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The Cultural Diet Behaviors of African Immigrants in California for Preventing Chronic Health Conditions including Obesity

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Abstract

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MPH, Walden University, 2019

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Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

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Health Education and Promotion

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Abstract

African immigrants to the United States face many challenges when diagnosed with obesity and other chronic health conditions. However, research concerning the role of cultural diets in preventing or ameliorating chronic health conditions including obesity has rarely focused on African immigrants. The purpose of this study was to explore the opinions, perceptions, and experiences of African immigrants on cultural diet preferences in the prevention of chronic health conditions, including obesity. Using the theory of assimilation and acculturation theory as a framework for the inquiry, the research questions focused on exploring the experiences, opinions, and perceptions of African immigrants concerning chronic health conditions, and their cultural diet practices. This qualitative case study employed semi-structured interviews with 10 adults who had legally immigrated, lived in the Bay Area of California, and had been diagnosed with any chronic health conditions. Transcripts of the recorded interviews provided the basis for initial identification and coding of recurring words and phrases. This coding allowed for the development and organization of themes that were then analyzed in relation to the research questions. Key findings of the study were that these African immigrants preferred to maintain their African cultural diet for the prevention of chronic diseases and reported negative experiences, opinions, and perceptions about the American fast-food diets, which they associated with chronic diseases. Future research should expand the exploration of the implications for better health outcomes among African immigrants and other populations through using cultural diets to help prevent chronic health conditions including obesity. Promoting dietary practices that include healthy foods which are culturally relevant for African immigrants can contribute to positive social change by improving individual and community health.

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Dedication

This work is dedicated to my dear family and friends. A special show of gratitude goes to my loving parents, Mr. and Mrs. Paulinus and Felicitas Nkeonye, whose love, actions, words, and commitment have played a key role in my success thus far. A special mention goes to my mother, whose push for tenacity continuously rings in my mind. My siblings, Kindness, Justice, Goodness, Michael, and Precious, have always been by my side with their special attention that halved my fears. Your presence is always appreciated, and you are very special to me. This dissertation is also dedicated to many of my friends and my business partners for their continuous and unwavering support throughout the entire period. I needed their support and prayers given the tiresome and long, late-night hours involved in completing this work. Special thanks go to my best friend, Noah Lystrup, for being there for me. You inspire me and make me want to go on to greater things. Your patience with me is appreciated especially because of the many challenges we overcame.

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Chapter 1: Introduction to the Study

The prevalence of chronic health conditions, including obesity, is on the rise in the United States, especially among immigrants of African origin (Kim et al., 2020). There are many determinants of micronutrient deficiencies, such as vitamin D and iron deficiencies, among African immigrants (Y. M. Lim et al., 2017). These micronutrients such as vitamins are critical in the prevention of chronic diseases. Deficiencies of these micronutrients and accumulation of carbohydrates in the body can lead to overweight and obesity as excess carbohydrates are converted into fats which are stored in the body (Y.M Lim et al., 2017). Many immigrants face deficiencies in micronutrients mainly due to changes in their dietary behaviors due to migration (Akombi-Inyang et al., 2021). The adverse effects of these determinants tend to increase significantly after 10 or more years of residing in the United States (Akombi-Inyang et al., 2021). Due to a shift in dietary practices and behaviors as a result of a change in environment (Ngongalah et al., 2019), African immigrants in the United States are more susceptible to lifestyle-related diseases such as diabetes and cardiovascular diseases associated with overweight and obesity (Moncho et al., 2022). According to Akombi-Inyang and colleagues (2021), this complex association between dietary behavior, lifestyle change, and the prevalence of chronic diseases, including obesity, could be theoretically explained by the dynamics of acculturation. The changes in health status over time due to adaptations to new culture and environment have been identified as a risk factor in the United States for chronic health conditions, including obesity (Murphy et al., 2017).

This challenge in healthy eating is made worse by structural and social barriers (Ngongalah et al., 2019) that immigrants, mainly from low and middle-income countries, face when living in high-income countries such as the United States. Social barriers are inequalities that exist between different groups of people as a result of conditions in which individuals are born, live and work according to National Center for Health Statistics (NCHS, 2020). Social barriers could be influenced by factors such as education, economic status, health status, racism, discrimination, stereotype, community, family background, neighborhood, and health care (NCHS, 2020). Structural barriers, according to National Center for Health Statistics (NCHS, 2020), include factors that perpetuate inequalities in access and use of infrastructure that promote equity and equality. Factors that may cause structural barriers include lack of insurance, transportation, health care, equal opportunities, education, and clean waters among others.

The adaption of culture and lifestyle as a result of immigration is known as acculturation. It has been defined as a process through which one ethnic group, most often a minority, adopts the lifestyle and culture of the dominant host (Brown et al., 2019). It includes adopting the dominant hosts' language, lifestyle, religion, food behaviors, diets, beliefs, and culture. Also, it involves adopting dominant economic, social, physical, and political life at the group level while also adopting attitudes and behaviors such as eating and dietary patterns, values, and beliefs at individual levels (Hruby & Hu, 2015).

There is a significant knowledge gap in the relationship between cultural diet and chronic health conditions, including obesity, especially among African immigrants living

in California (Brown et al., 2019). The prevalence of chronic health conditions in the United States, defined by the Center for Managing Chronic Disease (CMCD, 2019) as incurable, ongoing, and lifelong illnesses, is rising. This center estimated that 6 out of 10 Americans in 2017, had one or more chronic health conditions (CMCD, 2019). According to Commodore-Mensah et al. (2015), there is a significant research gap, particularly in the effect of the nexus between migration, cultural diet, and chronic health conditions, including obesity on African immigrants. This gap persists because African immigrants usually have been grouped by previous researchers with African Americans (Commodore-Mensah et al., 2015). The two population have different cultures, beliefs, and perceptions. The diet of any population or ethnic group is tied to its respective culture (The GBD 2015 Obesity Collaborators, 2017). That makes it difficult for any ethnic group to change its diet or adopt the dominant group's diet without experiencing changes in lifestyle, dietary behaviors, and health outcomes. Differences in culture, beliefs, and behaviors between African Americans and African immigrants have not been fully explored, making it difficult to assess the relationship between cultural diet and the prevention of chronic health conditions (Wafula & Snipes, 2014).

Past researchers have identified the influence of culture, dietary practices, and acculturation on cultural diets and the prevention of chronic conditions, including obesity, among African immigrants in the United States. I will examine some of these studies in the Background section of this chapter. Also, I will engage with studies that clarify how various factors influence dietary behavior, especially among African immigrants. In this section, the gap in the literature will also be identified. Also, a section

is dedicated for discussion of the problem statement. I provide evidence supporting the argument that the selected topic is not only current but relevant to the practice and to future research opportunities. I present the purpose of this study, the relevant research questions (RQs), and the theoretical and conceptual frameworks for the study. Other sections of this chapter will provide information on the nature of the study; operational definitions of key terms; the assumptions, scope and delimitations, limitations, and significance of the study. The chapter concludes with a summary of key points.

Background

Chronic conditions, including overweight and obesity, have been identified as one of the leading public health issues by the World Health Organization (WHO, 2022). Many studies have been published showing that the prevalence of chronic health conditions, including obesity, has increased over the years (Hruby & Hu, 2015; H. J. Lim, 2020; Seidell & Halberstadt, 2015). Chronic health conditions, including obesity, are a significant contributor to the global disease burden and one of the leading causes of premature deaths (Hruby & Hu, 2015). Also, they are associated with prolonged hospitalization, high cost of treatment, and poor quality of life (The GBD 2015 Obesity Collaborators, 2017; Hruby & Hu, 2015).

According to WHO (2020), in 2018, chronic conditions associated with obesity were the cause of up to over 2.8 million preventable deaths globally. Chronic conditions, including obesity, are complex and require extensive care. They pose a challenge to the provision of care for other diseases, and often result in other related comorbidities (Hurt et al., 2010). The challenges chronic conditions pose also include higher cost of health

care among the most vulnerable (The GBD 2015 Obesity Collaborators, 2017). About a third of the global population, accounting for about 1.9 billion adults, is reported to be overweight, with about 650 million individuals diagnosed as obese (WHO, 2020). The prevalence of chronic health conditions, including obesity, is higher in high-income countries such as the United States, United Kingdom, Australia, and Canada (Hruby & Hu, 2015; H. J. Lim, 2020).

Cultural diets are a significant way of life for African immigrants, especially those living in high-income countries. Brown et al., (2019) examined the influence of culture, nativity, and ethnicity on the diet of U.S.-born, African-born, and Caribbean/Latin American-born Blacks, as well as the model of dietary acculturation among the African-born and Caribbean/Latin American-born Blacks (Brown et al., 2019). The researchers argued that African born and Caribbean/Latin born Blacks in America considered cultural identity and diet highly important in maintaining health. In this qualitative study, the researchers also identified adaptive strategies to maintain cultural diets for immigrants moving to high-income countries such as the United States.

Prevention of chronic conditions, including overweight and obesity, are influenced by the social-economic status of an individual or population. Caprio et al. (2008) examined the correlation between race, ethnicity, culture, and childhood obesity. The authors argued that social-economic status plays a critical role in preventing and treating childhood obesity, especially among African immigrants. The study also found that environment, family income, and food consumed such as non-fast foods, healthy

fresh fruits and vegetables influenced the prevention and treatment of overweight and obesity among immigrant children.

Acculturation, especially dietary acculturation, has been considered one of the most influential factors that have determined dietary choices and increased the risk of chronic conditions, including obesity. For instance, in a qualitative study assessing differences in acculturation among Ghanaian immigrants conducted by Horlyck-Romanovsky et al. (2021), the researchers argued that acculturation begins at a personal level before moving to the population or ethnic group level. Also, the study found that while the younger generation adopts global and acculturated food more, the older generation maintains the cultural diets and healthy norms in the United States.

Chronic conditions, especially obesity, predispose individuals to other comorbidities and diseases such as diabetes. According to a study by Lascar et al. (2018), obesity, sedentary lifestyle, and family medical history are predisposing factors for diabetes. Lascar and colleagues reviewed the epidemiology and current knowledge related to pathophysiology, risk factors, complications, and management of Type 2 diabetes in adolescents and young adults. This finding was in tandem with another study conducted by Ngongalah et al. (2019) that involved an exploration of the perceptions of African migrant women living in the United Kingdom on obesity and factors affecting their weight status and weight-related behaviors. This study found that African migrant women are less likely to develop obesity due to sticking to cultural diets and exercise. This study underscores the importance of adhering to traditional or cultural diets as an

effective preventive and management technique for African immigrants at risk of being obese.

Renzaho et al. (2008) conducted one of the earliest studies on the importance of traditional and cultural orientation in the prevention of chronic diseases including obesity among African Americans. Using a cross-sectional study design, the researchers examined the relationship between dietary acculturation, chronic health diseases such as obesity, and other risk factors among African immigrants in Australia. The researchers divided participants into four groups that included tradition, marginalized, assimilated, and integrated groups. The study's main outcome was weight as measured by body mass index (BMI). The study found out that marginalized and integrated children reported high BMI compared to children to stuck to traditional diet or way of life. Also, assimilated children reported higher sedentary life compared to children adhering to their traditional way of life. Renzaho et al. argued that adherence to traditional diet reduces the risk of chronic health conditions, including obesity. Also, the study provides evidence that there is a link between acculturation, chronic health conditions, and migration. This study further posits that adhering to traditional diets helps in lowering the risks associated with chronic health conditions, including obesity.

Prevention of chronic health conditions, including obesity, requires changing eating behaviors and lifestyles and adhering to cultural diets. In exploring the adaptation, development, and refinement of diabetes prevention programs in the United States, Finland, and Australia, Mathews et al. (2018) found that behavior change was instrumental in preventing chronic conditions, including diabetes. The authors argued that

evidence-based behavior change, such as those that promote healthy diets, are influential in the prevention, treatment, and management of diabetes and other chronic health conditions, including diabetes. The researchers further argued that using evidence-based lifestyle programs that are culturally adaptive is critical in ensuring the effectiveness and buy-in of chronic diseases' prevention programs. Particularly, the study posited that effective prevention programs for chronic diseases should be community based and led by peers. This finding was supported by a study by Jakub et al. (2018), who examined the importance of traditional diets among African immigrants. In their study, these authors argued that family, community, and religion are tied to traditional African foods. More so, traditional African diets are considered healthier than American diets.

Religious beliefs are also an important factor that is associated with maintenance of a given dietary pattern or traditions. Immigrants' dietary patterns are shaped to a larger extent by beliefs, including religious beliefs. Dweba et al. (2018) assessed the factors that influenced the dietary choices made by immigrants in their host countries. In their scoping review, Dweba et al. assessed dietary challenges that immigrants face when settling in host countries. The study found that difficulty in adopting to new diet environment, socioeconomic barriers, perception about host's diets, language barriers, inaccessibility and safety of cultural diets, and religion greatly influenced dietary acculturation. In terms of religion, this study found that some religious beliefs or affiliations leads to food avoidance. This is where immigrants affiliated to certain religions will be prohibited to consume certain foods. In circumstances where food avoidance is permanent such as where food is considered impure, immigrants' food

choices and preferences will be reduced. Also, food avoidance is associated with food insecurity because food ingredients that are considered pure may be costly because of high importation costs and tariffs. The high ingredient prices may affect the dietary behavior of immigrants as their preferred cultural or traditional diet may not be readily available due to costs and accessibility. Dweba et al. concluded that dietary acculturation is troublesome especially in instances where immigrants do not share common religion with citizens of the host countries. In this sense, the researchers argued that religious beliefs become a barrier to dietary acculturation and integration.

In another study, Rhodes et al. (2018) assessed the cost and the effectiveness of faith-based lifestyle intervention compared to health education. The study included a random sample of 20 churches that either received a faith-based weight prevention or health education intervention. The researchers assessed weight change as its main outcome. This study found that individuals who received faith-based weight control intervention experienced more weight reduction compared to their counterparts who received health education intervention. The evidence from the study suggests that faith-based interventions are effective in weight reduction, especially among African Americans. One of the interventions in such faith-based weight and waist circumference reduction programs are based on restrictive diets. This is where individuals tailored their diets to match their beliefs by avoiding certain group of diet, taking physical exercises seriously, and avoid overeating. According to Rhodes et al., such interventions are effective because they are tailored to meet specific cultural and religious needs of African Americans who are obese or overweight. Addressing the problem of obesity and

overweight requires understanding about all these factors that can enhance or inhibit prevention and treatment of these conditions. Assessment of various factors such as acculturation, cultural diets, environment, and social economic status are very crucial in obtaining insight on effectiveness of interventions aimed at prevention and treatment of obesity and overweight. Also, it is important to assess the experiences, perceptions, and opinions of those involved.

Problem Statement

Several researchers have investigated the effect of dietary acculturation on African immigrants' health (Sanchez et al., 2018; Zilberman-Kravits et al., 2018). However, few have investigated African immigrants' opinions, perceptions, and experiences in maintaining cultural dietary preferences in preventing chronic health conditions, including obesity (Reed et al., 2012; Tiedje et al., 2014). African Americans are more obese than any other ethnic group in the United States (Cramer et al., 2018). However, African immigrants are grouped into the same category as African Americans despite having distinct cultures, behaviors, and lifestyles (Brown et al., 2019). According to Lascar et al. (2018), obesity is associated with poor dietary patterns and preferences identified among African immigrants. Rhodes et al. (2018) found that African immigrants who arrive in the United States have better health than their American-born African immigrants or native African Americans. However, as they stay longer in the United States, their risk of becoming overweight and experiencing other adverse health conditions increases compared to American-born African immigrants and African Americans due to dietary acculturation. African immigrants living in Alameda County,

California, were the focus of study. The county had the highest population of African immigrants in California at the time of the study (U.S. Census Bureau, n.d.). The chronic condition of interest in the study is obesity and overweight.

Purpose of the Study

The purpose of this qualitative study was to explore the opinions, perceptions, and experiences of African immigrants in Alameda County in the Bay Area of California related to cultural diet preferences to prevent chronic health conditions, including obesity. I used an interpretivist research paradigm for this study. This involved relying on my subjects' interpretations, reasoning, beliefs, and motivations in order to come up a clear picture of cultural diet preferences to prevent chronic health conditions, including obesity. This allowed me to come up in-depth data on this issue and to picture what is meaningful to the participants (Creswell & Creswell, 2019). This approach was appropriate for this case study because it provided insight on the effects of immigration through social constructions including diets, immigration, and shared meanings (see Creswell & Creswell, 2019).

The concept of interest for this study was dietary acculturation of African immigrants. I explored the association of dietary acculturation in this group with increased chronic health conditions, including obesity. Specifically, my goal was to understand the experiences, opinions, and perceptions of African immigrants in the Bay Area on cultural diet and chronic health conditions, including obesity. It is important to understand the experiences, opinions, and perception of this population, particularly in regard to native cultural diets and acculturation, because cultural diets have been reported

elsewhere to be a significant factor in the prevention of chronic health conditions including obesity (Delisle et al., 2009).

Specifically, there has been significant increase in the population of African immigrants in states such as Maryland, Texas, California, Virginia, and New York compared to other states in the United States (Commodore-Mensah et al., 2015). The specific research problem is that although researchers have investigated the issue of acculturation generally, there is minimal research on African immigrants' opinions, perceptions, and experiences on the use of cultural diet in preventing chronic health conditions such as obesity in states with high population of African immigrants such as California in which the Bay Area County is part.

Therefore, this research could be put into practice to help public health care professionals working with African immigrants in various health promotion programs to improve their health outcomes and reduce the burden of disease associated with chronic health conditions, including obesity which is disproportionately affecting African Americans, Blacks, and African immigrants in the United States.

Research Questions

The research question that I answered included:

RQ1: What are the experiences, opinions, and perceptions of African immigrants in the Bay Area on cultural diet and chronic health conditions, including obesity?

RQ2: How do the experiences of African Immigrants with chronic health conditions, including obesity, inform their current diet practices?

Theoretical Foundation

Gordon's (1964) classic work about immigrant assimilation and acculturation provided the theoretical foundation for this investigation. The theory was appropriate because I explored dietary changes involving the adoption of dominant dietary behaviors such as unhealthy dietary patterns. Acculturation has been defined in previous studies as the process through which an ethnic group or population, usually a minority group, adopts the culture, including behaviors, beliefs, and language, of the dominant group they are in contact with (Fox et al., 2017a). With its background in anthropology and psychology, this theory has been widely applied in epidemiological and behavioral studies (Fox et al., 2017a). This theory argues that cultural identity is very critical in controlling behaviors. At the individual level, behavior changes may include attitudes, eating patterns, and food preferences (Fox et al., 2017b). Some researchers have found a correlation between acculturation and obesity (Zhang et al., 2019; Zulfiqar et al., 2021), whereas other have argued that there is no relationship between acculturation and high BMI (Akresh, 2007; O'Connor et al., 2014).

Other theories put forward to explain the relationship between migration and obesity include obesogenic environment exposure, healthy immigrant effect theories, and the theory of planned behavior. Researchers have used these theories in explaining various issues on dietary acculturation including why some populations experiences adverse effects as a result of acculturation more than others. The obesogenic environment exposure theory argues that a given host country's dietary environment can either not be conducive to weight loss or may promote weight gain (McDonalds & Kennedy, 2005).

This theory promotes acculturation in several ways. For instance, immigrants moving from low-income countries where they experienced food deserts into high income countries where they have widely available food will adopt their host countries' dietary habits even though some of these dietary habits may be unhealthy (Brown et al., 2019). Also, because unhealthy food will be relatively cheap and easily accessible compared to their traditional diets, immigrants will be more likely to consume more of their hosts' diet than their own cultural diets. In this sense, cost, as well as and accessibility, plays an important role in dietary acculturation.

Another way in which obesogenic environment exposure contributes to dietary acculturation is through being exposed to more caloric and less nutritious diets than an immigrant's body system is accustomed to. Immigrants from low-income countries living in high income countries, consume less processed and highly nutritious diets compared to the native population these countries (Brown et al., 2019). When immigrants move from low-income countries to high income countries, they tend to consume food high in carbohydrates and fats (Fox et al., 2017b). However, their body system at this time will take time to adapt to this type of diet by storing excess fats, hence leading to an increase in BMI. With time, immigrants will have the same body mass as their hosts. The theory of obesogenic environment exposure enhances understanding of dietary acculturation especially among African immigrants in the United States (Brown et al., 2019).

The healthy immigrant effect theory posits that recently immigrated individuals have better health compared to citizens of the host country. This theory contributes to understanding of acculturation by arguing that the period of time in which immigrants

have stayed in the host country influences the extent of dietary acculturation. Before acculturation, immigrants tend to adhere to their healthy cultural diet and nonsedentary lifestyles (Paxton et al., 2016). When the period of stay is longer, immigrants tend to be influenced by their host's dietary habits, culture, and lifestyle. This contributes to acculturation as immigrants are eager to acquire a new identity through eating out, consuming fast foods, and identifying with the newly acquired lifestyle (Paxton et al., 2016).

Another way in which the healthy immigrant effect contributes to acculturation theory is through adoption of sedentary lifestyle. For instance, when African immigrants come to the United States, they tend to be physically fit due to their past lifestyle that involves long walks and manual labor (Paxton et al., 2016). However, after settling in the United States for some time, they often adopt a sedentary lifestyle that includes sitting for long hours and avoiding long walks; this lifestyle promotes weight gain and poor dietary behaviors (Antecol & Bedard, 2006; Jivraj & Khan, 2013).

However, the healthy immigrant theory has come under sharp criticism from various authors. According to some authors, the healthy immigrant effect has nothing to do with acculturation theory because of various reasons. For instance, some researchers have argued that legal immigrants are selected based on certain health selection criteria that only grants permission to immigrants who are healthy (Tshiswaka et al., 2017). According to U.S Government Accountable Office (GAO, 2021), immigration policy that is used to define a legal immigrant state that a person who is a lawful permanent resident or has immigrant visa in their possession becomes a legal immigrant. As stated in the

policy, these could be acquired through humanitarian protection, family relationships, or employment ties (GAO, 2021). Other scholars have posited that some immigrants, especially those of African origin, have reported poor health as a result of various factors including spending time in refugee camps where health conditions such as sanitation, water availability, nutrition, and mental health are relatively poor (Zulfiqar et al., 2021). This research offers a counterpoint to the acculturation perspective in substantiating that not all immigrants come to their respective host country while healthy (Zulfiqar et al., 2021).

The theory of planned behavior also differs from acculturation theory in some ways. According to this theory, an individual's behavior is influenced by their behavior intentions. These intentions are undergirded by three main determinants: attitude towards the behavior in focus, the existing subjective norms, and the perceived behavioral control that the individual has (Ajzen, 1991). One human behavior that has been widely studied is dietary behavior (Addo et al., 2019b). Acculturation is slowed down by the first factor of planned behavior, the results of participating in a given behavior (Ajzen, 1991). When immigrants come into a host country with residents they consider as having unhealthy dietary behavior, they will tend to limit indulging in such behaviors. For instance, African immigrants who believe that consuming an American diet could have serious health consequences such as overweight and obesity will tend to consume less of an American diet and more of an African traditional diet (Addo et al., 2019b). Also, acculturation could be hindered by the second factor of planned behavior where society and the normative belief that being overweight is not fashionable or the norm (Ajzen, 1991).

Moreover, immigrants who have health challenges understand that consuming some types of food will help them prevent or avoid adverse health outcomes. This last factor of planned behavior makes individuals reluctant to adopt to their hosts' dietary behavior because they believe that consuming their cultural diet provides many health benefits compared with hosts' diets (Addo et al., 2019b).

Immigrants moving from low-income countries and settling in the United States mostly experience food desert. According to Stowers et al. (2020), immigrants may not access their cultural healthy foods due to high costs and lack of accessibility. Marginalized areas in the United States where immigrants typically live are often food deserts where fresh food such as fruits and vegetables are very expensive and thus not affordable (Stowers et al., 2020). This lack of healthy food in food desert areas leads to health disparities where such populations are more likely to experience high incidences of chronic health conditions, including obesity (Anetcol & Bedard, 2006). A food desert environment negatively influences access to health care services in several ways. For instance, in such areas, immigrants are more likely to experience food insecurity where accessing food is difficult as a result of cost and availability. Barriers such as poor infrastructure, low income, unemployment, and education may limit access to health care among immigrants (WHO, 2020).

Food deserts could also perpetuate health care disparities by aggravating poor nutrition (Stowers et al., 2020). Immigrants living in environments where food insecurity exists will have disproportionate access to healthy foods. This will expose them to higher chances of having chronic diseases, including obesity, compared to their counterparts

living outside food desert regions. Ethnicity and income are some of the predisposing factors that drive immigrants into food deserts. Stowers et al (2020) argued that African Americans and African immigrants are at a higher risk of experiencing adverse health effects associated with food deserts. Access to, and utilization of, quality health care is limited in food deserts due to social and structural barriers that not only expose immigrants to a high risk of chronic conditions, including diabetes, but also makes access to health care services difficult (Stowers et al., 2020). For these reasons, Gordon's assimilation and acculturation theory provided a pertinent theoretical foundation for the study.

Conceptual Framework

In this study, I used the dietary acculturation concept to explain how eating habits, cultural preferences, and food procurement and cooking practices are linked to the intake of food higher in fat, sugar, energy, and eating. Satia-Abouta (2003, as cited in Horlyck-Romanovsky et al., 2021) developed the dietary acculturation concept, which has since been used to understand diet patterns among immigrants (Goulao et al., 2015; Fox et al., 2017 b; and Horlyck-Romanovsky et al., 202). The concept of dietary acculturation connects logically to the current study as its application has been reported in various interventions to promote a healthy diet to prevent chronic diseases (Horlyck-Romanovsky et al., 2021).

Three main dimensions of dietary acculturation were of interest in this assessment of the experiences, opinions, and perceptions of African immigrants in the Bay Area on cultural diet and chronic health conditions, including obesity. The first dimension was

bilinear acculturation (Cappiello, 2016). This dimension includes ethnic identities, values, and cultural behaviors (Cappiello, 2016). Another dimension was dietary modification (Han et al., 2015). That includes food procurement, cooking, and eating changes that are influenced by culture (Hans et al., 2015). The last dimension was cultural influence or diet, which includes preferences and eating habits that are acquired over a long period (Moreira & Gonçalves, 2020).

Nature of the Study

To address the RQs for this qualitative study, I conducted a single descriptive case study involving in-depth interviews of African immigrants in the Bay Area of California (see Creswell & Creswell, 2019). I conducted open-ended interviews to provide insight into participants' dietary preferences. I recruited 10 African immigrants in the Bay Area of California for in-depth, individual interviews. The interview protocol was developed based on the topic of study and previous studies. Face-to-face interviews that are one-on-one and in-person are considered appropriate data collection type for the research design used in this study. This type of data collection is considered useful, especially when participants will not be observed directly by the researcher (Creswell & Creswell, 2018). Thematic analysis also was appropriate in establishing a detailed understanding of participants' cultural diet experiences, skills, and perceptions related to the prevention of obesity (see Creswell & Creswell, 2018).

Definitions

Acculturation: The process through which an ethnic group or population, usually a minority group, adopts the culture, including behaviors, beliefs, and language, of the dominant group with which they are in contact (Fox et al., 2017a).

African American: An ethnic group comprised of Americans with total or partial African ancestry, mainly from sub-Saharan Africa (Farrelly et al., 2011).

African immigrant: A person with African origins who was not U.S. born. African immigrants include "naturalized U.S. citizens, lawful permanent residents (immigrants), temporary migrants (such as foreign students), humanitarian migrants (such as refugees and asylees), and unauthorized migrants" (U.S Census Bureau, n.d, Migrants in the U.S.).

Chronic health condition: A health condition or disease that persists and requires continuous; extensive; and costly diagnosis, treatment, and management and that may interfere with activities of daily living (WHO, 2020).

Cultural diet: Traditional foods that are similar to the diet in the native homeland. For African immigrants, traditional food is usually rich in tubers, roots, vegetables, and fruits with little protein intake characteristic of their native African homeland (Delisle et al., 2009).

Dietary acculturation: The adoption of dietary consumption behaviors, patterns, and habits of the host country by nonnative residents (Horlyck-Romanovsky et al., 2021).

Dietary behavior: A general term that is used to refer to all aspects related to food choice, eating habits, and nutrient intake. These may include aspects such as social eating

events, food preference and choice in terms of shopping, preparation, cooking, eating, and types of food among others (Nielsen et al., 2008).

Healthy immigration effect: A suggestion that the health of an immigrant from a low- or medium-income country shortly after arrival in the high-income country is better than that of native-born individuals (McDonald & Kennedy, 2005).

Obesity: Excessive or abnormal accumulation of body fats that presents around the waist and abdomen, posing a potential health risk and predisposing an individual to chronic health conditions and comorbidities (WHO, 2020).

Obesogenic environment: A proposition that when immigrants come from low-income countries such as those found in Africa to high-income countries such as the United States, they will encounter conditions that are conducive to weight gain and a sedentary lifestyle while hindering weight loss (McDonald & Kennedy, 2005).

Assumptions

The proposed study assumed that all participants provided honest responses to the interview questions asked. Another assumption I made was that the responses received reflected actual experiences, opinions, and perceptions of African immigrants living in California. Also, I assumed that the sample size of 10 respondents was sufficient to provide saturated data for analysis to address the RQs of this qualitative study.

Scope and Delimitations

The purpose of this qualitative study was to explore the opinions, perceptions, and experiences of African immigrants in Alameda County in the Bay Area of California related to cultural diet preferences to prevent chronic health conditions, including obesity.

Therefore, the study's scope included the experiences, opinions, and perceptions of African immigrants who were previously or currently diagnosed with chronic health conditions, including obesity and overweight, and currently residing in Bay Area County of California. Due to its confinement to the Bay Area, context may limit its transferability to a similar population living elsewhere. However, despite its delimitation to a specific geographical area, specific ethnic group, migration status, and specific health conditions, such as obesity, I believe that the in-depth data can be applied to African immigrants in other areas of California. I considered investigation outside these criteria to be out of scope.

Limitations

The purpose of this qualitative study was to explore the opinions, perceptions, and experiences of African immigrants in Alameda County in the Bay Area of California related to cultural diet preferences to prevent chronic health conditions, including obesity. Some respondents, especially those struggling with overweight or obesity, were not able to provide their opinions due to the stigma and beliefs attached to ideal body size and obesity (Addo, Brener, Asante & de Wit, 2019b). Also, the environment in which I conducted the interviews, including the Zoom space, may have led to biased responses from the participants. According to Egger et al. (2011), the environment could influence the motivation and behavior of individuals as a result of specific stressors that could lead to a positive or negative impact on participants' moods and hence bias their responses.

Significance

This study is significant because of its potential to fill the knowledge gap in past studies that addressed issues of acculturation of immigrants mainly dominant races such as Hispanics, Whites, and Asians but ignored special cases of African immigrants living in high-income countries such as the United States. This study highlights this group or population, which has over the years been erroneously categorized as African American or Blacks despite their unique experiences, culture, and circumstances. By offering evidence of African immigrants' experiences, opinions, and perceptions about maintaining cultural diets to prevent obesity and other chronic conditions within the Bay Area of California, this study may add new data to the dietary acculturation literatures as well as shape cultural dietary practices in other region of the United States. The findings of the proposed study provided evidence on how to support culturally centered dietary interventions and education and their effect on dietary acculturation on health outcomes. The findings of this study also include new data that can be added to the literature and future research by examining the impact of dietary acculturation among African immigrants in the U.S. This has implications for African immigrants in other areas of the United States. Lastly, this study is significant as it provides knowledge on social change impact. Immigration comes with dietary acculturation, where immigrants may assimilate unhealthy dietary patterns that could affect their health outcomes. It is essential to explore the perception and preferences of immigrants in maintaining cultural diets to prevent obesity.

Summary

Prevention, treatment, and management of chronic health conditions, including obesity, are critical to public health professionals. The most vulnerable groups, such as African immigrants and others, pose a challenge to health care providers as most interventions aimed at chronic disease prevention and treatment among these groups have proven ineffective. This first chapter discussed the issue of chronic health conditions among African immigrants, the risk factors such as obesity, and causes such as acculturation. The association between migration and obesity has been explored in the background section of this chapter. The first chapter also addressed the research problem, the purpose of the study, the RQs, and the significance of the study. The scope, delimitations, and limitations of the study were also outlined in this chapter. In Chapter 2, I present the literature review chapter, which includes a review of current, relevant, and scholarly literature on the evidence of the effects of acculturation on maintaining cultural dietary preferences among African immigrants living in the United States.

Chapter 2: Literature Review

Introduction

The problem that this study addressed was the lack of research on African immigrants' opinions, perceptions, and experiences related to the maintenance of cultural dietary preferences to prevent chronic health conditions, including obesity (Reed et al., 2012; Tiedje te al., 2014). The purpose of this qualitative study was to explore the opinions, perceptions, and experiences of African immigrants in Alameda County in the Bay Area of California related to cultural diet preferences to prevent chronic health conditions, including obesity. Chronic conditions including obesity continue to be a significant risk factor for several diseases that pose health challenges for racial and ethnic minorities in the United States (Brown et al., 2019). Interestingly, minorities such as African Americans have a high incidence of obesity than any other minority ethnic group (Brown et al., 2019). Obesity or overweight is mainly a factor of unhealthy lifestyles, including poor diet. Upon arrival to the United States, African immigrants have better general health than their U.S.-born African American counterparts, research shows (Rhodes et al., 2018). The longer they stay in the United States, the higher their weight gain and associated poor health outcomes risks become, even after adjusting for confounding factors such as age (Ford et al., 2017). This increase has been associated with changes in their dietary patterns and dietary culture due to acculturation.

African immigrants living in the United States have difficulty navigating a different food and physical activity environment. Researchers such as Sanchez and colleagues, have pointed out that the reason for this difficulty is mainly as a result of

unaffordability and inaccessibility of cultural diets and tight work schedules. These authors argue that these barriers have promoted sedentary behavior and high energy intake (Sanchez et al., 2018). Immigrants represent a large proportion of the American population, and many researchers have explored changes in their dietary status, especially among Hispanic and East Asian immigrants (Renzaho et al., 2008; Griffith et al., 2014; Han et al., 2015; Zulfiqar et al., 2021). Limited studies exist on the perception of the effect of maintaining cultural dietary preferences on the prevention of obesity among African immigrants. In this qualitative study, I explored how African immigrants in the Bay Area of California maintain their cultural diet preferences to prevent obesity and related consequences in the face of the influence of dietary acculturation.

According to the Pew Research Center (2015), obesity and other chronic diseases among immigrants, is a significant issue because the immigrant population contributed to more than 40% of the population increase in the United States in 2014. The population of foreign-born individuals, particularly African-born immigrants who came to live in the United States particularly in 2014, contributed to more than 12% of the total population (Princeton University, 2017). Therefore, African immigrants now represent a significant proportion of the United States, and their changing health attributed to dietary behaviors is a matter of concern to health promotion initiatives. According to Paxton et al. (2016), many African immigrant families find the Western diet—consisting of a large proportion of processed food; refined sugars and saturated fats; and low whole grain, fruit, and vegetable consumption—dramatically different from the diet in their home counties. Understanding how African immigrants maintain their cultural diet to prevent obesity is

essential to health promotion efforts. Such knowledge may inform the development of culturally specific dietary interventions and programs (Y. M. Lim, 2017).

This chapter begin with an explanation of the literature search strategy, including the search terms, inclusion criteria, and databases used. Then, I discussed the theoretical underpinnings of this study and the concepts that framed the study. The following section will provide an exhaustive review of the current studies on crucial variables and constructs of the study. That will include highlighting the strengths and weaknesses of the approaches taken by the authors of these studies, the reason for selecting the variables in question, what is known about the key concepts, what is unknown, and the gap that this study addressed. The chapter end with a summary of the reviewed literature and discussion of why research was needed on cultural diets and the prevention of chronic conditions, including, obesity among African American immigrants in Bay Area.

Literature Search Strategy

The research method of collecting and analyzing several past and current studies is described as a literature review (Creswell & Creswell, 2019). Researchers conduct literature reviews to scrutinize, select, and critically analyze a wide range of published and in-press articles to acquire knowledge for answering clearly defined RQs (Blackmore, 2014). As posited by Blackmore (2014), prior studies offer a basis for new studies.

Conducting a literature review involves bringing together various articles and information sources that are linked the study area. A strong thesis depends on the foundation and currency of the evidence on the subject investigated (Blackmore, 2014).

Searching and selected relevant, credible, and current studies on the topic under investigation is critical in identifying gaps in the literature that will be answered through a well-developed thesis. Past studies provide evidence on the current level of understanding about an issue, criticism on the position taken, and prospects of future exploration (Blackmore, 2014). The main reason for conducting a well-designed literature review is to ensure that the presented information has as minimal bias as possible by using different sources, including sources that feature different methods (Blackmore, 2014).

Database and Search Engines Considered

To find relevant articles for this study, I used several databases and search engines. These included CINAHL, MEDLINE Combined Search, Google Scholar, PubMed, Medline, and Cochrane Database for Systematic Reviews. Most of these databases and search engines were accessed using the online electronic sources of Walden University, including its Thoreau Multi-Database Search tool. In addition to these, I also search two websites that included the WHO (specifically, its *Controlling the Global Obesity Epidemic* webpage;https://www.who.int/activities/controlling-the-global-obesity-epidemic) and the Centers for Disease Control and Prevention (https://www.cdc.gov). Both websites were informative in providing statistics for this literature review. The literature review was conducted between December 2021 and March 2022. The initial search involved reviewing all relevant studies and was conducted in December 2021. In March 2022, I performed a refined and focused search of relevant articles. Inclusion and exclusion criteria follow.

Key Search Terms

To achieve a focused and relevant search, I used several relevant keywords and search terms, either individually or in combination. The key search terms and phrases, which were developed from the RQs and study objectives, included *diet* and *dietary acculturation, immigrant culture, assimilation, African immigrants, obesity, dietary assimilation, healthy diet, dietary interventions,* and *cultural diet.* Other search terms and phrases included the following: *African Americans, African Americans immigrants, African American immigrants in California, Blacks in Bay Area, immigrants, African immigrants, culture, cultural diets, obesity, integrative medicine, chronic illnesses, integrative medicines* and *health, integrative nutrition, treatment, prevention, health promotion, whole foods, plant-based diets, vegetarian diets, vegan diets, healthy lifestyle, lifestyle medicines, nutritional education, plant-based doctors, plant-based practitioner, holistic nutrition, health and wellness, first-line treatment, chronic pain, diabetes, healthy dietary pattern,* and *hypertension.*

Data Search Process

The search for the relevant literature began by the identification of original or primary articles using the databases selected. The use of keywords and key search terms followed. This is where the titles, abstracts, and the full texts of the articles were read and short notes taken. As the first step, the search terms such as *African immigrants, cultural diet, obesity* and so on were searched in the databases. In the second step, these keywords were combined with other terms such as *integrative medicine, chronic illnesses, integrative medicines and health, integrative nutrition, treatment, prevention, health*

promotion, whole foods, plant-based diets, vegetarian diets, vegan diets, healthy lifestyle, lifestyle medicines, nutritional education, plant-based doctors, plant-based practitioner, holistic nutrition and so on so as to expand the search base. In the third step, I used a filter that ensured I obtained only focused and relevant articles in terms of content and currency. The filters that were critical in the specification of search included: open-source articles because they were readily available at no cost, full-text articles, English-only articles, peer-reviewed, and articles published within the past five years except for seminal articles.

As this study required to come up with more hits, this search strategy included the Boolean technique. This is where the use of Boolean operators and the key search terms was activated. Boolean operators "AND" and "OR" was employed together with selected search key terms singly or combined with other search terms to generate more hits. An example of Boolean technique search that will be employed included the use of operators together with search terms such as "dietary assimilation" AND "African immigrants," "immigration" AND "obesity," "diet culture" OR "diet behaviors," "dietary acculturation" OR "dietary assimilation," and "underweight" OR "obesity" among others. All the articles retrieved were then scrutinized by examining methodology, design, theoretical foundation, abstract, population, publication year, and study purpose.
In instances where there was little current literature or research, including dissertation and conference proceedings, the search strategy was expanded to include a wide range of years of publication as well as expanding other search criteria such as key search words and databases.

Inclusion and Exclusion Criteria

The articles that were used in this study met the set inclusion and exclusion criteria before being selected for the study. The developed criteria stipulated that, among other considerations, that the articles must have related to African American immigrants, cultural diet, and must have passed all the criteria included in the search. According to De Almeida, and Goulart (2017), the use of inclusion and exclusion criteria was important as it helped the researcher to reduce bias in the selection made. Also, the inclusion and exclusion criteria were considered as important in ensuring that the search was narrowed down to only relevant and current articles. Several studies have been conducted by several authors on the effect of dietary acculturation on African immigrants' health (Zilberman-Kravits et al., 2018; Sanchez, Silvestre, Campo, Grandes, G. & PredDE Group, 2018). However, there was need to narrow down on how cultural diets can be used in the prevention and treatment of chronic health conditions including obesity by searching and accessing credible, relevant, and current literature. To achieve this, certain inclusion criteria were selected. These included:

- Only articles that were peer reviewed
- Full-text
- Published in English language
- Published within the last five years except seminal papers.
- Quantitative, qualitative, and mixed methods

The exclusion criteria used in the literature review included:

- Abstracts

- Articles published in languages other than English
- Published earlier than 15 years ago.

Evaluation of Methodology for Literature Review

In order to enhance the literature search, a critical appraisal was conducted using two main appraisal tools. For the qualitative research that was included in this literature review Joanna Briggs Institute tool was used to appraise them. This tool was useful in assessing the articles' relevance, reliability, and trustworthiness (Vardell & Malloy, 2017). This tool provided the necessary checklist that guided the literature review and all the articles selected presented information that was considered as relevant, reliable, and trustworthy. The second tool that was used was Crowe Critical Appraisal Tool (CCAT) that was developed by Crowe and Sheppard (2011). This tool has been used to appraise for quality due to its strength and effectiveness in evaluating the validity and reliability of studies especially cross-sectional studies which were included in the current study (Crowe & Sheppard, 2011).

This appraisal tool was developed through employing reporting guidelines, existing current appraisal tools, and theory of research methods (Crowe & Sheppard, 2011). Another rationale for selecting this first appraisal tool was that it ensured higher tests for reliability and validity of original studies when compared to other appraisal tools (Page, McKenzie, & Higgins, 2017). CCAT as an appraisal tool was specifically selected due to its applicability in evaluating both quantitative and qualitative studies (Page, McKenzie, & Higgins, 2017). CCAT tool is made up of 22 items that are formed from 8

main categories. For each item, there are multiple item descriptors that provide criteria on how to score and appraise any of the subdivided categories.

The main categories that are included in the CCAT include the introduction, Aims and objectives of the study, design section, ethical consideration used, sampling techniques, data collection, result sections, and discussion (Crowe & Sheppard, 2011). The scoring of these items includes a six-point scale that ranges from zero to five. In this scoring scheme, the minimum score that could be acquired is zero while the maximum score is 40. The first process involved obtaining the scores. Then these scores were converted into percentages which are presented in the tool. These scores and percentages are then used to gauge various sections and articles to assess their values.

A total of 1,120 articles were retrieved from the various search engines and were subjected to inclusion and exclusion criteria, leading to exclusion of 1110 articles for various exclusion reasons such as being available as abstract only, published in languages other than English, and published earlier than 2017. A total of 10 articles were included in the review. The findings of the review showed the following. First, it was found that African immigrants most often migrate for economic, social, educational, and political reasons (Alidu & Grunfeld, 2018). After arrival, African immigrants face challenges associated with cultural shifts, social adjustments, and communication barriers (Serral, Bru, Sánchez-Martínez & Ariza, 2019).

Zhang and colleagues in their study, showed that acculturation due to immigration into developed countries influences dietary behaviors and body weight among immigrant children (Zhang et al., 2019). In another study, Zulfiqar, Strazdins, and Banwell (2021)

found that contradiction and tension as a result of dietary acculturation affected healthy living due to differences in the perception of food status associated with obesity/overweight between the home and host country. However, Zulfigar et al. (2021) argued that cultural diet is an important aspect of cultural identity among immigrants. Cultural diet form part and parcel of dietary adaptions success that is essential component of acculturation theory (Moncho, Martínez-García & Trescastro-López, 2022). Ibe-Lamberts et al (2017) found out that that majority African immigrants adhere to their cultural diet consisting of fresh ingredients and use the same to make their own home-prepared fresh dishes.

The effect of acculturation on physical activities and health of immigrants have also been studied in several studies. For instance, Addo, Brener, Asante, and Wit (2019a) argued that acculturation and social cognitive factors are critical determinants of African immigrants' physical activity behaviors and health status. Also, Devonport, Nicholls, and Fullerton (2019) found out that eating behaviors as a result of acculturation was associated with increased body weight among African immigrants. Also, Alyousif and Mathews (2018) found that there is positive association between migration, poor diet, lack of physical activities, and increase in body weight among immigrants from Gulf countries. Also, socio-cultural beliefs particularly concerning ideal body size and immigration contributed to the risk of overweight and obesity following immigration (Addo, Brener, Asante & de Wit, 2019b).

Theoretical Foundation

The Assimilations and Acculturation Theory

The theory that underpins this study is Gordon's assimilation and acculturation theory (1964). This theory originated from the earlier work of Redfiled et al. (1936). However, the theory originally came from anthropology and was assimilated into psychology. This theory is increasingly applicable to health promotion research, which elucidates the consequences and factors that influence health status disparities for minorities such as African immigrants (Fox et al., 2017a).

Acculturation/assimilation theory has its propositional roots in the cultural identity proposition. According to Fox and colleagues (2017b), cultural identity includes a web of attitudes and beliefs that individuals have concerning themselves about their membership in a cultural group. This theory provides perspective on the pathway that immigrants follow in adapting to a new culture or holding on to their home country's cultural identity when they mingle with communities with a different culture (Fox et al., 2017b).

Various studies have applied this theory in assessing dietary changes among individuals moving from one country to another. Zhang et al. (2019) conducted a study using this theory on the association between obesity and acculturation among children immigrating to the United States. The study found that acculturation due to immigration into developed countries influences dietary behaviors and body weight among immigrant children. Another recent study conducted by Zulfiqar, Strazdins, and Banwell (2021) employed acculturation theory to study the experiences of immigrant mothers and their

young children on the effect of acculturation and obesity/overweight in Australia. The immigrant mother immigrated to Australia from Bangladesh, Pakistan, and India. This study found out that there was a contradiction and tension that affected healthy living due to differences in the perception of food status associated with obesity/overweight between the home and host country.

Food is an essential and critical cultural identity marker (Zulfigar et al., 2021). As such, the rationale for the application of acculturation theory is that dietary adaption is an essential component of acculturation theory (Moncho, Martínez-García & Trescastro-López, 2022). By employing this theory in the present study, the researcher tries to link immigrants' dietary habits, including insights into how they decide to adopt to new dietary habits of their new countries while maintaining some food habits and culture of their home countries (Popovic-Lipovac & Strasser, 2015). The current RQs relate to this theory in that it assesses whether retaining some of the cultural diets of home countries affects the prevention of obesity among African immigrants. It also builds upon this theory by evaluating the effect of dietary assimilation on health outcomes among African immigrants.

The Theory of Planned Behavior

The theory of planned behavior put forward by Ajzen (1991) is a health-related theory that explains dietary and health behavior of individuals. Forming part of the broader social cognitive theory, theory of planned behavior will be applied in the proposed study to help explain variations in dietary behavior after the migration (Addo, Brener, Asante & de Wit, 2019b). According to theory of planned behavior, individual's

behavior will be influenced by three factors. The first factor is behavioral beliefs which include the beliefs that the individuals have on the likely results when he/she performs a behavior (Ajzen, 1991). The second factor is the normative beliefs that include beliefs that individual has on the expectation of significant others (Ajzen, 1991). The last factor is the control beliefs which include beliefs that an individual has that he/she could perform a given behavior in the presence of undesirable circumstances or conditions (Ajzen, 1991). Furthermore, I used the theory of planned behavior to argue that behavioral beliefs may result in either unfavorable or favorable attitudes expressed towards a given behavior.

Additionally, normative beliefs could produce behaviors that are affirmed or supported by other individuals significant to the performer of the given behavior. Lastly, control behavior produces the will or capability that an individual may possess in performing a given behavior (Ajzen, 1991). In combination, the three; subjective norm, attitude, and perceived behavioral control results in the development of behavioral intention, which is an immediate and key determinant of a given behavior. This theory will apply in the proposed study because when African immigrants move to the United States, their behavioral beliefs will make them want a healthy diet. However, their normative beliefs about their American friends or relatives will influence their dietary behaviors as they will have expectations from these relatives to adopt to American dietary behavior. Decisions that will make them adhere to healthy diet despite being influenced by new 'American way of life" will also form part of this study.

Literature Review Related to Key Variables and/or Concepts

In the literature review, I discussed concepts pertaining to the relationship between increased body weight, obesity, and migration. The literature review also includes discussion of related topics, including the experiences and dietary acculturation of African immigrants in the United States. The section concludes with an identification of the gap in the literature.

Obesogenic Environment Exposure

The concept of obesogenic environment exposure proposes that when immigrants come from low-income countries such as those found in Africa to high-income countries such as the United States, such high-income countries then become obesogenic for such immigrants (Brown et al., 2019). This is where there is high availability of foods that are considered as unhealthy food (McDonald & Kennedy, 2005). Also, such as the United States provide limited opportunity to immigrants from low-income countries to access affordable and culturally healthy food options (Akresh, 2007). Again, in such obesogenic countries, immigrants find limited options for healthy daily life activities as most activities are sedentary in nature (Antecol & Bedard, 2006). According to this theory, the longer the immigrants from low-income countries stay in obesogenic countries, the more they will gain body weight and the higher the chances of becoming obese (Antecol & Bedard, 2006). Therefore, African immigrants' body weight is expected by this theory to increase over time after arriving in the United States so as to become similar to the body weight of their host population which in case of higher income countries such as United

States tend have higher rates of overweight as well as higher rates of obesity (Akresh, 2007).

Healthy Immigrant Effect

Some studies have reported that immigrants have significantly better health shortly following their arrival in the United States compared to the host population. McDonald and Kennedy (2005) argue that immigrants' health shortly after immigration is better compared to native-born individuals. This was attributed majorly to healthy lifestyle and cultural diets of immigrants who still are not acculturated to the diet of the native-born population (Paxton et al., 2016). However, this argument has been challenged by some authors who have argued that such is not a valid assumption. One such study argued that this assumption needs reassessment, where they pointed to evidence that showed African males reported poorer health in cardio-metabolism compared to their African American counterparts (O'Connor et al., 2014). Also, in the same study, it was pointed out by the authors that African immigrants reported a higher incidence and prevalence of prediabetes and type-2 diabetes (O'Connor et al., 2014). In other similar studies, various authors (Zulfiqar, Strazdins, & Banwell, 2021; Ibe-Lamberts, Tshiswaka, Osideko, & Schwingel, 2017) have also challenged this assumption where they argued that it fails to take into account the case of involuntary immigrants as well as refugees who due to their circumstances such as malnutrition, poor sanitation, and persecution have low life expectancy and increased morbidity.

Premigration Exposure and Deprivation Theories

On the one hand, the theory of pre-migration exposures argues that immigrants' pre-immigration experiences can have an influence on their body weight. This is where the assessment of the immigrants' body weight before leaving their native countries is a factor that could be used to whether or not obesity levels in the country of origin are higher than those of the host country (McDonald & Kennedy, 2014). Individuals migrating from countries where obesity levels are relatively high are more likely to be influenced by factors back home rather than the conditions present in the host countries (Antecol & Bedard, 2006). Immigrants weight according to this theory is a reflection of general status of weight in the native countries and hence, could not necessarily be explained by the conditions brought about by new environment or acculturation.

Deprivation theory on the other hand, posits that migrant could be coming from regions or countries where high levels of deprivation exist. According to Venters and Gany (2009) immigrants coming from economically deprived regions are more likely to arrive in high income countries while underweight as a result of experiences of food or resource deprivation in their native countries. However, as their metabolic systems are accustomed to scarce/deprived nutritional conditions, their systems are not ready to accommodate the high fat and calories diets that they are subsequently exposed to by reason of immigrating into high income countries (Akresh, 2007). In such instances, the immigrants are likely to experience rapid body weight gain and associated chronic health conditions (Zulfiqar, Strazdins, & Banwell, 2021).

The Experiences of African Immigrants in the United States

The population of Africans immigrating to United States and living there has been on increase over the past 30 years (Turk, Fapohunda & Zoucha., 2015; Wafula & Snipes, 2014). Between 1980 and 2009, the number of African immigrants in the United States rose by about 75%, according to forecasts (Blanas et al., 2013). Also, it was reported that during 2013, there were about 1.4 million immigrants of African origin that lived in the United States (Akpuaka et al., 2013). In another study, it was estimated this number to be about 1.6 million during the same period (Horlyck-Romanovsky et al., 2021). With this rapid growth of the number of African immigrants living in the United States, the nation has been faced with growing epidemiological challenge which is new to the U. S's public health sector.

Immigrants from Africa has a distinct and unique experiences when they come to the United States. African immigrants most often migrate for economic, social, educational, and political reasons (Alidu & Grunfeld, 2018). Even after immigration, African Americans maintain cultural and traditional ties with their home countries back in Africa and many times this is evident in the remittances and connections they have with their home countries (Alidu & Grunfeld, 2018). They also encounter in the United States, cultural shifts, social adjustments, and communication barriers (Serral, Bru, Sánchez-Martínez & Ariza, 2019). These experiences take them through the process of acculturation where they either have to adapt to the new way of life or develop new cultural environment which is both demanding and stressful (Popovic-Lipovac & Strasser, 2015).

One of the unique experiences that is specific to African immigrants in the United States is that they have to adopt to a new social identity. This is where they have to adapt to the fact that they have to be identified as both African Americans and racial minority (Serral, Bru, Sánchez-Martínez & Ariza, 2019). This for newly immigrated Africans is very challenging because it exposes them to some form of social prejudice and discrimination which they did not initially experience in their home countries. Additionally, their unique experience comes from dual racism that emerges as a result of being labelled as both immigrant and black (Seller et al., 2006). In this sense, African immigrants face special needs that stem from the race dynamics they have to go through as well as social factors applying to any other immigrant group in the United States (Sellers et al., 2006).

All these experiences have exposed African immigrants to various health challenges. For instance, research has shown that West African immigrants are more likely to suffer from high prostate cancer incidences similarly to the African American counterparts (Akpuaka et al., 2013). Also, another study argued that African immigrants experienced 6 times higher HIV infection rates compared to the general United States' population (Blanas et al., 2013). An earlier study by Fox, Thayer, and Wadhwa (2017a) also found that the prevalence of chronic diseases such as diabetes, cardiovascular diseases, diabetes, and obesity was disproportionately higher among African immigrants compared to general population. This argument was supported by another qualitative study that posited that African immigrants from Somali and Ethiopia especially those living in Ohio, were disproportionately faced with chronic conditions such as type-2

diabetes, obesity, and hypertension than their native-born counterparts (Shipp, Franci, Fluegge, & Asfaw, 2014). In a different study, Sewali et al (2015) reported that about 55% of the respondents who took part in their study were obese or overweight and that the prevalence rate of hypertension among this population was about 8% more than their native-born counterparts. Despite these figures falling below the national averages, it is clear that there is a growing challenge in the prevalence of chronic conditions among African immigrants as a result of lifestyle changes following the immigration. This lifestyle-related health issues have been attributed majorly to acculturation (Seaman, 2013).

African Immigrants and Dietary Acculturation

Dietary acculturation has been assessed differently among different racial groups and in particular among African immigrants. As argued by Adekeye et al., (2014), dietary acculturation among African immigrants has been assessed by the availability of culturally healthy food in the host country that is comparable to native homelands. Other methods of assessing dietary acculturation among African immigrants mentioned in most studies included food-frequency questionnaire, food habits, food, environment, and shopping patterns (Patil, Hadley, & Nahayo, 2009). The use of different assessment criteria for dietary acculturation among African immigrants has resulted in inconsistencies in drawing conclusion on the effect of dietary acculturation on health outcomes (Patil e al., 2009).

Dietary Practices as a Function of African Immigrants' Beliefs and Culture

Culture is an important factor that influences not only the kind of food communities consume but also food preparation and eating habits. The type of food and eating habits are practices that are passed down from one generation to the next (Popovic-Lipovac & Strasser, 2015). African immigrants have been accustomed for a very long period following their arrival into the United States with food that is usually rich in carbohydrates as well as spices (Venters et al., 2009). African immigrants who recently arrived adhere to traditional and cultural diets and eating habits where most of the ingredients they use in food preparation come from back home or alternatively shop in stores that specializes in African foods and ingredients (Venters et al., 2009).

Cultural Diets

African immigrants perceive their traditional/cultural diet as having higher nutritive and protective values. As argued by Delisle, Vioque, & Gil (2009), African immigrants value diets that are rich in tubers, roots, vegetables, and fruits with little protein intake characteristic of their native homeland. In another study, African immigrants have been associated with higher intake of food that is rich in whole grains, legumes, and vegetables which is typical of their homeland (Lindsay et al., 2012). These diets have been considered as somewhat protective when it comes to nutritive value by authors such as Delisle et al (2009), and Lindsay et al (2012).

Another issue that has been influential in determining dietary acculturation is the accessibility to these groups of food from their native homelands. In one study, authors found out that immigrants from Democratic Republic of Congo, Somalia, and Liberia

have accessed their cultural diet readily and hence have continued in their cultural dietary habits even long after staying in the United States (Ilunga-Tshiswaka et al., 2017). In the same study, these authors argued that Congolese diet have been associated with high natural and organic products that are high in fiber and hence has contributed positively to the prevention of higher blood sugar (Ilunga-Tshiswaka et al., 2017).

Cultural diet of African immigrants has also been associated with natural and fresh ingredients. In a study on African immigrants, Ibe-Lamberts et al (2017) argued that majority African immigrants adhere to fresh ingredients and use the same to make their own home-prepared fresh dishes. They also control their nutrient intake by adhering to some of the native eating habits such as having light breakfast, midday lunch, and early dinner (Ibe-Lamberts et al., 2017). African immigrants who have shortly arrived in the United States value observing such eating habits which, according to Ibe-Lamberts et al (2017), are associated with dietary intake control. Furthermore, African immigrants use various food preparation techniques that adds nutritive value of their dishes as well as controls intake of sodium and other salts' intake (Ibe-Lamberts et al., 2017).

Acceptability and Preference of Cultural Diet

Food acceptability or palatability/preference is based on cultural and social connotations. Cultural and social food acceptability has been categorized into four main areas: social eating events, implementation in terms of shopping, preparation, cooking, eating, relationship of the food to the outcome such as weight loss or nutrition, and preference of the diet (Nielsen, Korzen, & Holm, 2008). Preference of food depends on

various factors such as availability of the cultural food at an affordable price, social acceptability, personality, and easy access (Neilsen et al., 2008).

Limited studies have examined the correlation between cultural acceptability of food and diet adherence. In most studies, incorporating cultural diet in nutrition intervention was associated with greater diet adherence. According to the study conducted by Deng, Zhang, and Chan (2013), incorporating cultural diet enhances the success of nutrition intervention as there is ease of associating the diet with the family's food patterns and eating habits. Also, Murphy, Robertson, and Oyebode (2017) argued that when diet is culturally motivated, then it is highly likely that much time and money will be invested in acquisition, preparation, and consumption of such diet. Furthermore, in a study on the relationship between acculturation and risk of developing obesity and overweight, Zulfiqar and colleagues showed that culturally and socially acceptable diets are associated with reduction in unhealthy food intake as well as reduced body weight (Zulfiqar, Strazdins, & Banwell, 2021). In another study, Akombi-Inyang and colleagues examined the relevance of diabetic diet in controlling diabetes and found out that when highly culturally acceptable diet is consumed by diabetics, there is significant reduction in blood sugar glucose compared to less culturally acceptable diets (Akombi-Inyang et al., 2021).

Dietary Acculturation and Health

There is considerable documentation of the association between acculturation and health. For instance, Serafica (2014) argued that Asian immigrants living in the United States adopting American dietary habits and way of life are more likely to experience

increased risk of hypertension than when they adhere to their Asian dietary patterns. This argued further that the high risk of chronic condition among this population is due to the increase in frequency of food, sugar, fats, and salts, and low intake of fresh vegetables and fruits (Serafica, 2014). In another study, Allen et al (2014) also argued that there is a correlation between acculturation, unhealthy dietary habits, and smoking among low-income immigrants living in Boston.

The correlation between acculturation and dietary behaviors has been widely explored among Mexican immigrant population living in the United States. For instance, Perez-Escamilla (2016) argued that immigrants were faced with higher rates of food insecurity vulnerability and negative effects resulting from change in their cultural food habits. This author came up with evidence-based Mexican food and physical exercise guidelines aimed at reducing the negative effects of dietary acculturation among Mexican immigrants (Perez-Escamilla, 2016). In other studies, researchers have found the association between dietary acculturation and increased risk of chronic diseases among African immigrants. For example, in one study, it was found out that acculturation of African immigrants living in the United States was associated with increased risk of chronic conditions such as cardiovascular conditions and type-2 diabetes (Paxton et al., 2016).

Another qualitative study on the perception of dietary acculturation on health was conducted by Horlyck-Romanovsky et al. (2021). In this study, individual or group interviews were used to collect data from youth and adult immigrants from Ghana to the United States. The study's findings showed that parents were more aligned to eating at

home while youth preferred eating outside. Also, the study found out that due to high purchasing power, food rich in calories and fast foods were consumed by both youth and adult immigrants. This study's strength included rich data on intergenerational differences in dietary acculturation perception. However, its weakness includes a lack of generalizability due to the small sample and a lack of gender differentiation.

Dietary Acculturation and Chronic Diseases Such as Obesity

The constructs of interest in this study are dietary acculturation and obesity. The key variables /concepts of interest for the current study include food practices, exercises, integration, environment, health concerns, cultural practice related to cooking and eating, and the relationship between dietary acculturation and chronic conditions including obesity, among others. Although much work has been put to study the correlation between acculturation and obesity or overweight, so far, the findings of such studies have remained inconclusive in nature. Vargas and Jurado (2016) argued that there is a significant relationship between increased waist circumference, BMI, and acculturation among immigrants from Philippines living in the United States. As argued by the same study, this increase in BMI, and waist circumference was due to the increased intake of carbohydrates and foods high in calories (Vargas & Jurado, 2016). Also, Griffith et al. (2014) argued that BMI of adolescent immigrants from Africa in Australia was correlated with their parents' acculturation factors. The argument in this study was that adolescents from households with parents that adapted Australian dietary habits, had relatively higher BMI compared to their counterparts from households with parents who adhered to cultural diets from Africa (Griffiths et al., 2014).

In a systematic review conducted by Goulao, Santos, and Carmo (2015), the authors argued that BMI has a significant and positive correlation with the duration at which the new immigrants have stayed in the high-income countries. This systematic review pointed out that there are several factors that could be underlying the positive association between increase in BMI and length of stay including social factors such as sedentary lifestyle, dietary acculturation, genetic susceptibility, higher consumption of foods rich in calorie and fats, and change in economic status among others (Goulao, Santos, & Carmo, 2015).

The most current qualitative study on the subject was conducted by Zulfiqar, Strazdins, and Banwell (2021) on how acculturation is a risk for obesity and overweight among Australian immigrants from Asia. In this study, face-to-face semi-structured interviews were conducted to assess changes in physical activities and diet and how they are associated with overweight among immigrant mothers and their children aged between 8 and 11 years. The authors of this study found out that mothers and their children acknowledged the effect of acculturation on obesity but provided evidence that shows that while children's frame of reference is their host country, their mother's frame of reference is their home country. Even though this study included a small sample size localized to Australia, making it difficult to generalize these findings, the study acquired rich data on the topic through its qualitative methodology. Strazdins and Banwell's (2021) study is helpful for the current study because it highlights some of the essential constructs that will be assessed in this study, such as food practices, physical exercises, social integration, health concerns, and environment.

Also, Paxton et al. (2016) conducted a qualitative study on the effects of changes in dietary habits on health among immigrants from West Africa to the United States. The study found that respondents reported weight increase after staying for some time in the United States and that their diet and eating habits had considerably changed. This study is important for the current study because it shows how staying in the United States leads to dietary acculturation and an associated increase in body weight/obesity. Like the current study, all these studies are qualitative in nature and provide evidence on dietary habits of both adults and youth, eating practices, obesity, and other health concerns.

Conversely, other studies have found no significant association between dietary acculturation and obesity. For instance, a study conducted by Isasi et al (2015) argued that there was no significant correlation between acculturation and obesity among immigrants of Hispanic origin living in the United States. This study argued that the effect that was reported by earlier and other studies were as a result of confounding factors associated with the prolonged environmental exposure of the immigrants in the United States. They disputed the effect of acculturation on higher rates of obesity among Hispanic immigrants (Isasi et al., 2015). Another similar study argued that there was no statistically significant correlation between acculturation and feeding behaviors among immigrants (Tovar et al., 2013). This study however, showed that the length of stay was a modifying factor in changes in eating behaviors and was considered as a contributing factor to obesity among adolescent children and mothers (Tovar et al., 2013).

However, although there are mixed findings on the association between length of stay and high rates of obesity among immigrants in high income countries, inclusion of

behavioral factors as a result of acculturation cautiously points to the conclusion that immigrants from low-income countries are more likely to be obese due to dietary acculturation and change in physical activities (Ro et al., 2015). Change in dietary patterns of immigrants are as a result of influence of host country's eating behaviors and lack of access to culturally acceptable food (Ro et al., 2015). However, the conclusion that could be drawn from these studies is that there are other factors in addition to dietary acculturation that influence increase in obesity and overweight among immigrants from low-income regions such as Africa. In the current study, what needs to be researched is the perception of adult immigrants on how maintaining cultural diet preferences will be critical in preventing obesity, especially in the Bay Area of California. Therefore, these studies use approaches that are relevant to the current study's RQs and objectives.

Identified Gap in the Literature

The literature review that I conducted revealed that most research has identified that grouping of black immigrants with African Americans is problematic when it comes to studying health factors and outcomes (Ting, 2010; Harcourt et al., 2014; Sewali et al., 2015). This mounts challenge in acquiring accurate data as well as planning effective health promotion interventions for African immigrants. The problem posed by grouping African Americans and African immigrants together in health research has been pointed out by Wafula and Snipes (2014) who cited differences that exists between the two distinct populations. The lack of sufficient data is as a result of single race category where all blacks irrespective of place of origin or reason, are categorized as Black/African American (Commodore-Mensah, Himmelfarb, Agyemang, & Sumner,

2015). Various subcategories that exist such as Afro-Caribbean and Jamaican among others have been overlooked in previous research (Commodore-Mensah, Himmelfarb, Agyemang, & Sumner, 2015).

This categorization fails to capture the wide range of culture, cultural diets, habits, and beliefs existing in the larger Black population including African immigrant effectively. Gaining more accurate description of dietary behaviors, dietary culture, and food habits of African immigrants and their effect on chronic diseases requires a more focused study. Although researchers have investigated this issue, there is very limited research on the opinion, perceptions, and experiences of African immigrants on the use of cultural diet in preventing chronic health conditions such as obesity in the Bay Area of California. The social problem is that despite health education and dietary interventions to prevent chronic health conditions including obesity, African immigrants are still disproportionately affected by overweight as a result of dietary acculturation and their (Horlyck-Romanovsky et al., 2021). Research is required to ensure dietary intervention recommended are culturally sensitive and population-specific.

Summary and Conclusions

The studies examined looked at broad-ranging themes such as eating habits, dietary practices, cultural habits of cooking and eating, health outcomes, obesity, the role of the environment, social-economic status, intergenerational differences in diet acculturation, and physical exercises. According to the literature review, youth are more likely to adapt to the host dietary habits and are at higher risk of overweight/obesity than adults. Also, these studies reviewed have shown that adults are more strongly influenced

by the cultural diet of their home countries than their host countries and hence will find it challenging to adapt to the new dietary habits. Again, the literature review showed that adapting to host dietary habits is associated with chronic conditions such as overweight/obesity. However, there was a gap in how immigrants perceive that maintaining their cultural dietary preferences is essential to preventing adverse health outcomes. Research is needed to evaluate the views, experiences and perception of African American immigrants living in Bay Area in California on the relationship between cultural diets and chronic conditions including obesity among African American immigrants in Bay Area.

Chapter 3: Research Method

Introduction

In this qualitative study, I sought to understand how African immigrants in the Bay Area of California maintain their cultural diet preferences to prevent chronic health conditions, including obesity. I used qualitative methods to examine their experiences, opinions, and perceptions of their native cultural diets. Other topics that were examined include dietary acculturation, nutritional values, health beliefs, chronic health conditions including obesity, and physical exercises. In this chapter, I provide an overview of the qualitative research method I used, including the research design and its appropriateness for this study, the research approach, my role as a researcher in conducting this study, the methodology, issues of trustworthiness, and ethical procedures.

Research Design and Rationale

Two research questions that were answered included:

RQ1: What are the experiences, opinions, and perceptions of African immigrants in the Bay Area on cultural diet and chronic health conditions, including obesity?

RQ2: How do the experiences of African Immigrants with chronic health conditions, including obesity, inform their cultural diet practices?

The research approach that was employed for the current study was qualitative and involved interpretivist philosophical assumptions based on a descriptive single case study. This approach was appropriate for the current study as it allowed for a description of participants' experiences, opinions, and perceptions related to their cultural diet and chronic health conditions, including obesity (see Rodriguez & Smith, 2018). Also, use of

this approach was necessary to set aside any preconceived assumptions, biases, feelings, experiences, and perceptions that I had that may have influenced the research I performed (see Creswell & Creswell, 2019).

As Holloway and Galvin (2017) noted, qualitative research designs in the social sciences involve collecting qualitative data through interviews or direct observation. There are various qualitative designs that Holloway and Galvin alluded to, one of which—single descriptive case study—was applied in this study. The rationale for the selection of this design was that it would allow me to explore the human experience as described by individuals who lived it in a given specific context (Rodriguez & Smith, 2018). I examined the lived experiences of African immigrants in the Bay Area, California, from a vantage point of these subjects to understand their experiences, opinions, and perceptions on the link between cultural diet and chronic health conditions, including obesity. Bracketing, where the researcher will put aside all preconceived opinions and biases, is a key part of this design (Rodriguez & Smith, 2018).

Role of the Researcher

In qualitative research, the researcher is an instrument of data collection (Creswell & Creswell, 2019). In this sense, the researcher acts as a human instrument through which data are mediated. Because the researcher acts as an instrument, by collecting, organizing, sorting, and analyzing data, their personal biases and preconceived perspectives could affect the conclusions they draw. Therefore, as the primary instrument for data collection and analysis, it is essential to state relevant aspects of myself, including the biases and preconceived assumptions that I have that may induce bias in the

data collection and analysis (Creswell & Creswell, 2018). That also includes statements of my experiences that qualified me to carry out this research and of the expectations of the research outcome.

In conducting this study, I was aware that past experiences gained in my studies might lead to potential bias. By using a member checking strategy, I sought to mitigate such potential biases. The interviewees reviewed their responses to ensure their accuracy and completeness (see Greenbank, 2003). Second, before this study was conducted, I understood the potential impact of American and cultural diet on African immigrants' health due to the fact that I have lived close to African immigrants in the Bay Area, California. As such, I have been acquainted with some of their plights and the burden of chronic diseases, including obesity. To mitigate potential bias and overreaction, during the interview sessions and afterward, I kept a research journal in which I recorded my personal reactions and reflections. I also kept an additional journal that I used in noting down my past experiences with cultural diets and health conditions in Bay Area, California as well as other insights I obtained from studying and listening to news. Moreover, I used bracketing where I kept analytical memos about my train of thoughts as well as a record of my personal reflection throughout the research period. (Greenbank, 2003).

My role also included observing ethical requirements that include justice, beneficence, and respect (Gluck & Mciver, 2016). By emphasizing to all participants, the principle of justice, I treated all participants fairly. Also, by avoiding harm to all participants and treating all participants with respect in the same manner, I was able to

ensure that I adhere to ethical requirements suggested by Gluck and Mciver (2016). Furthermore, I followed strict interview protocol that helped standardize the data collection process to limit any potential bias (Creswell & Creswell, 2019). The specific procedures and steps highlighted in the interview protocol were critical in ensuring that potential personal biases are eliminated, participants are set free to provide honest responses, and the data collection process is uniform and seamless (Guest, Namey, & Mitchell, 2013).

Methodology

Participant Selection Logic

In qualitative research, various sampling strategies such as convenience, purposive, and snowball techniques could be applied (Creswell & Creswell, 2019). For the current study, purposive sampling and snowballing were selected and deemed appropriate. The reason is that purposive sampling allowed narrowing down participants based on predetermined criteria set by the researcher (Etikan, 2016). For this study, purposeful sampling involved recruiting participants based on specific selection/recruitment criteria. The selection criteria included: (1) immigration status; where the participants were foreign-born and legal immigrant status (2) immigrated to the United States and Bay Area not more than 10 years ago (3) adult of either gender (4) currently resides in Bay Area, California (5) diagnosed with any chronic conditions including obesity/overweight, (6) having access to computer and streaming internet.

As mentioned in Chapter 1, 10 African immigrants were purposefully sampled from a population of African immigrants living in the Bay Area, California, and included

in the study. This sample size was appropriate because, as posited by Creswell and Creswell (2018), qualitative research is concerned more with in-depth and quality analysis rather than representativeness or breadth of analysis. Provided data saturation could be achieved, a sample size of 10 should be appropriate (Etikan, 2016). I began snowball sampling by identifying four participants from varied group say: two obese African immigrants, one female immigrant and one male immigrant who both uses cultural diet a lot. Then, I provided information for the four subjects and encourage them to pass the same information to others who may be eligible or interested in the study. This information was provided to the subjects through digital flyers that were approved by the Walden University Institutional Review Board.

The interested potential participants then contacted me for more information on how to take part and possible inclusion in the study. Alternatively, I asked the four subjects initially recruited through digital flyers to obtain permission from prospective participants prior to disclosing their specific contact information. In this sense, I was not directly in contact the prospective subjects referred without their permission and also, I did not had access to any information about the prospective subjects without their permission. Then, I asked the selected lot to identify more members that could take part in the study. When those referred by this lot were not willing, I requested them to refer other until I had identified 10 individuals who took part in the study.

The reason why I used the varied group is to ensure saturation due to diversity of perspectives that is expected from the sample. Also, the central was effectively phenomenon explored through in-depth exploration by a diverse group. The recruitment

of the first four participants involved invitations through flyers and brochures that were digitally distributed to potential participants through social media, Facebook, and Instagram with an invitation link. These social media were selected due to their ease of use and traffic. All invitees were then scrutinized to ensure they met the selection criteria. Successful potential participants were then emailed with details of the study, including purpose, data, required consent, and ethical issues addressed. Further follow-up emails aimed at obtaining their signed consent and further instructions were sent to potential participants.

Instrumentation

The data collection instrument that was used were derived from the interview protocol that I developed. Hence, the interview protocol that I generated guided this study to probe, explore, and present questions to the respondents to ensure that generated data answers the RQs set. Colegrave and Ruxton (2016) argued that an interview guide is essential in ensuring that the interviews are focused and uniform across all interviewees by using the same checklist for all participants. The instrument was developed by evaluating the RQs with references to the literature to ensure that all concepts are based on the literature. Use of the interview protocol (see Appendix A) ensured that the data collection process was comprehensive and systematic. It also allowed me to plan and delimit the aspects of the research topic to be explored (Colegrave & Ruxton, 2016). The interview protocol highlighted the topic of the study, how participants will be introduced, the purpose of the study, benefits and ethics, confidentiality, right to information, transition to set interview questions, and any other issue of concern that was faced during

the interview process. This protocol was developed under the guidance of a checklist provided in Creswell and Creswell (2019).

Procedures for Recruitment, Participation, and Data Collection

The first process involved the establishment of the validity of the study protocol by receiving approval from Walden University's Institutional Review Board (approval no. 12-21-22-0728310). Next, the semi-structured interview questions were validated through reviews, and the selected participants will be invited to take part in the interviews. Initially, one-on-one in-person interviews were planned. However, I decided to settle on the Zoom technology due to the resurgent of the COVID-19 pandemic and resource constraints. Consent to take part in this study was obtained from all participants before the date for the interview. Each interview lasted between 25-35 minutes in each private Zoom session with the participants. Also, data collection during the interview included taking short notes and using a digital audio recorder to capture the participants' responses. All participants were informed of the recording and its purpose in data analysis. For this research, an Infinix digital recorder was used. Body language, as well as nonverbal communication cues, were also observed and noted by the research during the interview sessions. Participants were given sufficient time to respond, and I did not interject during the period that participants will be providing their responses. Again, I sought clarification and probe respondents to provide further information.

Data Analysis Plan

Raw data that were obtained from interviews were then transcribed into written format. Member checking, triangulation with audio recording, and short notes taken

during the interviews were used to check the accuracy of the transcribed data. The analysis then followed using pre-determined codes drawn from each question to ensure that the data collected was are aligned to the RQs. Then, thematic analysis following the Braun and Clarke (2006) seven-step framework was used. The first is step was to get familiar with the data collected through reading and re-reading the transcripts. Second step included developing initial codes by systematically organizing the data to find meaning. Third step involved searching for themes by joining codes using the RQs (Braun & Clarke, 2006). This was important in ensuring that RQ guided the development of themes. The fourth step involved reviewing the identified themes to ensure they were aligned to RQs. In Step 5, I refined and defined themes and identified how they were tied to subthemes. In Step 6, I wrote up the results obtained (Braun & Clarke, 2006).

The raw data was then transferred into NVivo Version 10 for Windows. This software was selected because of its user-friendliness, support for various data sizes, and online accessibility (Rowlands, Waddell, & McKenna, 2015). NVivo software effectively identifies concepts and themes for coding, as well as analyzes and stores qualitative data. The first stage was to compile raw data by transferring member-checked transcripts into NVivo software. The second stage involved dissembling of data into labels and fragments. The coding begun by naming and grouping raw data into codes in NVivo. These were then used to create core themes through labeling to develop relationships and patterns (Rowlands et al., 2015). The third process involved reassembling the categories and clusters into groups and sequences through NVivo critical functionalities. Then, the last process involved interpreting the data using narratives. Finally, conclusions were

drawn from the data using past and present studies on the same topic (Rowlands et al., 2015).

Issues of Trustworthiness

According to Etikan (2016), trustworthiness in qualitative research refers to the extent to which the findings are dependable. It also refers to validity, where the researcher asks whether the findings are credible, confirmable, and transferable (Creswell & Creswell, 2019).

Dependability

This term is used in qualitative studies in place of reliability as applied in quantitative studies. As Wuest (2015) argued, dependability refers to the consistency and reproducibility of the data obtained under similar conditions. That is achieved through subjecting the interview protocol and questions to expert reviews, member checking of methods used and interpretation of the data, triangulation of data, and transcript review (Wuest, 2015). In this study, dependability was ensured by involving three external experts to review the interview protocol and questions, interview transcripts, and methodology employed. I ensured that all steps were followed and that all interview questions were aligned to RQs. The use of a voice recorder also enhanced transcription.

Credibility

Credibility refers to the extent to which the findings are accurate from the standpoint of the participants (Creswell & Creswell, 2019). This study ensured credibility by member checking where respondents were called upon to check whether the summary

of their responses provided was accurate. Also, credibility was enhanced by further probing for responses during the interviews to achieve data saturation.

Confirmability

Confirmability refers to the ability of the findings to be corroborated by others (Creswell & Creswell, 2019). This was achieved through reflexivity and review of the transcripts. This included disclosing my biases and predetermined assumptions and ensuring that responses were provided purely from the participants' standpoint.

Transferability

Transferability refers to the extent to which future researchers could benefit from the current research findings (Creswell & Creswell, 2019). This was achieved by strict adherence to research protocol and documentation of every step and process that will be used.

Ethical Procedures

Protecting participants from potential psychological, physical, and social harm is an ethical requirement of a qualitative study (Creswell & Creswell, 2019). No initial contact with the respondents was made before the University's Institutional Review Board provided its approval. Also, all participants were required to read, understand, and sign a consent form as proof of their consent to participate in the study willingly. This form provided information on the purpose of the study, the right to withdraw at any time without any obligation to the researcher, the right to information, the confidentiality of the data provided, and the benefits of the study. All participants were assured that their personal information would not be used in any form and that their names were

anonymized P1, P2, etc., for Participants 1, 2, etc. Also, I gave assurance to all participants that the information provided were kept in a computer that was password protected and will only be used for the study to the extent provided by the law, after which it will be safely discarded after 3 years.

Summary

Chapter 3 detailed discussions on the applied research design and rationale behind such a decision. Also, this chapter discussed the sample selection strategy and sample size drawn from the population of African immigrants in Bay Area County of California. The appropriateness of the selection strategy was highlighted. Also, this chapter presented the data collection, analysis, and interpretation procedures. The methods employed to establish the trustworthiness of this study's findings were also presented in this chapter. Ethical requirements and how they were met in the study were also provided in Chapter 3. The following chapter present the results of the study and how they were interpreted.

Chapter 4: Results

Introduction

In this study, I sought to understand how African immigrants in the Bay Area of California maintain their cultural diet preferences to prevent chronic health conditions, including obesity. The study had two main RQs:

RQ1: What are the experiences, opinions, and perceptions of African immigrants in the Bay Area on cultural diet and chronic health conditions, including obesity?

RQ2: How do the experiences of African Immigrants with chronic health conditions, including obesity, inform their cultural diet practices?

In this chapter, I describe setting, demographics and the approach used in collecting data. Also, this chapter includes discussion of the data analysis process including how categories and themes were formed through an inductive process. Evidence of how the data collection and analysis process achieved trustworthiness is also presented. The results are presented by RQ, and discrepant cases are noted. The chapter concludes with a summary of the results followed by a transition to the next chapter.

Setting

As I was using Zoom technology for interviews, there were times during data collection when the internet connection line was poor, resulting in a delay in communicating with the respondents. In these cases, I had to repeat the question and wait for the response, as well as confirm with the respondents to ensure that their experiences

were correctly recorded. No other challenges that could have affected the respondents' experiences were noted.

Demographics

The majority of the respondents (n = 9) were men with only one being female. Out of the 10 respondents, eight were born in Nigeria, one in Cameroon, and one in Benin Republic. All were aged 18 years and above.

Data Collection

Ten individuals took part in the study by responding to the interview questions. I used the Zoom videoconferencing platform to conduct the interviews, which allowed respondents to participate from the comfort of their homes. I took 1 to 2 days between each interview to allow time for preparation for the next interview. The data were collected for a period of 2 weeks, and each interview took about 12 to 25 min. Data were recorded using an Infinix digital audio recorder. I also took brief hand written notes. The participants were informed about the recording and its purpose in data collection. Body language and nonverbal communication cues were also observed and noted in the note pads during the interview sessions. In the initial data collection plan, I anticipated that the duration of each interview would be between 25 and 35 min, but I changed the allotted duration to between 12 and 25 min. Also, the interviews did not follow the order of questions stated in the interview protocol; in some instances, for example, some questions came before others depending on the responses provided. The only unusual circumstance

that was encountered during the data collection was an occasional poor line for the Zoom meeting. This issue required patience both on the part of the participants and myself.

Data Analysis

Data analysis followed Braun and Clarke's (2006) framework where inductive thematic analysis was employed to identify the emerging patterns related to the two main RQs. Inductive thematic data analysis allowed codes and themes to be strongly associated with the data instead of theory-driven deductive thematic analysis. Braun and Clarke (2006) and Braun and Clarke (2019) detailed six step-process of data analysis, including getting familiar with the data, initial coding, coming up with themes, checking themes, naming and defining these themes, and final write-up of themes.

First, I listened to the interview recording in order to get familiar with them. Then, I transcribed each interview while identifying each participant with initials such as Interviewee 1,2,3 and so on. Then I organized the interview data using the interview questions. This led to the development of a codebook that contained the interview question topics and associated codes (see Appendix B). Then, I read the codes to find associated extracts which were then used to develop patterns connected to each interview questions. After this, I grouped interview questions into subthemes and then themes. I looked at the interview data, and then, I ensured that the themes were arranged into categories related to the two RQs.

Evidence of Trustworthiness

In order to achieve dependability, after transcription of the interviews obtained, the copy of the transcribed data was sent to each of the respondents who were asked to

confirm whether the transcribed data represented their opinions and responses. This ensured credibility of the findings. Also, interview transcripts were sent to three of my colleagues with experience in qualitative data analysis who reviewed both the transcript and the method so as to ascertain their credibility. The use of voice recorder enabled corroboration of the transcripts during data analysis process. During the interview, further probing questions were allowed so as to allow data saturation. Time was given for the respondents and further probing was conducted to ensure credibility. Transcripts were reviewed several times to ensure confirmability of the findings. Every step of the data collection and analysis was described and documented in notebook to ensure that this study could be used in future by other researchers.

Results

I generated five primary themes, along with several subthemes. Table 1 shows the themes, subthemes, and representative comments that emerged from data analysis.

Table 1

Summary of Themes, Subthemes, and Representative Comments

Theme	Subtheme	Representative comment
Theme 1: General opinion on African cultural diet versus American diet	Preference for African cultural diet Cultural diet and health benefits. Perception on American diet and overweight/obesity	"Like you feel our food is more natural, healthier than what you see here." [Interviewee 3] "Second, I feel it's more natural they are not synthesized with foreign chemicals; that's why I love it." [Interviewee 8]
Theme 2: General opinion on change in dietary behavior	Challenges in dietary behavior change. Affordability and accessibility of preferred African diet	"There have been substantial adjustments to my eating." [Interviewee 2] "Well, I do not like it. Because I have to pay more to get that type of food, very expensive." [Interviewee 7]
Theme 3: General opinion on type of food and chronic diseases	Type of food and chronic diseases prevention. The manner of eating and chronic diseases prevention.	"I'm kind of referred to. It's been so hard to stay healthy. It's been so hard to make healthy choices for food." [Interviewee 9] "The way we cook our beans; we like to have a lot of flavors in our food. We like to have a lot of richness in our food." [Interviewee 3]
Theme 4: General opinion on knowledge of overweight/obesity and chronic diseases	Obesity and inappropriate body mass index (BMI). Obesity as a chronic disease	"For my school days, I understand that anybody with a BMI of 25-30 is overweight. Anything over 30 is obese." [Interviewee 8]
Theme 5: Opinion in maintaining cultural diet	Sticking to cultural diet Watching dietary habits	"A get-eating an African diet that kept me reducing my weight." [Interviewee 1]

To help in coming up with these, NVivo software was used. Figure 1 is a word cloud that shows words that appeared many times in the interview data. These words include "African diet," "food," "American," and "overweight," among others. The size of words is an indicator of their frequency in responses.

Figure 1

Word Cloud of the Most Frequently Used Words in Interview Responses

Research Question 1

RQ1 was, What are the experiences, opinions, and perceptions of African immigrants in the Bay Area on cultural diet and chronic health conditions, including obesity?

Theme 1: General Opinion on African Cultural Diet Versus American Diet

This theme describes the general opinion on the preference between the African cultural diet and the American diet. Overall, respondents had a favorable opinion and attitude towards the African cultural diet compared to the American diet. Under this theme, there were three subthemes. These were preference for African Cultural diet, African cultural diet versus American diet, and perception of the American diet and overweight.

Subtheme 1: Preference for African Cultural Diet. This subtheme describes the African cultural diet and why this diet is preferred. Overall opinion on the preference for African cultural diet was positive, with many respondents discussing why they prefer it. For instance, the seven out of 10 respondents pointed out that having grown up with an African cultural diet makes them like it more. Interviewee 3 reported that the African cultural diet is tasty and has a lot of flavors:

> This I what I grew up eating, right? But it has a lot of flavors to me. It has a lot of taste, and to me, there is a lot of richness in African meals. Like the way, we cook our rice. The way we cook our beans, we like to have a lot of flavors in our food. We like to have a lot of richness in our food.

Specifically, Interviewee 9 reported that having grown up eating an African cultural diet has enabled him to maintain a healthy physique:

> Of course. Aah... I mean, that's one thing I grew up eating. That's always been nature to me, and I think that's one of the things that is aiding me in having such a healthy physique even though I haven't been active as I was since I moved into this country.

Also, Interviewee 3 pointed out that the African cultural diet is healthy in the manner of its preparation: "It is natural, and it is very healthy in some forms and ways it is made." This sentiment was also echoed by Interviewee 7 who pointed out that the African cultural diet is home-grown and home-cooked:

> So, I like the way I grew up; the food they grow is always home cooked. We suddenly get money to buy eat-outs which we call treats. So basically, I believe you have to eat what is grown in your region.

Subtheme 2: Cultural Diet and Health Benefits. Respondents discussed why they preferred the African cultural diet over the American diet in comparing it to the American diet. Overall, their experience and perception of the African cultural diet were positive compared to the American diet, which was primarily negative or reserved. In the discussions, respondents pointed out several reasons why they believe the African cultural diet is healthier than the American diet. Interviewee 3 pointed out that the reason why African cultural diet was healthier than American diet was because it was more natural in the way it is grown:

> The fact that we don't have the technology advancement to manufacture food like that, and you know, speed up the growth process, we tend to eat more naturally grown things as far as health benefits go. You tend to see fewer defects and illnesses in food than in the western world. Like you feel our food is more natural, healthier than what you see here.

Interviewee 9 pointed out that the issue of seasoning food and using chemicals that may adversely affect health makes American diet less healthy:

> I mean, for example, with most food in America, we have sugar in everything. Everything is added extra sugar. Like if you buy chicken here, they sterilize it with extra chemicals that make it buff, and we don't do that with our meat in Nigeria; we don't do that with our food.

Also, as opposed to American food, Interviewee 8 pointed out that African cultural diet is healthier because it does not contain any chemicals synthesizers: "Second, I feel it's more natural they are not synthesized with foreign chemicals; that's why I love it."

Further, in another instance, interviewee 3 clarified that consuming an African cultural diet makes it easier to be healthy. Similarly, it is easier to become unhealthy by consuming the American food: "The content of food in African culture, you have to go out of your way to eat unhealthy African dishes. You understand? As opposed to America, you have to go out of your way to eat healthy."

Subtheme 3: Perception on American Diet and Overweight/Obesity. Nine out of 10 participants responded that the American diet causes obesity or overweight. These participants pointed out that the American diet is mainly made of fast food. They also

associated the American diet with fast foods, mostly fried or seasoned with sugar or salt. Interviewee 4 argued that American diet is disadvantageous because it is meant to be efficient and fast:

> In my part, I see more disadvantages to it because the American diet is mainly based on fast and efficient. So, it's like frozen vegetables and the stuff like that, burgers, whereas I tend to like eating my vegetables when they are naturally harvested fresh and not frozen.

According to Interviewee 10, fast food associated with the American diet is not only unhealthy but also unfamiliar: "With the African diet, you mostly have a lot of fresh food and vegetables. Whereas in American fast food, mostly dried foods, and fats. So, I'll prefer ours because it is healthier and familiar."

The respondents also discussed the lack of nutrients, where eight out of 10 perceived the American diet as having few nutrients compared to the African cultural diet. For instance, this point was raised by Interviewee 5 who spoke of the American diet thus: "I mean, nutrients are not there. And then talk about a sugary diet, like everything is boiled and cooked in sugar. You know the effect of sugar. Too many carbohydrates in the body. It can cause obesity."

Concerning the American diet and obesity and chronic diseases, the discussions were that the American diet could cause diseases such as obesity and hypertension, among others. Interviewee 7 reported, "I prefer my cultural diet over the unhealthy American diet. Yes, because I don't see what it does. It just gets people big, with lots of diseases that's why people just die [of] prostate health, colon health, hypertension, especially diabetes."

Theme 2: General Opinion on Change in Dietary Behavior

This theme discussed changes in the dietary behavior of African immigrants since they came to the United States. Nine respondents concurred that there were two main issues with their dietary behavior since they arrived in the United States. These issues formed the subthemes for this theme: change in dietary behavior has been challenging and affordability and accessibility of preferred African diet.

Subtheme 1: Changes in Dietary Behavior Change. The respondents discussed that they had faced various challenges regarding their dietary behavior change since they moved to the United States. Interviewee 2 reported that his dietary behaviors have changed since coming to the United States:

> There have been substantial adjustments to my eating. Where I come from, we eat breakfast at 8 or 9, or even 10 am. And you know here at 11 am they are eating lunch. While we eat our lunch around 3 pm at home.

Also, Interviewee 9 pointed out that changes in dietary behavior since coming to the United States have made it difficult for them to stay healthy because of the limited choices of healthy food: "Aaah… I'll say no. I'm kind of referred to. It's been so hard to stay healthy. It's been so hard to make healthy choices for food."

Subtheme 2: Affordability and Accessibility of Preferred African Diet. The discussion around this subtheme was that the significant challenge that change in dietary behavior has brought to the African immigrants since coming to the United States was a need for an African cultural diet. However, according to Interviewee 3, the importation of African foods has caused their costs to increase and made them rare:

> So my eating habits have been influenced that way because there are not so many African dishes available. I have to make do, that's number one (12:03). Then two, it tends to be cheaper because when you talk of African dishes, it is rare, and most of the time they have to import most of their ingredients.

Interviewee 7 mentioned the high cost of African food in the discussion. Also, there was a discussion that many respondents did not like the way their dietary behavior has changed, mainly because they were forced to pay more to get their preferred food: "Well, I do not like it. Because I have to pay more to get that type of food, very expensive." Another respondent, Interviewee 6, also pointed this out: "Both accessibility and affordability are important."

Accessibility came out strong in the discussion, where some respondents say they have been forced to eat more American diet because their special African cultural diet is not accessible. This was highlighted in Interviewee 5's transcript:

> I'm eating more of the American diet than my cultural diet because I cannot access my local home diet. As a student, that is another point to consider, affordability, but I could give anything to eat at least once a week, some of my home diet.

Theme 3: General Opinion on Link Between Type of Food and Chronic Diseases

This theme discusses the general opinion on the link between diet or type of food and chronic diseases. In this theme, two main subthemes were identified: the type of food can cause or prevent chronic diseases and the manner of eating can cause or prevent chronic diseases.

Subtheme 1: Type of Food and Chronic Diseases Prevention. In the discussions, Interviewee 1 associated the type of food with chronic diseases such as obesity and diabetes: "If you are not eating healthy or dieting, you are more likely to gain weight which will translate to being obese. After obesity, it will translate to diabetes… type II diabetes."

Respondents discussed that eating a balanced diet is essential in preventing chronic diseases. In this discussion, Interviewee 2 pointed out that too much eating without physical exercise could result in obesity: "Health is nurture and nature. We are what we eat. So terminal obesity is like overeating with less physical exercise, you know."

Subtheme 2: The Manner of Eating Chronic Disease Prevention. The discussion put forward by respondents was that timing and how food is prepared are essential in making food nutritious. For instance, Interview 2 reported that the ingredients used, cooking and serving methods improves food's nutritional value:

> What is vital to eating, what is required, is timing. Is essential… The African ones are healthier in the way they are being cooked and served; the ingredients that we use to cook contain a lot of nutritional benefits that go with it.

The way food is prepared was also mentioned by Interview 3 as making food rich: "The way we cook our beans, we like to have a lot of flavors in our food. We like to have a lot of richness in our food."

Again, Interview 1 pointed out that the use of right ingredients in African cultural diet makes the food healthy: "I think if you correct your diet, start eating healthy and start working out, it is most likely to reduce your weight and prevent having type II diabetes."

Theme 4: Opinion on Knowledge of Overweight/Obesity and Chronic Diseases

This theme was on the general opinion on the knowledge about overweight/obesity and chronic diseases. Generally, respondents had a different opinion on what is overweight, although most mention BMI and inability to carry out daily activities. There were two subthemes in this theme: obesity and inappropriate BMI and perception of obesity as a chronic disease.

Subtheme 1: Obesity and Inappropriate Body Mass Index. Most of the respondents associated obesity with having inappropriate BMI. One respondent, Interviewee 8, pointed out that being overweight is having a BMI of between 25 and 30, whereas obesity is having a BMI of 31 or more. The respondent stated, "For my school days, I understand that anybody with a BMI of 25-30 is overweight. Anything over 30 is obese." Interviewee 3 also stated that obesity has something to do with having an inappropriate BMI:

> I would say your BMI is not to have a very, very reasonable BMI…. There is a scale we usually use in the army. But we have …. What do we call it now? BMI. I think it is BMI. But for a certain height, you cannot go past confident weight, right?

That point of view was also reiterated by Interviewee 2, who provided parameters associated with BMI, such as getting too big compared to waist circumference: "You know it recounts the size of the person against the weight. So actually, I can say that person is obese, and the waist circumstances and other parameters when they are too big."

However, there were some respondents who associated BMI with body fat. Specifically, interviewee 4 stated: “But obesity is when there is too much fat in your system that your muscles cannot carry.” That was also supported by Interviewee 5 who argued that they do not associate obesity with BMI but with body fat: “But I think that someone obese is fat (15:34). That is how I take it. I cannot take it regarding weight or BMI.”

Also, some respondents discussed being overweight and obese in terms of having difficulty performing day-to-day activities that an ordinary person can do. One of the respondents, Interviewee 6 reported:

> I consider overweight when you find it challenging to do your daily activity or run out of breath during your daily activity. Or when you start feeling insecure about your own body. Which is stopping you from doing other activities

In tying this up, Interviewee 9 discussed being overweight or obese as reaching a point where your body mass cannot allow you to perform functions of daily living that any other individual or average person could: “If your body… if you feel like your body has limitation what you can do, I consider [when your body mass] limit you from normal day-to-day activities that any other person can do, that is obesity.”

Subtheme 2: Obesity as a Chronic Disease. There was a divided opinion about obesity as a chronic disease. Although many of the respondents appreciated that obesity could lead to chronic disease, some were not sure whether obesity is a chronic disease or could lead to chronic diseases. For instance, Interviewee 4 argued that gaining too much weight may be a problem just as well as losing too much weight:

> I'm 50-50 on the fence about it, for I, in particular, am trying to gain weight. I'll gain and be obese because of my small bone structure and small frame. Because my aesthetics won't go further than I wish to go. So, I'm 50-50 in the fence for that.

These sentiments were shared by Interviewee 5 who pointed out that both gaining or losing too much weight is a problem: "…… It goes both ways. Two ways: someone loses weight, too much is a problem, and someone gains more weight is a problem. So, they are both extreme, and it has to do with nutrition."

However, although the majority were divided over whether obesity is a chronic disease or could lead to chroming diseases, some pointed out firmly that they believe obesity is a severe lifestyle disease that could trigger other chronic diseases. For instance, one respondent associated obesity with chronic diseases: "…… I came to associate obesity with having a chronic disease. It will open you to other diseases. Obesity is a severe lifestyle disease. Slowly, it gets you to become diabetic."

Research Question 2

RQ2 was, how do the experience of African Immigrants with chronic health conditions, including obesity, inform their cultural diet practices?

Theme 5: Maintaining Cultural Diet

Only one theme was identified relating to the second RQ. This theme's discussions concerned maintaining a cultural diet to prevent chronic diseases. Generally, respondents pointed out that their experiences with the American diet have made them

"stick to their cultural diet" and "watch their dietary habits." These were the two subthemes.

Subtheme 1: Sticking to Cultural Diet. The discussion on sticking to a cultural diet came out clearly when some respondents pointed out that their experiences had led them to become obese, making them revert to eating an African diet. Interviewee 1 pointed out that since reverting to the African diet, he has lost some weight: "But since I reversed, I started eating Nigerian food. I have lost almost 40 pounds which has reversed my prediabetes. A get-eating an African diet that kept me reducing my weight."

Also, the experiences of African immigrants with the American diet, particularly fast food, could have been better because such food has been unhealthy. That has made some respondents avoid eating fast foods and prefer their cultural diet. Interviewee 7 pointed that American diet is foodless: "No, no, I don't want to buy from McDonald's. I used to treat them on the bus but not anymore because I see they are foodless. I prefer my cultural diet over the unhealthy American diet."

Other respondents also pointed out that due to their not-so-good experience with the American diet, they have decided to eat less American food and more African cultural food due to cost and accessibility. Although accessibility and cost of African food have been challenging for many African immigrants, Interviewee 8 seemed having no difficulty affording or accessing African food: "Actually, I am getting more of an African diet compared to an American diet. Yes, I would say that. Affordability and accessibility do not challenge me. I do rounds to places accessible to African food."

Moreover, Interviewee 2 pointed out that he preferred to stick to African cultural diet because it is what his body was used to and helps him in performing daily work: "The way I work, you know, my job and everything. I walk a lot; we do not sit down a lot. So, what I eat, the African food I eat, that's what my body is used to."

Subtheme 2: Watching Dietary Habits. Respondents discussed the subtheme of watching dietary habits by pointing out that since coming to the United States, their experiences have made them generally have an open mind and seek various options on a healthy diet and what is not. Some respondents said that it has been helpful for them to do their research about what food is healthy and what is not. Interviewee 4 reported that having an open mind about diet was essential: "As I said, keeping an open mind to what you eat, primarily doing research and knowing what you're putting in your body, helps." Discussions also highlighted the point in which some respondents argued that in addition to keeping healthy through exercising, their dietary experiences since coming to the United States had informed them that it is essential to watch what one eats and change their eating habits. Interviewee 5 echoed this by reporting: "Although they say exercise, exercise I there, exercising is good, but then you must watch what you eat. Eating habits will help, so most time, we consume poison in the name of food."

Summary

The first RQ that sought to assess the experiences, opinions, and perceptions of African immigrants in the Bay Area on cultural diet and chronic health conditions, including obesity. The findings showed that generally, African immigrants living in the Bay Area had favorable opinion and attitude towards African cultural diet compared to

American diet. The preference for African cultural diet was mainly because it was what most of them grew up with. Also, this preference was as a result of the good flavor and healthy nature that comes from the way African cultural food is prepared. American diet was perceived as mainly consisting of fast food that was perceived as unhealthy mainly from the way it was prepared to achieve efficiency. The American diet was also perceived to be causing overweight and obesity. In terms of their experiences, African immigrants argued that change in dietary habit since they first came to the United States was unpleasant. This is because of the many adjustments they had to make in their dietary habits. Due to affordability and accessibility issues, they were not able to maintain their African cultural diet. It was perceived that type of food could cause or prevent chronic diseases, including obesity. Compared to American diet, African diet was healthier because of types of ingredients used and the way in which the food was being prepared.

Also, there was good knowledge about obesity where majority associated obesity with having inappropriate BMI. However, some perceived overweight and obesity as having body fat as well as being limited in ability to conduct normal daily activities. Opinion was divided on whether having obesity translated to having chronic disease. Some viewed obesity as having chronic disease or a cause of other chronic diseases while others perceived obesity as not associated with having chronic disease. The second RQ sought to understand how the experience of African Immigrants with chronic health conditions, including obesity, inform their cultural diet practices. The unpleasant experiences with American diet informed African immigrants by helping them understand the relationship between type of food they consume and chronic diseases.

They associated American diet with chronic diseases, including obesity. This made them to prefer and stick to African cultural diet in order to prevent chronic diseases. They argued that maintain African cultural diet helped them to reduce weight. Also, their experiences with American diet have informed their dietary behavior where they now have open mind on the type of food they consume.

This chapter presented the setting, demographics and the approach that were employed in data collection and analysis including how categories and themes were formed through inductive process. Evidence of how the data collection and analysis process achieved trustworthiness was also described. The results were presented based on each RQ identifying themes and subthemes in each of the cases. Next chapter discusses the interpretation of the findings based on peer reviewed literature, limitations, recommendations for further research, and implications of the study. It also provides the conclusion to the study.

Chapter 5: Discussion, Conclusions, and Recommendations

Introduction

In this chapter, I interpretation the findings based on the peer-reviewed literature on the study topic. Also, I discuss the limitations and trustworthiness of the study. The chapter also includes recommendations for practice and further research that are based on the identified strengths and weaknesses of the study. The chapter also includes discussion of the study's potential implications for positive social change. Theoretical and methodological implications are also considered. The chapter ends with a conclusion to the study.

The data analysis provided insight into how African immigrants in the Bay Area of California maintain their cultural diet preferences to prevent chronic health conditions, including obesity. I identified five main themes and 11 subthemes in response to the study's two main RQs. The themes for the first RQs suggest that respondents generally had positive experiences, opinions, and perceptions of the African cultural diet and negative experiences, opinions, and perceptions about the American diet. During their interviews, participants discussed issues related to the American diet and chronic health conditions, including obesity. Respondents argued that the African cultural diet was healthier than the American diet. Also, they pointed out that they have had negative experiences related to changes in dietary habits since they came to the United States. The association between the type of food consumed and chronic diseases was also discussed.

For the second RQ, the theme identified represented ways African immigrants' cultural diet practices have been informed by their experiences since they came to the

United States. Respondents stated that due to negative experiences with the American diet, they believed that maintaining their African cultural diet was a better option for them. Also, they argued that their experiences with the American diet have made them open to diet and aware of what they consume. These changes, according to the respondents, help them keep healthy and prevent chronic diseases, including obesity. Therefore, African immigrants' experiences, perceptions, and opinion favor African cultural diet as healthier and plays a significant role in the prevention of chronic health conditions, including obesity compared to American diet.

Interpretation of the Findings

The responses obtained from the study participants resulted in some key findings. In answering the first RQ, the African immigrants in the study had negative experiences, opinions, and perceptions of an American diet. Also, responses revealed a perception that the American diet could lead to chronic diseases, including obesity. Moreover, respondents associated the American diet is associated with fast foods, which are less healthy, tasty, and nutritious compared to African cultural diet (Ilunga-Tshwiswaka et al., 2017). Generally, respondents expressed that their experience with the American diet since coming to the United States could have been better. They associated the American diet with unhealthy foods and less nutrition. This finding is consistent with research showing that, after immigration, African immigrants maintain strong ties with their African cultural diets and traditions in their respective African countries. Alidu and Grunfeld (2018), for instance, noted the influence of traditional cultures, including dietary behaviors, on African immigrants long after their arrival in the United States.

However, others, such as Serral et al. (2019), have pointed out that African immigrants' experiences with a new culture in the United States, including dietary habits, have been primarily negative due to social adjustments, communication barriers, and cultural shifts. That perspective was reflected in participants' interview responses in which they discussed negative experiences related to the American diet that they had after coming to the United States. Also, the data reflected the respondents' challenges with getting used to the American diet. The process of acculturation and associated experiences can make immigrants either adapt to the new way of life of a particular country or develop their cultural practices, including dietary behaviors, which is both stressful and demanding on the part of immigrants (Popovic-Lipovac & Strasser, 2015).

In regard to the second RQ, I found that participating African immigrants' negative experiences, opinions, and perceptions about the American diet led them to maintain their African cultural diet and watch what they consume. Respondents generally viewed their African cultural diet as healthier than the American diet because of several reasons. For instance, they argued that the African diet is natural and is not preserved or seasoned using chemicals that may have adverse health effects. Also, they argued that the content of their diet and how their food is prepared makes it healthier than the American fast-food diet. Respondents argued that their cultural diet was effective in helping them prevent chronic diseases compared to the American diet. In an earlier study, an earlier study, Renzaho et al. (2008) demonstrated how cultural diets are essential in lowering the risk associated with chronic diseases and obesity. Specifically, Renzaho et al. noted that sticking to an African cultural diet lowers the chances of suffering from chronic diseases,

including obesity. Renzaho et al.'s study, therefore, provides support for the respondents' desire to maintain their African cultural diet to lower their risk for chronic diseases.

The findings of this study can be used to support the acculturation theory (Gordon, 1964), which views cultural identity as a critical factor in controlling behaviors. Also, the findings of this study can be employed in supporting past evidence on how behavior changes could include eating patterns and food preferences (Fox et al., 2017b). The findings also reflect the view that acculturation may lead to chronic diseases, including obesity. The participants' views on this matter are supported by evidence from studies whose authors found correlation between acculturation and obesity (Zhang et al., 2019) and between acculturation and high BMI (O'Connor et al., 2014). Respondents shared their experiences with gaining weight by consuming the American diet and difficulties accessing their African cultural diet. Although the respondents preferred the African cultural diet, cost and affordability were cited as barriers to maintaining their dietary behaviors. In a prior, Brown et al. (2019) supported this assertion; African-born and Caribbean/Latin-born Blacks in the United States considered cultural identity and diet significant in maintaining health. According to Brown and colleagues, African immigrants developed their own adaptive strategies that helped them to maintain their cultural diets especially when they move to high-income countries such as the United States to ensure low rates of chronic diseases, including obesity.

Changing dietary behavior and adhering to a cultural diet have been reported as essential to preventing chronic diseases, including obesity. Diabetes prevention interventions and programs implemented across the United States are based on behavioral

change. According to Mathews et al. (2018), behavior change, such as developing resilience toward maintaining culturally healthy diets, is critical to preventing and treating chronic illnesses such as diabetes and obesity. Sticking to a cultural diet is essential in ensuring good health and well-being. This study's findings agree with Ngongalah et al. (2019), who found that African immigrants living in the United Kingdom and maintaining their traditional African cultural diet were less likely to develop chronic diseases such as obesity. Therefore, it is vital to adhere to a cultural diet as one of an effective strategy in the prevention of chronic diseases, including obesity.

Strength and Limitations of the Study

The purpose of this qualitative study was to explore the opinions, perceptions, and experiences of African immigrants in Alameda County in the Bay Area of California related to cultural diet preferences to prevent chronic health conditions, including obesity. This approach allowed the researcher to probe respondents for additional information, providing high-quality data. The second strength of this study is that it employed Zoom technology wherever possible. It allowed the researcher to collect data on visual cues such as facial expressions and respondent body language, which were instrumental in ensuring that participants' perceptions and opinions were corroborated.

However, several limitations were identified in this study. First, the study obtained data from mainly African immigrants from Nigeria, with only two respondents coming from Cameroon and Benin. The findings of this study may be biased because they could be reflecting only opinions, experiences, and perceptions of that specific demographic. Second, because this study was focused on the Bay Area of California, it

could neither be generalized to other geographical areas nor any other immigrant groups outside those coming from Africa. Third, as someone from Nigeria, I held personal thoughts, perceptions, and experiences regarding the African cultural diet. That could have led to researcher bias. However, an attempt was made to limit this bias by developing an interview protocol involving reviewers consisting of a panel of experts to ensure effective alignment. Nevertheless, qualitative studies are mainly concerned with providing rich and in-depth insights into respondents' experiences, opinions, and perceptions, and therefore, findings from this study could be employed to inform health interventions policies as well as update dietary acculturation literature.

Recommendations

Recommendations for Practice

The purpose of this qualitative study was to explore the opinions, perceptions, and experiences of African immigrants in Alameda County in the Bay Area of California related to cultural diet preferences to prevent chronic health conditions, including obesity. The findings show that African immigrants adhere to their cultural diet to prevent chronic diseases, including obesity. It implies that interventions aimed at preventing and treating chronic diseases, including obesity for African immigrants, should be based on cultural diet support. It is essential to use cultural diets to ensure healthy eating habits when planning prevention interventions for chronic diseases, especially among African immigrants in the Bay Area of California. According to O'Connor et al. (2014), African immigrants reported a higher incidence and prevalence of prediabetes and type-2 diabetes. Also, Fox, Thayer, and Wadhwa (2017a) found that the prevalence of chronic

diseases such as diabetes, cardiovascular diseases, diabetes, and obesity was disproportionately higher among African immigrants than the general population. As African immigrants and other minorities face a higher risk of becoming obese, cultural diets provide promising intervention strategies for preventing chronic diseases, including obesity, in African immigrant populations. That calls for culturally sensitive and population-specific intervention based on cultural diet in combating the high rates of chronic diseases, including obesity, among African immigrants.

Secondly, this study's finding has shown that African immigrants have faced the challenge of accessing and affording their cultural diet. It implies that interventions such as setting up more African restaurants and stores especially in Bay Area as well as reducing import duty on African diet ingredients could go a long way in helping African immigrants live a healthy life with a reduced rate of chronic diseases, including obesity.

Recommendations for Future Research

The current study sought to explore the opinions, perceptions, and experiences of African immigrants in Alameda County in the Bay Area of California related to cultural diet preferences to prevent chronic health conditions, including obesity. As one of its limitations, this study focused on African immigrants living in the Bay Area of California. Future research should be conducted to understand how immigrants such as Latino and Chinese in other regions of the United States maintain their cultural diet preferences to prevent chronic health conditions, including obesity. Also, the data for this study was collected using cross-sectional approach hence it did not monitor African immigrants in Bay Area over time to assess the changes in dietary behavior. It is

recommended that future studies be based on longitudinal data to assess how African immigrants' experiences, opinions, and perceptions have changed over time. That will provide a better understanding of the long-term effect of acculturation on African immigrants.

Implications

Implications of this study is that it is important at an individual level for African immigrants living in Bay Area of California to have an open mind when deciding on what to consume. It is important for individuals to try much as possible to maintain cultural diet by consuming more of African cultural diet and less of American diet in order to prevent chronic diseases, including obesity. Also, at family-level, it is healthier to prepare food at home more often than eat-outs. This will ensure that rich ingredients are used, and food preparation is improved. At societal level, this study implies that advertisements for healthier cultural diets, especially African cultural diet should be stepped up to ensure east access to healthy diets. Moreover, government should provide subsidies for African cultural diet products so as to make them affordable, especially for African immigrants in Bay Area of California.

Conclusion

Although the African cultural diet was not accessible and affordable for majority African immigrants living in the Bay Area of California, still majority of the respondents preferred their African cultural diet over the American diet. Respondents also acknowledged that the African cultural diet is healthier than the American diet. They associated the American diet with chronic diseases, including obesity. They argued that

their experiences with how their dietary habits have changed since moving to the United States could have been better. However, these experiences made respondents realize the importance of adhering to their cultural diets. They argued that cultural diets are healthier, tasty, and more nutritious. Their main concerns include the high cost and unavailability of African foods in the Bay Area, which makes them consume American diet, which is comparatively cheap and readily available despite the adverse effects it has on their health.

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Appendix A: Research and Interview Questions

Research Question

What are the experiences, opinion, and perceptions of African immigrants in the Bay Area on cultural diet and chronic health conditions including obesity?

Interview Questions

1. Let's begin with you telling me where you were born. Where were you born?
2. Can you tell me, what do you consider as being overweight or obese?
3. Can you tell me; do you associate being overweight with having chronic diseases? Why?
4. Do you believe the type of food and eating habits can cause or prevent chronic diseases? How so?
5. Do you like African cultural diet? Why or why not?
6. What is you experience with American diet and eating habits?
7. Which one do you prefer or better, African cultural diet or American diet? Give reasons.
8. Can you say that you like the way your diet or eating habits have changed since you came to the United States? Why so?
9. Do you believe that the diet and eating habits of Americans can lead to overweight? Why do you say so?
10. What do you consider healthy? Eating American diet or African cultural diet?
11. What beliefs do you have that make you prefer your current diet since you arrived in the United States?

Appendix B: Codebook

Code	Description
African cultural diet	
American diet causes overweight	
American or African Cultural diet healthy	
Belief about African Cultural Diet	
Diet preference	
Experience with American Diet	
How diet has changed since immigration	
Obesity	
Obesity and chronic disease	
Type of food and chronic diseases	