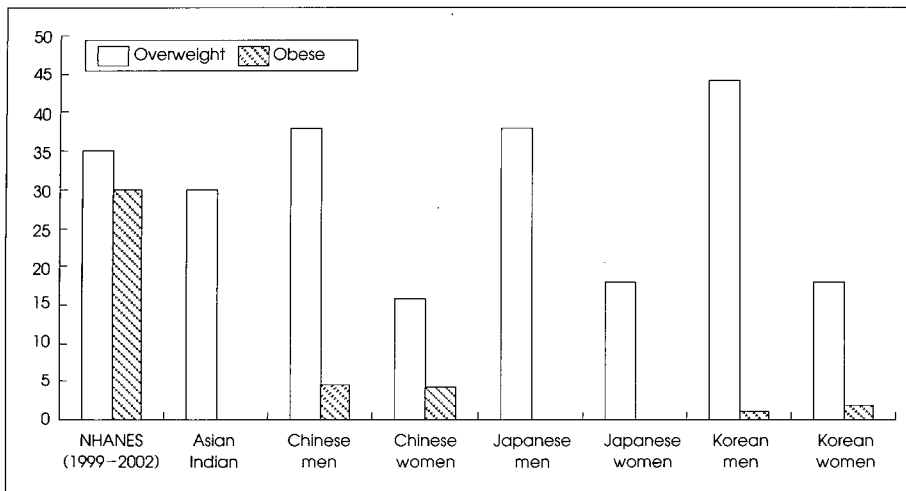


Fig. 1. Obesity prevalence among adults of selected Asian ethnic groups. Sources: Cheng & Lee, 2005, Lauderdale & Rathouz, 2000, Jonnalagadda & Diwan, 2002.

(Fig. 1). In addition, Asian American women showed lower prevalence of overweight and obesity than Asian American men. This finding should be taken with three considerations, however. First, many Asian countries have adopted different Body Mass Index (BMI) cutoffs to define overweight and obesity. The US guideline defines overweight as BMI between 25 and 30 (WHO 1995) and obesity as BMI of 30 or over, while Taiwan defines overweight as BMI between 24 and 26.9 and obesity as BMI of 27 and over. Although the lower BMI cutoffs for Asians have not been adopted in the US because of lack of mortality data, these lower BMI cutoffs will undoubtedly increase the proportion of Asian Americans who are overweight and obese. Second, the lower prevalence of overweight and obesity among Asian Americans may underestimate obesity-related health risks for Asian Americans. Some studies have shown that waist circumference is a better and more sensitive indicator for chronic diseases such as diabetes than BMI for Asian Americans (McKeigue, Shah, Marmot 1997). Third, the relatively lower prevalence of overweight and obesity among Asian Americans should be understood more as an opportunity for prevention efforts than as an indication of a group without obesity problems.

Current Dietary Patterns

When Kyuminika (1993) summarized dietary risk factors for minority populations in 1993, she listed high salt and low calcium consumption as dietary risk factors for Asian Americans and Pacific Islanders. She also indicated that fat consumption of Asian Americans and Pacific Islanders was

lower than that of white Americans. After almost 10 years, the dietary risk or protective factors for Asian Americans appear to remain as they were, however, whether the fat consumption of Asian Americans remains lower than that of white Americans is questionable. With acculturation progresses in Asian Americans, fat consumption has been shown to increase (Park et al. 2004), while fat consumption among white Americans has decreased (Thompson et al. 2005). Therefore, it is possible that the ethnic differences in fat consumption between Asian Americans and white Americans may no longer exist.

Studies showed that Asian Americans consumed more “American” foods and less “Asian” food as they acculturated, and that breakfast was the meal where new food items were frequently included compared to lunch or dinner (Lee, Sobal, Frongillo 1999a). It appears that higher acculturation tends to lead increased consumption of foods such as meat, fat, vegetable, sweets and snacks, soft drink, and fast foods and convenient foods, while consumption of foods such as fish, legumes, tofu, and rice decreased (Lee, Sobal, Frongillo 1999a; Satia et al. 2001a; Satia et al. 2001b).

Sociodemographic, Psychosocial, Environmental, and Cultural Factors Affecting Dietary Patterns

Various factors affecting dietary patterns are described in Fig. 2. The conceptual framework was modified from the works from Lee, Sobal and Frongillo (1999b) and Satia et al. (2002). Dietary pattern is affected by sociodemographic factors, psychosocial factors, and environmental factors. The

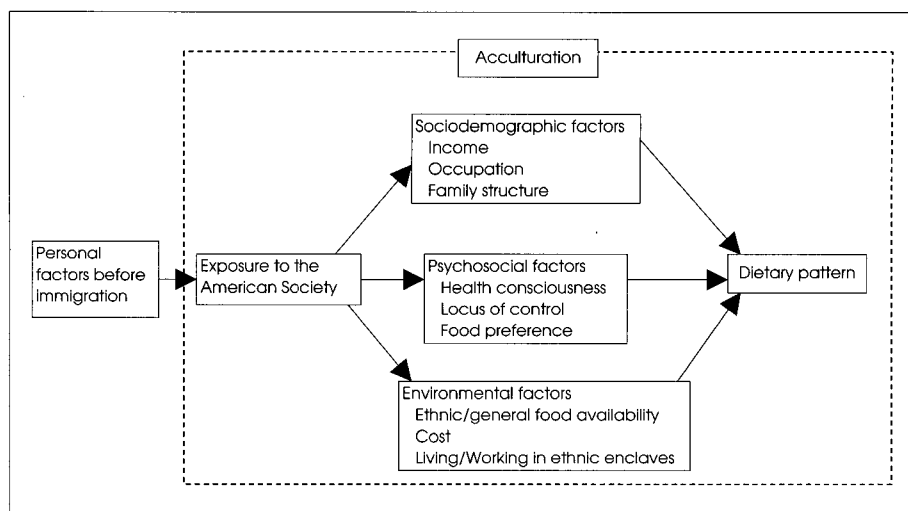


Fig. 2. Factors affecting dietary patterns. Adapted from Lee, Sobal, Frongillo, 1999b; Satia et al. 2002.

three intermediary factors are, in turn, affected by exposure to the American society or acculturation. Personal factors established before immigration will affect acculturation process as well.

Acculturation is a process of overall adaptation on both group and individual levels, indicating cultural, psychological, social, economic, and political aspects (Lee, Sobal, Frongillo 2000). Although many studies have treated diet as an independent factor from acculturation, diet should be considered as a dimension of acculturation because acculturation takes place in all aspects of life. In food and nutrition studies in Asian Americans, acculturation has been assessed with single-item measures such as English proficiency or length of stay or with the very popular Suin-Lew scale (Suinn, Ahuna 1995). These two approaches conceive of acculturation according to the unidimensional model (Lee, Sobal, Frongillo 2003), which views learning or adoption of new cultural traits and the retention of old cultural traits as a zero-sum game. On the other hand, many studies in other minority populations have used acculturation scales (e.g. Bicultural Acculturation Scale, Acculturation Rating Scale for Mexican Americans-II) reflecting the bidimensional model. The bidimensional model of acculturation views adoption of new cultural traits as independent of the retention of old cultural traits. The bidimensional model has not been frequently used with Asian Americans, perhaps mostly because no bidimensional acculturation scales were available (Lee, Sobal, Frongillo 2003).

Sociodemographic factors have been studied in relation to diet and food consumption among Asian Americans. While higher socioeconomic status tends to be associated with be-

ter quality of diet, younger age, higher education, longer stay in the US, and living with children were shown to be associated with higher "American" food consumption.

A few studies examined how psychosocial factors are related to food consumption among Asian Americans. Liou and Contento (2001) found that while the intention of fat reduction among Chinese Americans was affected by attitude, over health concerns, and self-efficacy, fat reduction behaviors themselves was associated with attitude, perceived barriers, and self-efficacy. Fruit and vegetable consumption among Chinese American was significantly related to belief, motivation, and knowledge (Satia et al. 2001a; 2001b). Interestingly, Satia et al. (2001a) also found that living with elders was a significant determinant of fruit and vegetable consumption. Generally speaking, younger Asian Americans with higher acculturation seem to have higher nutrition knowledge and health consciousness, but not necessarily better dietary behaviors.

Food availability has been one of the most important environmental factors among minority populations, however, the effects of food availability may have been reduced. Ethnic food availability was significantly associated with variety of ethnic food consumption, but not frequency in Korean Americans (Lee, Sobal, Frongillo 1999b). Satia et al. (2001a) also found that ethnic food availability was not a major concern in Chinese American women. These insignificant effects of ethnic food availability may indicate that Asian Americans now have access to ethnic foods thanks to development of ethnic enclaves with various ethnic food stores. Lee, Sobal, Frongillo (1999b) found that most Korean Americans have an access to Korean foods with varying range

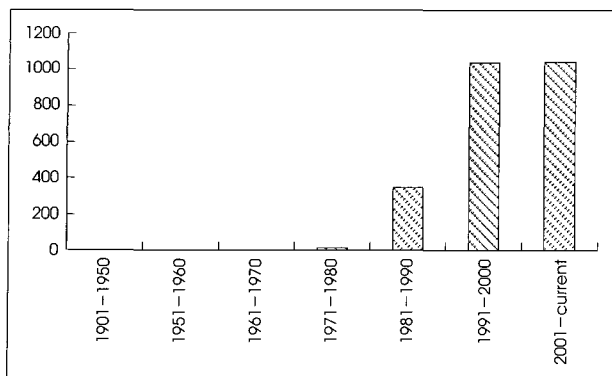


Fig. 3. Number of papers from research with Asian Americans indexed in PubMed.

of travel time. Food cost was also studied in relation to food consumption, but it was not significant.

Strategies for Improving the Dietary and Health Profiles among Asian Americans

Forming strategies for improving the dietary and health profiles among Asian Americans would require much more information and data through research and practices with Asian Americans. Fig. 3 shows the number of publications from research with Asian Americans indexed in PubMed. Research with Asian Americans started to take off during the 1990s. Most, if not all, of the research has been done in small scale studies, frequently using non-probability sampling methods, therefore, studies that provide representative data are in much need. Currently, data on dietary patterns are available on some Asian ethnic groups, however, determining factors on food choices are very limited. More research should be done in this area so that effective nutrition education intervention can be designed.

The first step of nutrition education with Asian Americans, perhaps, should be overcoming the “model minority” image. This image exists among not only nutrition professionals but also Asian Americans themselves. The image of model minority is false because there are aspects of dietary patterns of Asian Americans in need of improvement and because socioeconomic status varies within and across ethnic groups of Asian Americans.

Nutrition education messages for Asian Americans should be well focused on the negative aspects of dietary patterns such as high salt consumption or low calcium consumption. Traditionally, nutrition professionals have encouraged Asian

Americans or immigrants to maintain their ethnic dietary pattern because the ethnic dietary patterns are generally healthier than the one immigrants adopted with acculturation (Lee, Sobal, Frongillo 1999a). Although this approach would be helpful and feasible because it actually discourages behavior changes, this approach is not proactive. Maintaining ethnic diets would help reducing likelihood of developing chronic diseases that are often associated with more westernized diets, but it does not help preventing diseases that are often associated with negative aspects of Asian diets. In addition, it is not practical or possible to keep an ethnic diet maintained in its entirety, when living in a new society. Therefore, a more proactive approach in nutrition education with Asian Americans should be promoting maintenance of the “healthy” aspects of ethnic diets and adoption of “healthy” American diets.

Collaboration with nutrition educators in Asian countries would be extremely useful since only limited resources are available for researching and developing nutrition education messages and materials for Asian Americans (Lee 2003).

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