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Health Disparities among South Asians: Is Food Insecurity the Missing Link?

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Abstract

We conducted a scoping review in order to assess the current empirical research on food insecurity among Asian Americans, with emphasis on South Asians. Query was run in academic search engines (PubMed/Google Scholar) and non-academic sources (Google) to assess the literature on food insecurity among Asian-Americans, with emphasis of search placed for South Asians. Significant amount of research has been conducted on food insecurity, especially among minority populations, such as African Americans and Hispanics in the United States. Research, however, is limited among Asian-Americans, and negligible among South Asians, despite the group having disproportionately higher rates of cardiovascular diseases. Limited empirical evidence, however, does highlight the burden of food insecurity among the population, especially those who are immigrants. Research priorities on food insecurity must address the hidden burden among Asian-Americans with disaggregated group specific data.

Introduction

Food insecurity is defined by the United States Department of Agriculture (USDA) as having limited or uncertain access to adequate food [1]. In some studies, limitation to food, thus impacting food security, has also been attributed to pesticide, and in turn impact health outcomes [2]. Regardless of the reasons for food insecurity, there is a plethora of literature to support the detrimental effects of food insecurity among individuals. Food insecurity can lead to cardiovascular disease, obesity, depression, stress and behavioral patterns among adults and children [3]. For example, in children, food insecurity has been associated with higher asthma morbidity [4]. Likewise, increasing food insecurity level has been associated with increasing psychological distress among minority populations [5]. Food insecurity has also been associated with lower CD4 count among those who are HIV positive [6]. Undoubtedly, food insecurity is a major social issue.

Given the empirical evidence on the negative burden of food insecurity, it is critical to assess the associated factors and outcomes among the most vulnerable. In this scoping review, the focus is on South Asians, as the population is often masked under the Asian-American title. This makes it difficult to identify and combat specific issues this population faces as they have a higher risk for cardiovascular disease, which is just one of the negative health effects arising from becoming food insecure.

Methods

In this scoping review, we ran query in academic search engines, specifically PubMed and Google Scholar, as well as non-academic search engine (Google), to assess empirical research or any data for Asian-American food insecurity, especially among South Asians. The following combinations of keywords were used: South Asians, Asian Americans, food (in) security. Given the limited literature, we further assess the evidence on the current prevalence and burden of food insecurity in the general population to bring to attention the need for such research among Asian-Americans as well.

Results

Food Insecurity

The USDA defines food insecurity as "a household-level economic and social

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condition of limited or uncertain access to adequate food" [1]. It is the lack of access to nutritious foods due to a number of social determinants. These social determinants include: living in a food desert, having a lack of nutritional education, as well as having a lack of monetary means to afford healthy food items, among other items. According to Coleman-Jensen, Rabbitt, Gregory and Singh [7], 11.8% of households (or 15.0 million households) in the United States were identified as being food insecure at some point in the year 2017. This means that they did not have access to nutritious food items to sustain optimal health. Furthermore, individuals who are considered food insecure experience disruptions in eating patterns and reduced food intake. Coleman-Jensen et al. [7], also state that non-Hispanic Black and Hispanic households have the highest rates of food insecurity, as compared to White. Other populations that have higher rates of food insecurity include: households that have children headed by a single parent of either gender, households that have an income below or near the federal poverty line, men and women living alone, and households located in principal cities of metropolitan areas [7].

Health Outcomes of Food Insecurity

If not addressed, food insecurity can lead to a plethora of negative health outcomes that may diminish the quality of life for individuals. For example, in a study done to establish the correlation of obesity and food insecurity among adults, Pan, Sherry, Njai, and Blanck [8] discovered from data collected among twelve states, one in three food insecure adults are obese. Pan et al. [8] also discussed that food insecure people fell into the category of being low income. Therefore, it was deduced that in order to compensate for being low income and food insecure, foods purchased were energy-dense (high in sugar and fats). Due to food insecure individuals experiencing cyclical food restriction, these energy-dense foods resulted in greater energy intake and ultimately obesity. Specifically, this study found that in the twelve states surveyed, the prevalence of being obese among food insecure adults was 35.1% [8]. In a cross-sectional study done to establish the correlation of food insecurity and cardiovascular disease [9], discovered that food insecure individuals who fall within the age range of 30 to 59 years have a predicted 10-year risk for cardiovascular disease and have higher concentrations of HbA1c and C-reactive protein when compared to their food secure counterparts. This is important to note as having higher concentrations of HbA1c and C-reactive protein are indicators of increased risk for cardiovascular disease.

Although food insecure adults are prone to health issues such as obesity and cardiovascular disease, children are also subject to similar outcomes. For example, in a cross-sectional study among 2,870 mothers of 3-year-old children, Whitaker et al. [3] discovered that the rate of mothers who experienced food insecurity also had higher rates of depressive episodes or anxiety when compared to their food secure counter-parts. Furthermore, the percentage of behavior problems among children of these mothers increased with increasing food insecurity [3]. Therefore, it was deduced that food insecure mothers who experience depressive episodes and generalized anxiety have children that are more likely to exhibit behavioral issues, making mental health an affected area of food insecurity. In their study, Robson, Lozano, Papas, and Patterson [10], found that cardiometabolic risks were higher and prevalent among adolescents that identified as being food insecure. The adolescents studied exhibited behavioral patterns associated with an increase in cardiometabolic risks, such as, getting less than eight hours of sleep per night, not eating breakfast, smoking and drinking alcohol [10]. Having these patterns from a young age can offset the health of adolescents and follow them throughout their adulthood.

South Asians and Food Insecurity

Although there are multitudinous reports on food insecurity and the negative health outcomes it causes, primarily among the Hispanic and African American populations, there is limited literature on the prevalence of and outcomes associated with food insecurity among South Asians. This is due to the population being categorized as Asian-Americans, which limits the opportunity to delve into specific barriers this subgroup faces. Understanding such a burden among the South Asian is imperative due to the heterogeneity of the Asian-American population.

Walsemann et al. [11] conducted a study in California and categorized all Asian-Americans as one group and noted that their rate of food insecurity was similar to that of non-Hispanic Whites, while the Hispanic population faired lower [11]. This could be primarily due to the masking of specific subgroups among the Asian-American population as one homogenous group.

While being one of the fastest growing minority groups in the United States, Asian-Americans are a diverse group with multiple languages and cultural backgrounds. Due to the vast cultural differences among this subgroup, there are specific needs that should be met to ensure the utmost quality of life for this population, and thus elucidating the unique needs of subgroups is critical. The term "South Asians" is utilized to describe a subgroup of the Asian continent. Countries included within this subgroup are Bangladesh, Bhutan, India, Nepal, Pakistan, and Sri Lanka [13]. South Asians are a population that faces multiple health disparities, including, metabolic syndrome, cardiovascular disease, obesity, diabetes, myocardial infarction among many others. Patel and Bhopal [14] found that individuals with ancestral origin from South Asia have a higher susceptibility rate for cardiovascular disease after migrating. Also, stress and racism were found to be major players in the increase of cardiovascular disease among this subgroup. South Asians emigrating from their country of origin to the United States face the burden of acculturation and therefore, may face disorders as a result such as psychoses, depression, sociopathy, substance abuse, alcoholism, crime, delinquency, vandalism, family disintegration, and alienation [15]. Another pattern found among South Asians is the acculturation of dietary habits after immigration. Gilbert and Khokhar [16] noted that South Asians alter their diet gradually based on increasing length of residency from grain-based and low-fat to a more animal based diet. Such changes in diet can further lead to disproportionately higher rates of cardiovascular disease risk. Whether food insecurity plays a role in dietary practices, especially differing role by immigration status remains to be evaluated. In one study, [17] noted that South Asians who spoke a non-English language at home, thus less acculturated, had a higher prevalence of food insecurity.

Conclusion

Undoubtedly, the evidence highlights there is a significant lack of literature assessing food insecurity among Asian-

Americans, especially disaggregated by subgroups. Furthermore, given the evidence of the higher rate of chronic diseases among South Asians, understanding the role of food insecurity would be beneficial onto the literature, as the social determinants of such disparity remains unknown. Such evidence found in this scoping review also highlights that the immigrant South Asian generation may be disproportionately impacted by food insecurity.

The results of this scoping review should be interpreted in the context of some limitations. Our study was limited to the United States and thus other nations with South Asian immigrants may have more robust results and further research is needed to conduct a global analysis of such a burden. Nevertheless, our study provides the first scoping review of the understanding the burden of food insecurity among Asian-Americans, especially South Asians, as the group continues to suffer health disparities.

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