

What Japanese Immigrants' Health Indicators and Mortality Rates can Teach Us? - A Review

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Abstract

Japanese nationals not only have the longest life expectancy at birth, but are also the oldest population in the world. However, Japanese immigrant populations concentrated in the U.S (1.2 million) and in Brazil (1.5 million) do not enjoy the same health outcomes. Studies of Japanese immigrants in these countries have reported higher prevalence of both obesity and several risk factors for obesity-related diseases compared to native Japanese. In the 90s, these disparities were attributed to the negative effects of acculturation on lifestyle and health status of immigrants. Recently, an understanding has developed regarding other factors that might cause differences in life expectancy, morbidity and mortality among immigrant populations. We summarized twenty articles from some 300 total accessed articles and studies on health indicators and mortality data for Japanese immigrants in the U.S. and in Brazil. Our hypothesis that acculturation analysis may be insufficient to explain the extent to which national public health policies influence health outcomes and risk factors for immigrants was confirmed. This review corroborates the idea that Japanese immigrants' health outcomes are determined not only by acculturation to the receiving country, but also by other social determinants of health and factors such as public health policy and historic and political processes in the receiving country. By understanding each of these factors in more depth, the results of this review can be used to develop policy recommendations to improve health outcomes for Japanese immigrants and their descendants, and may guide research on health outcomes for other immigrant groups.

Keywords: Immigrant's Health; Japan; Obesity; Health outcomes

Introduction

People in Japan not only have the longest life expectancy at birth, the longest healthy life expectancy in the world, but are also the oldest population. However, Japanese immigrant populations concentrated in the U.S (1.2 million Japanese) and in Brazil (1.5 million Japanese) do not enjoy the same health outcomes than Japanese in Japan. For instance, studies of Japanese immigrants in the United States report a high prevalence of both obesity and several risk factors for obesity-related diseases compared to native Japanese [1-4]. In the 90s, these health disparities were attributed to the negative effects of acculturation and globalization on lifestyle and health status of immigrants both in the U.S. and in Brazil [5]. More recently, there is an understanding that other factors might cause differences in life expectancy, healthy life expectancy, morbidity and mortality among populations.

Among these factors are differences in public policies that guide prevention, diagnosis and treatment of diseases; access to health care services; environmental conditions; individual income and neighborhood; and political and historical relations between the native and host country. The purpose of this review on Japanese populations' health is to provide a foundation for understanding not only the causes of disparities among the groups but also to offer an agenda of priorities and proposals for developing and improving health outcomes for immigrants.

Results

An extensive review of the literature was conducted to synthesize current knowledge about the lifestyle, health outcomes, and cause of death of Japanese populations in Japan (JJ), in the U.S. (JA) and in Brazil (JB). No other published review on this topic was found. The review included both empirical and conceptual articles published from 1986 through 2016. More than 300 articles, published primarily in referred journals, were accessed. Eligibility criteria for inclusion in the review were English language; publication within the last

twenty years; detailed and substantive information about any health related comparison between Japanese, Japanese-Americans and Japanese-Brazilians.

Many of the articles discussed diseases clustered around types of chronic or non-communicable diseases such as diabetes, metabolic syndrome, obesity, malignant neoplasms, and cardiovascular diseases. A few [6] focused on issues of mental health including depression and suicide. Only 3 articles reported on comparisons made between health outcomes of the three groups or other aspects of cross cultural comparisons. Key points from each of these articles are described below.

Acculturation: Although the first study that analyzed the impact of acculturation (the process by which immigrants adapt to a new country and culture) in Japanese-Americans was from 1976, most of the studies on acculturation of Japanese immigrants were published in the 90s. These papers not only called for recognition of the negative effects of adopting a western diet and lifestyle but also identified the main attitudes and behaviors that increased health risks of Japanese immigrants and their descendants. In their studies, authors acknowledged that a preference for diets higher in fat and containing more processed meat increases risks of obesity and developing other diseases among Japanese immigrants living in the U.S. [6] and in Brazil [5]. Cultural integration and acculturation processes both in the U.S. and in Brazil might have contributed to health risk factors that may have rendered this population vulnerable to certain chronic conditions such as diabetes [7]. In the U.S., acculturation also influenced attitudes towards smoking [8] and drinking [9,10]. Cross-cultural comparisons between the three countries are very limited, however, based on the description of the acculturation process in the U.S. and in Brazil, we can infer that immigrants rather than adapting to a very distinct culture were in fact adapting to a western diet and lifestyle consisting of norms and behaviors that are now globalized.

Diabetes and metabolic syndrome: The prevalence of diabetes among Japanese-American men in Hawaii was found to vary according to the exposure to traditional Japanese social and cultural lifestyles [6]. Those that had retained a more Japanese lifestyle had reduced prevalence of diabetes and after controlling for age, BMI, and physical activity, the number of total years lived in Japan were inversely associated with diabetes prevalence [6]. According to one study of the influence of acculturation in Japanese-Brazilians, [11] the rates for diabetes in Japanese-Brazilians both for first and second generations were 1.5–2.0 fold higher than those for the general Brazilian population and also higher than the rates for Japanese in Japan for the same age-groups. Metabolic disorders also presented a higher prevalence in Japanese-Brazilians [8]. The high frequency of metabolic disorders, including diabetes, high levels of cholesterol, and obesity among Japanese-Brazilians has also been widely acknowledged in other studies [12].

Obesity: Obesity prevalence in Asian-Americans is lower than other racial/ethnic groups in the US [13]. However, a combination of factors such as lower body mass index, lack of

disaggregated data and lack of cross-national data on obesity may contribute to misleading estimates [14]. In Brazil, one study found that obese Japanese-Brazilians consumed higher proportion of energy as fat as and lower as carbohydrate than those without obesity and central adiposity [15]. When adjusted by generation, the study found that second generation of Japanese-Brazilians consumed intake of energy as fat was higher than of first generation [16]. Several studies found that the risk of developing central obesity was 2.8 times higher among Japanese-Brazilians than Japanese residing in Japan [14]. The authors also suggested that immigrant Japanese men are more susceptible to develop central obesity associated with metabolic risk factors for coronary disease than women counterparts [17].

Cardiovascular health and risk factors for cardiovascular disease: Published papers addressing this topic focused on associated risk behaviors such as smoking, drinking, stress or other dietary patterns. Japanese-Americans had the highest total cholesterol levels among Asian-Americans [16]. The Honolulu Heart Program demonstrated how more traditional Japanese men had lower serum cholesterol and uric acid, were less obese, more physically active, and smoked fewer cigarettes than those that were more acculturated or more westernized [17]. In fact, among the most acculturated Japanese-Americans, coronary heart disease was three to five-folds higher than those least acculturated [18]. The gradient of coronary heart disease was lowest in Japan, intermediary in Hawaii and highest in California [19]. The authors explain that this gradient seems to be due to differences in diet, serum cholesterol, blood pressure or smoking [19]. There were very limited studies in Brazil about the cardiovascular health or risk factors of cardiovascular disease for Japanese-Brazilians. Mizushima et al. proposed a possible association between fish intake and cardiovascular risk noticing that Japanese-Brazilians in São Paulo had a negative gradient of fish intake per week and higher meat intake when compared to Japanese in Okinawa [20]. As metabolic syndrome prevalence among Japanese-Brazilians, Siqueira et al. demonstrated how macro vascular disease is highly prevalent among Japanese-Brazilians [19]. The authors propose using lipoprotein modifications anti LDL (+) antibody to identify individuals at higher risk [21].

Mental health: Lock explained how one dominant aspect of Japanese culture is the tendency to suppress negative feelings-towards intimates, family and those in authority [22]. There is no concept of mental health that is separate from physical health, instead illness are seen as result of stress on the social level. Brown, Cohen, and Mezuk 2015 showed a modest positive association between duration of U.S residency and suicidal ideation attempts among Asian-Americans [21]. Suicide rates vary by gender and ethnicity. The most frequently method used among Japanese-Americans of both sexes has been hanging with increasing use of fire-arms [23]. In Brazil, the numbers of suicide seem to be low compared to the U.S. and Japan. Perhaps cultural and religious aspects help contain the number of suicides in Brazil. However, there are other important mental health issues to be considered. Yamada et al. indicated higher prevalence of all kinds of dementia (12.1) for Japanese-Brazilians than Japanese in Japan possibly due to

dietary factors [24]. However, high prevalence of dementia is also usually associated to a combination of low average educational attainment and high vascular risk profile. The prevalence rates in Brazil among Japanese-Brazilians contrast with those in Japan. Japan has the lowest prevalence of dementia among developed countries [25].

Conclusions

While the literature includes numerous studies on the impact of acculturation in Japanese immigrants' health, cross-country comparisons between Japanese-American and Japanese-Brazilians are very limited at best. While some less formal evaluations and anecdotal reports have occurred, very few studies have described or tried to draw parallels between health outcomes of these two immigrant groups. It is essential to determine what elements or combination of elements are generating health disparities among the three Japanese groups (JJ, JA and JB) to design intervention strategies that promote better health outcomes to all immigrants. For that, we will need to update the datasets relative to Japanese-Brazilians, for example. The effect of variations in guidelines and health care systems must also be considered as well as availability and quality of human resources in the receiving countries. Despite the limitations of the existent literature, the review has highlighted a number of studies dedicated to understanding the factors perceived by the researchers and clinicians as drivers of health disparities among the Japanese immigration groups. Researchers and partners in the U.S., Japan, and Brazil eagerly await the results from these comparative analyses to build and propose policies for the continuing development and improvement of health outcomes for Japanese descendants and all immigrants.

Conflict of Interests

The authors declare no actual or potential conflict of interest.

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