

2016

# Perception of Nutrition and Utilization of Healthy Food Ideas when Making Food Choices.

Judy Pilgrim-Hector  
*Walden University*

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# Walden University

College of Health Sciences

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Judy Pilgrim-Hector

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2016

Abstract

Nutrition and Food Choices Among Caribbean Immigrants in New York

by

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MS, Touro College, 2005

BS, Touro College, 2005

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Health Services

## Abstract

The availability of nutrition information is an important aspect of health care and equally important is access to cultural and theoretical nutrition evidence to increase awareness on ways to manage a diet in ethnic communities. The problem was the shortage of culturally appropriate nutrition data to educate Caribbean immigrants. The purpose of the study was to acquire culturally profound nutrition information on Caribbean immigrants' distinctive philosophical perception on nutrition and food choices. A phenomenological approach was used to examine ways in which the participants integrate nutrition facts when making food choices. The theory of reasoned action was the main conceptual framework used in this study to assess the participants' dietary belief systems. A purposeful sampling approach was used to recruit participants for the study and the participants were prescreened as part of the data collection procedure. The inclusion criteria focused on adult Caribbean immigrants who had awareness on nutrition habits. The 15 participants who agreed to participate in face-to-face interviews provided data on their food habits. The interpretive phenomenological analysis approach was used to investigate and explain the participants' diet. The participants' routines included eating whole foods from plant and animal products, eating foods from all food groups in moderation, and monitoring salt and sugar intake to prevent diet-related illness. The frequently occurring themes that emerged from the study included family traditions and ethnic beliefs and values that inspired recipes and types of food the participants consume. These findings may possibly be used by health professionals to assist in planning or implementing culturally sensitive education programs to enhance nutrition awareness in Caribbean immigrant communities.

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## Dedication

This dissertation is dedicated to my children Kadeem and Nathan who are my motivation to be excellent, and to all immigrant families who strive to live healthily. It is my hope that the findings and recommendations of this study will inspire all people to make a choice to consume whole foods, and to embrace the idea that food is nourishment and fuel for our body. I encourage all people to make the choice to consume healthy nutrients from whole foods.

## Acknowledgments

It is my dream to achieve the highest level of academic excellence and the support and encouragement of many people have motivated me to endure this incredible journey. Thank you to my sons Nathan and Kadeem for loving me through this journey, and enduring this process with me. Thank you to my friends and family who have encouraged me to stay on the path to success. Thank you to my committee, Dr. Kimberly-Dixon-Lawson (Chair), Dr. Amy Thompson (Committee Member), and Dr. Raymond Thron (University Research Reviewer), for the time, and knowledge that you have invested in my academic success. Thank you for your support and encouragement.

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## Chapter 1: Introduction to the Study

### **Introduction**

According to the U.S. Department of Agriculture (USDA) (2013), nutrition is the dietary or organic component of food that is used to nourish the human body. Eating and making food choices is a common social activity that all cultures share (Sobal & Bisogni, 2009). The selection of foods that people generally make is influenced by factors such as time of day, personal preference, cultural eating habits, and the influence of social groups. A person may choose to consume food during breakfast, lunch, and dinner time, and the dietary decision is generally a personal preference. On a daily basis, people purchase groceries to prepare their own meals, or they purchase prepared food. This means each person has several opportunities to make dietary decisions that affect their nutritional habits.

An individual's food choices may be influenced by learned behavior acquired and developed in daily life experiences owing to a combination of economic factors, social factors, and an awareness of health risks, benefits of healthy eating, personal pleasure, and general freedom to be spontaneous with food selections. The pleasure that people experience from foods may influence the variation in food selections (Jacquier, Bonthoux, Baciú, & Ruffieux, 2012). Food choices are regulated by the autonomic nervous system and it is normal for people to unconsciously crave the foods that they enjoy, because the hypothalamus automatically facilitates and controls personal pleasure, including the desire for foods. The hypothalamus also regulates hormone production, hunger, food and water intake, and other autonomic functions.

Immigrants and refugees from Mexico, Somalia, Cambodia, and Sudan participated in a focus group, and their values regarding food choices and health were assessed, and the general ideas expressed in the focus group were fast food, or “junk food,” is unhealthy, and food choices are influenced by family and social traditions, personal preferences, cost of food, and food cravings (Tiedje et al., 2014). The recommendation for the immigrants and refugees to facilitate healthier food choices includes presenting information on healthier ways to prepare traditional foods and community health education programs to provide information for families.

A qualitative study was conducted to explore the cultural change in the food choices of Puerto Rican girls who migrated to New York (Bowen & Devine, 2011). The Puerto Rican girls participated in a semi-structured interview session to discuss their experiences with Puerto Rican cultural customs relating to food choices, knowledge of nutrition, cooking experiences, and other food-related issues. The girls discussed their experience with preparing and consuming cultural foods in their homes, and in their social community, especially during evening meals (dinner). The Puerto Rican girls’ cultural food choices are influenced by routine cooking and eating Puerto Rican food in the home. The participants maintained their cultural food traditions by consuming ethnic meals prepared by friends and extended family. Some girls chose to immerse in the American cultural food choices and they consumed limited ethnic foods. A general perspective among Latino immigrants is food choices are influenced by the cultural values of the family and socioeconomic traditions of the community (Gerchow et al., 2014; Gray, Cossman, Dodson, & Byrd, 2005).

Another study was conducted among Hispanic women in New York to evaluate factors that influence food choices, and it appeared that the participants' food choices were based on the availability of food items, and the cost of the food (Park, Quinn, Florez, Jacobson, & Rundle, 2011). The Hispanic women explained that their idea of healthy food was fresh foods grown without artificial fertilizers. This Hispanic study is relevant as some Hispanics from the Spanish-speaking Caribbean islands are considered as Caribbean immigrants. The gap in the study conducted by Park et al. was the nutritional value of food was not considered when making food choices. The gap in the Hispanic study was a catalyst to explore the food choices of Caribbean immigrants in Brooklyn, New York. Although many research studies explore food choices and the disparity in the health among Hispanic immigrants in the United States, more research data are needed to assess the health and food choices among other immigrant groups (Hadley, 2010). Information on nutrition is taught in schools, and the age of information and technology has increased the availability of nutritional information on the internet, books, billboards, commercials, food labels, and other sources. However, limited information is available regarding the Caribbean immigrant use of health information when making food choices.

The purpose of this qualitative study was to understand the viewpoint that Caribbean immigrants living in Brooklyn, New York share on nutrition and consuming a balanced diet of foods from all food groups. This research study provided additional academic data to help fill the gap in the literature on the Caribbean immigrant use of nutrition information when making food choices. This study explored the perception

among Caribbean immigrants on the use of nutritional information when making food choices. I explored how the participants interpreted and explained their decisions to make food selections. I acquired and analyzed data to explain how Caribbean immigrants make food choices and manage lifestyle illnesses in their community. The results may be used to develop nutrition-based health education programs in the Caribbean immigrant community.

In this chapter I identify, the gap in the study, I outline, the research question and I research background information to support the need for the study. I outline the problem statement; the purpose of the study, nature of the study, and I present theoretical concepts to establish a foundation for the study. I also summarize the methodology for conducting the study. In this chapter, I include definitions, assumptions, limitations, and the significance of the study. I conclude with a summary of the major conceptual ideas that supports the research study.

### **Background of the Study**

The World Health Organization (WHO) (2013) described eating food as the ingestion of nutrients for the physical development and continuing existence of the body. According to the report presented by Healthy People 2020, a balanced diet of foods from all food groups is intended to nourish the body and reduce the occurrence of diet-related illness, whereas overindulgence of unhealthy food choices may contribute to health problems such as obesity and diabetes. A balanced diet of animal or plant protein, fruits, and vegetables can help to prevent lifestyle diseases such as diabetes, heart disease, and obesity (Devine, Connors, Bisogni, & Sobal, 1998).

According to the WHO (2003), an inconsistent dietary pattern, combined with reduced physical activity, may increase the risk for diet-related lifestyle diseases. The WHO supports the need for health policies and health programs to focus on preventing chronic diseases. The strategy to facilitate a healthy body includes a balanced diet; combined with increased physical activity can be a start to preventing chronic lifestyle-related diseases.

Economic factors may influence food choices by limiting a person's ability to purchase food (Sobal & Bisogni, 2009). According to the USDA (2013), more than 47 million people needed economic assistance to acquire daily food needs. The Supplemental Nutrition Assistance Program was one way the USDA provided nutrition assistance for people with low incomes. The USDA supported the Hunger-Free Kids Act to enable children to acquire healthy foods in schools. It appeared the food choices of many people were influenced by economic circumstances.

Drewnowski and Darmon (2005) proposed that food choices may affect the health of individuals (e.g., excess consumption of high-calorie foods may contribute to diseases such as obesity and diabetes whereas increased consumption of fruits and vegetables may reduce the occurrence of diet-related illness). Processed foods may contribute to obesity and diabetes, because of the high-caloric content, including fat, and carbohydrate content, and because people eat more to achieve dietary satisfaction. Refined foods are inexpensive, taste good, and are conveniently available. Further, people choose to purchase these foods more than fruits and vegetables. Inexpensive foods are sometimes more appealing to some people despite the potential for diet-related illness.



Kozup, Creyer, and Burton (2003) suggested that the Nutritional Labeling and Education Act of 1990 was intended to assist people in making healthy food choices by providing nutrition information on food packages. Food packaging companies have also taken advantage of the Education Act by highlighting health claims on food packages. An example of a health claim is a product with fiber reduces cholesterol, or a food product helps to keep the heart healthy. Health information is a start to bringing attention to the idea of consumers making healthy food choices.

A survey was conducted among adults in Korea to study the influence of education level on the choice to consume fruits and vegetables (Hong, Kim, & Kim, 2012). The participants' food selections were influenced by cultural beliefs, personal values about eating healthy foods, and intellectual awareness on the importance of fruits and vegetables. It appeared that people who were more intellectually aware of the significance of healthy ideas were motivated to consume healthy foods.

On occasions a person may have an extreme desire for different types of food and this intense yearning for a food product may be defined as food craving (Levin Pelchat, 2009). Kavanagh, Andrade, and May (2005) proposed that smell or a visual image may stimulate craving and people may experience a feeling of emotional satisfaction when a craved food is consumed. Cravings may influence the food choices among individuals because of the feeling of contentment when the desired food is ingested. The release of the hormones serotonin and dopamine in the brain may contribute to the pleasurable experience when a craved food is eaten (Kemps & Tiggemann, 2010). Hill and Heaton-Brown (1994) have proposed that cravings may increase a person's desire to choose a

specific food. It is believed that people crave salty or sweet foods in response to stress and the adrenal glands release the hormone cortisol in reaction to managing and regulating chronic stress, glucose absorption, and food cravings (Scott, 2011). Verpy, Smith, and Ricks (2003) suggested that people generally buy what they desire to eat. Therefore, a craving may be a normal experience that influences food choices.

Clarke (1998) presented a case study showing that many people in the study had a preference for sweet, crumble-textured cake with nuts. The acquired sensory desire for this cake product shows an intricate awareness that is based on personal sensory taste preference. Clarke maintained that food is primarily eaten for the nutritious value but the price of a product and the social value placed on a product may also serve as a motivating factor to influence consumers to choose a food item. People value flavorful food, and taste is a major factor that affects food choices. Therefore, a person's decision to continue purchasing a food product may be based on taste satisfaction that is acquired from the desired food.

Cultural values and traditions may also influence food choices and dietary habits of people (James, 2004). This means cultural holidays and festivals may help to evoke the desire for traditional foods such as turkey, candied yams, or cranberry sauce for Thanksgiving; matzo balls for Passover; bun and cheese for Easter; or black cake, sorrel, and ginger beer for a Caribbean Christmas. A food selection process is a phenomenon that is common in all communities, as people need nutritional sustenance for life and celebrating traditional habitual eating. Hunger and the desire for tasty foods may intensify the need for different types of food.

It appears that lifestyle habits acquired from friends and family routines may play an integral part in influencing impulsive eating patterns. The social and economic factors that encourage food choices were noted in the literature; however, limited information in the literature supports the notion that Caribbean people traditionally monitor nutritional information when making cultural food choices. A review of the literature publicized minimal information on Caribbean immigrant perception of nutrition and use of healthy food ideas when making food choices. This gap in the literature has supported the need for a study on Caribbean immigrant food selections and perception of healthy food choices. This study has provided more insight on the Caribbean immigrant use of nutrition information when making food choices.

### **Problem Statement**

A review of the literature revealed that limited information is available on Caribbean immigrant perceptions of nutrition and use of healthy food ideas when making food choices. The WHO (2003), Caribbean Commission on Health and Development (2006), and Gustafson (2014) have confirmed that an incongruous dietary pattern, combined with reduced physical activity, may increase the risk for diet-related lifestyle diseases. The WHO, the Caribbean Commission on Health and Development, and Gustafson support the need for health policies and health programs to focus on preventing chronic diet-related diseases. A strategy to facilitate a healthy diet includes a balanced nutritional intake, combined with increased physical activity, is an appropriate approach to preventing chronic health-related diseases. These general ideas suggest that only basic information is available on health and nutrition. However, there is limited

actual data on the experiences of Caribbean immigrant cultural philosophies and values on nutrition and food choices. More research data are needed to document Caribbean immigrants' food and nutrition habits. Therefore, it was academically significant to conduct a qualitative research study to collect data on Caribbean immigrants' perception on nutrition and food choices. This data help to contribute to the body of scholarly evidence on food selections.

### **Purpose of the Study**

The purpose of the study was to explore Caribbean immigrants' lived experiences regarding integrating nutritional information when making food choices. A qualitative study using a phenomenological approach was used to interview participants and acquire current experiences of Caribbean immigrants. The study examined how immigrants used nutrition information when making daily food selections. The data collected from the study increased the availability of documented experience among Caribbean immigrants with integrating nutritional ideas when choosing foods. Health educators may use the results of the study to develop education programs, and to increase awareness of Caribbean immigrants' perception of food and nutrition. Community health educators may use data from this study to modify food and nutrition programs to facilitate the needs of the Caribbean immigrant population. Health education specialists may have access to data that can be used to develop teaching programs that are client-centered and focused on the relevant needs of the Caribbean people. The data from the study can be shared with the local and state departments of health, local health facilities, and local community

groups. The health departments and community groups may use the data to initiate a conversation on Caribbean immigrants' views on nutrition

### **Research Questions**

The following research question and sub-questions were used in this study:

#### **Research Question**

1. What are the perceptions of the Caribbean immigrant population in suburban Brooklyn toward their food choices and the use of healthy food ideas?

#### **Sub-questions**

1. What is the immigrants' awareness of the significance of a balanced diet?
2. What are the views among immigrants on making healthy food choices?
3. What is the opinion among immigrants on the effect of cultural values and traditions on food choices and the use of healthy food ideas?
4. Have immigrants used information on healthy food ideas in the past?
5. What are the immigrants' perceptions of the value of a balanced diet when determining food choices?

## **Theoretical Framework**

Theory of reasoned action was the main theoretical approach that influenced the study of Caribbean immigrant food choices. The ideas of the theory of reasoned action implied that a person's behavior is influenced by personal philosophies, personal feelings, and personal desire to make a realistic change (Fishbein & Ajzen, 1975). This means the individual may be motivated to make health changes because it was a personal decision. The ideas from the theory of reasoned action which included individual attitude, personal beliefs, and the desire to engage in food-related activities were incorporated into a study that assessed food consumption, and food selections (Ackermann & Palmer, 2014). There was a disparity in the study between reported food consumption and actual food consumption. The participants were consuming large quantities of food that have contributed to health risk, despite increase awareness of nutritional information.

Based on the ideas of Fishbein and Ajzen (1975) the principles of the theory of reasoned action focused on the belief system of a person, and the individual intention and desire to integrate ideas into life choices. The principles of the theory of reasoned action support the idea of personal choice and the idea of an informed decision as relevant ideas for influencing food selections. The philosophical ideas from the theory of reasoned action have influenced the focus of this research study on food choices and use of nutritional information.

After reviewing several theoretical ideas, I concluded that many other philosophies are applicable to researching immigrant perception of nutrition and making food choices. The health behavior theory infers that a person must be aware of the need

for a behavior change and the environment may help to support the behavior change (Glanz, Rimer, & Lewis, 2002). The social cognitive model also called the health belief model was designed to promote healthy behaviors in an effort to prevent illness (Rosenstock, Victor, Strecher, & Becker, 1974). Theory of reasoned action and the theory of planned behavior were used to evaluate dietary behaviors for teenagers and young adults as a response to the obesity epidemic in many countries (Hackman & Knowlden, 2014). This was a meta-analytic study wherein Hackman and Knowlden used the theory of reasoned action and the theory of planned behavior to evaluate dietary behaviors and factors influencing dietary changes in teens and young adults. However, a limitation of the study was a lack of a variety of treatment tools to engage clients in the treatment process. The extended parallel process model was designed to motivate individuals to change unhealthy behaviors using a fear tactic (Witte, 1992). A typical example of a fear-based strategy is convincing individuals to engage in healthy eating habits to prevent lifestyle illness like heart attacks. This means that a person may change a behavior because they are scared of a negative health consequence. Fear based strategies may be effective initially to get the attention of individuals but fear should not be a long-term strategy to promote healthy eating habits (Soames Job, 1998). Fear based models are considered temporary solutions to initiate a change in health behavior until the individual becomes convinced that a healthy lifestyle is an appropriate action approach to improving health. The theory of reason action has promoted individual intention to change behavior and the other theories have supported the need for health behavior change.

### **Nature of the Study**

This was a qualitative study using a phenomenological approach to explore immigrants' perception of food and nutrition. A phenomenological study was described as the study of human experience based on individual perception (Patton, 1990). Creswell (2009) proposed that a phenomenological study requires the researcher to explore the meaning or significance of an issue. A phenomenological approach to research facilitated the sharing of experience from the participants' point of view with the purpose of justifying the importance of the research approach. A phenomenological approach to research provided an opportunity for the participants to express their awareness of nutrition in relationship to daily food choices. I used information flyers with contact information, (Appendix A) to request participants in the Caribbean immigrant community in Brooklyn New York to share their awareness of food and nutrition.

A purposeful sampling strategy was described as acquiring information from knowledgeable individuals who choose to share their experience (Patton, 2002). A purposeful sampling approach was used to collect qualitative data from Caribbean immigrants who wished to share their experience on food choices. An awareness of nutrition ideas was a requirement for immigrant participation in the study because the study was designed to explore the experiences of Caribbean immigrants regarding using nutrition knowledge when choosing foods. It was relevant for knowledgeable individuals to provide a detail description of their daily food choices, discuss the significance of nutrition ideas in daily food choices, indicate the relevance of portion control when making food choices, and discuss the significance of cultural values and traditions on



daily food choices. A snowball sampling strategy means existing participants in a study may recruit acquaintances that were appropriate for a study (Creswell, 2009). A snowball sampling strategy was a secondary strategy that was utilized to recruit participants for the study, to ensure that an adequate number of participants were secured to participate in the study. Fifteen participants were contacted via phone or in person conversation to participate in the study.

The sample size of a study should be based on the expectation of a study as there were no evidence-based guidelines to support sample size in a meta-analytic study using 83 articles (Marshall, Cardon, Poddar, & Fontenot, 2013). Therefore, 15 participants was a reasonable sample size to adequately provide detail discussion for a qualitative study on exploring Caribbean immigrants' experiences regarding utilizing nutrition information when making daily food selections. The participants provided written consent before participating in the study. The participants were interviewed in person using questions from the Food Choice Interview Guide (Appendix C). The Food Choice Interview Guide is a list of 20 semi-structured questions that was designed to facilitate in-depth discussion on Caribbean immigrants' use of nutrition information when making food choices. I engaged the Caribbean immigrants in detail discussion to explore their views and lived experiences on actually using nutrition information when making food choices.

I interviewed the participants, documented and analyzed the data, and presented the results of the study for this research project. The data for the study were transcribed and secured in a password protected computer. The interpretive phenomenological analysis is the process of examining how people think about an issue and explaining the

meaning of participant lived experience (Smith & Osborn, 2007). The interpretive phenomenological analysis was used to explore the participants lived experiences and the meaning of the experiences to the participants. The data was coded using the NVivo 11 Plus computer program to identify emerging ideas. The ideas were analyzed and results were documented to complete the research project. No personal data was used in presenting the final project. A phenomenological study was an appropriate approach to explore the perception and experiences of Caribbean immigrant participants because the approach was designed to document individual lived experiences.

### **Definition of Terms**

*Nutritional awareness:* For this study, nutritional awareness is knowledge on the significance of consuming foods from all food groups including, meat, fruits, vegetables, dairy, grain (protein, carbohydrates, fats, minerals, vitamins, water), consuming a balanced diet, and cognizant of the significant effects of food on the body.

*Food choices:* For this study, food choices are daily decisions regarding food selection.

*Using healthy food ideas:* Means using current nutrition information.

*Life experiences:* For this study, life experiences are cultural, social, economic, and personal thoughts, ideas, and decisions regarding food choices.

*Perception:* For this study, perception is individual insight or awareness.

*Awareness:* For this study, awareness means information and experience on the subject of nutrition and food choices.

*Caribbean immigrant:* For this study, Caribbean immigrants are people who settled in the United States from any island located in the Caribbean Sea.

### **Assumptions**

I assumed that the participants voluntarily provided truthful information regarding daily food selections, and their use or non-use of nutritional information when making food choices. There was no monetary obligation or punitive consequences for participation. Therefore, it was assumed that people genuinely wanted to make an honest contribution to research information to benefited health awareness in the community.

### **Delimitations**

Immigrants from the Caribbean who traveled to Brooklyn, New York between 1990 and 2015, able to communicate in English, and have knowledge on nutrition and food choices was interviewed for the study. This study specifically explored Caribbean immigrants' views on the use of nutrition ideas when making food choices. Only adults who were capable of giving informed consent were used for the study. Participation was voluntary.

### **Limitations**

A phenomenological study describes the experiences of a specific group of people. This study was based on the experiences of 15 Caribbean immigrants who lived in Kings County, Brooklyn New York. People from other regions or cultures may not relate to the experiences of the study group. Patton (2002) suggests the sample size in a research project should be determined by the purpose of the study and research saturation. Although 15 people were reasonable for a qualitative study, this was a small

sample size and the experiences of these individuals may not represent the experiences of other Caribbean immigrants or people in other communities. Therefore, generalization is a limitation of the study. The data may not generalize to other populations because a phenomenological study is designed to describe the experience of individuals. Another limitation was the constraint of resources. This was a dissertation project, there were no community sponsors, and I had limited resources to conduct a manageable project. This phenomenological study was designed to discuss the Caribbean immigrant use of nutrition information when making food selections and the participants shared their perspective on food and nutritional information.

### **Significance of the Study**

The study has increased the availability of academic information on Caribbean immigrant experiences with food selection and application of nutritional ideas, and this information may be used by people in the community. The study will provide academic information and insight on Caribbean immigrants' perception on using nutrition ideas when making food choices. The study will increase educational awareness for the need to include nutritional information when making food selections. I can encourage social change by organizing health promotion campaigns to publicize the increase in academic data and the potential benefits of using nutritional ideas from a Caribbean cultural perspective.

A study conducted by Swanson, Schoenberg, Davis, Wright, and Dollarhide (2013) explored the views of Appalachian children regarding food and nutrition choices. It was apparent in the study that the food choices of children influenced obesity and

diabetes in adults, and there was a need for health education programs to change future health-related behaviors of the Appalachian people. Many participants indicated that they were not interested in a traditional nutritional program that was based on information regarding food groups and some of the recommendations for future health programs included an incentive to join healthy eating programs, and designing social interaction programs that are healthy and fun. The participants thought it may be significant to support community cooking classes and garden projects. The group also supported the need for physical activity to be incorporated into nutrition programs. These ideas are relevant because it demonstrated the need for social change regarding health and nutrition. The idea of making food selections is a universal concept and the ideas from the Appalachian study made it significant to reflect on the dietary choices of Caribbean people and their perception of healthy food selections. Conducting this study has helped to facilitate an understanding of the lived experiences of Caribbean people, and academic data may be acquired to impact social change regarding food and nutrition choices.

### **Summary**

The idea to study food and nutrition choices was influenced by a need to understand the food values of Caribbean immigrant people. Exploring the views of the Caribbean immigrant population has helped to contribute to the body of academic data to support social change in the Caribbean community. I live in a Caribbean immigrant community, and I work in a health care facility where the effect of unhealthy nutrition choices is evident by the observed occurrence of dietary-related diseases such as obesity and diabetes in the communities. Understanding the views among Caribbean people has

helped to increase awareness on the issues relating to nutrition and food choices. The values of families may influence food choices and immigrant families reported that food choices are made based on the mothers' awareness of nutrition (Marquis & Shatenstein, 2005). Some immigrant groups were more aware of the nutritional needs of the family than other groups, and limited awareness may mean there is a need for increase health promotion programs to facilitate social change relating to health and nutrition.

According to Nicolaou, Dam, and Stronks (2006), quality food selections was described as people who ate a balance of fruit, meats, and vegetables; and it became important to study the change in the food choices of Caribbean immigrants who moved to the Netherlands in comparison to native Dutch residence. The purpose of the study was to examine change in food choices, availability of educational programs related to health, and nutrition intervention programs. The immigrants in the study ate a relatively balanced diet but there was a need for remediation that related to salt intake and managing the quality of breakfast meals.

A contrasting qualitative study was conducted to examine parental styles relating to family food choices, physical activities, and desire to change behavior among Mexican immigrants (Turner, Navuluri, Winkler, Vale & Finley, 2014). Many parents supported the need for their children to eat healthy foods and engage in physical activity, however, the parents were not consistent in their support of a healthy lifestyle, and the parents did not always exemplify the principles of a healthy lifestyle. There was a need for insight relating to living a healthy lifestyle on a daily basis.

The ideas in the literature review in Chapter 2 have supported the occurrence of diet-related illness in the world and the need to understand the significance of dietary choices. The literature review has supported the idea that food selections is a complex behavioral issue that is influenced by hormones, social, economic, and cultural influences as well as personal desires. The limited data on Caribbean immigrant views on food choices have demonstrated the need for a study on the Caribbean immigrant food selections. The purpose of this study was to research information on the Caribbean immigrant practice of integrating nutrition ideas when making food choices.

Theory of reasoned action was an appropriate theoretical concept to establish a foundation to study food choices and nutritional behaviors of Caribbean immigrants. This study was an opportunity for Caribbean people to share their lived experiences on personal dietary practices. This study has explored the food choices of Caribbean immigrants and provided qualitative research data that may be used for education programs in an effort to facilitate social change in the Caribbean community.

## Chapter 2: Literature Review

### **Introduction**

Food choices among Caribbean immigrants are a complex issue, and data are required to understand the experiences of the Caribbean people. Generally, individuals make daily food selections because food provides nutritional sustenance for the body, and it satisfies the feeling of hunger (Gibson, 2006). The food choices of folks are influenced by both physiological and psychological factors. Society may be predisposed to making food choices based on foods that taste pleasant, such as sweet and salt foods, while avoiding sour and bitter foods (Chadwick, Crawford, & Ly, 2013). The foods presented to children at an early age during family meals and cultural events may also influence food selections. People may choose an assortment of foods based on past impulsive behavioral habits, social influence, and interpersonal influences in the community. Food selections are also influenced by individuals in the immediate environment such as friends and associates (McFerran, Dahl, Fitzsimons, & Morales, 2013). Food preferences are eventually integrated into daily behavior and become habits (Franchi, 2012).

Daily food selections are personal decisions to acquire and consume food items (Kjærnes, 2012). The desire to select a particular food may be based on food taste, ability to purchase food based on price, or the desire to consume organic foods based on personal tendency. People make food choices on what they believe is nutritious, and food labels are one way consumers use to determine the nutritional value of foods. Chadwick et al. (2013) supported the idea of health education programs that focus on educating



consumers on behavior modification, facilitating long-term changes, and encouraging people to eat a balanced diet of foods from all food groups.

Genetic engineering is a process of identifying a characteristic in a gene, cloning the gene, and introducing the gene into another organism (Ellahi, 1994). Genetic engineering of foods has been a major concern for many social groups because people are concerned about the effects of the genetically engineered foods on health, religious beliefs, and ethical beliefs. One example of religious concern is using genes from pigs and introducing the gene to other animal products, because some religions avoid pig products. Vegans are concerned with using animal products injected into plant products. One recommendation was that genetically modified foods should be labeled so that consumers may have an increased awareness of food content. The process of genetic engineering appears to be a safe process. However, there is continuing debate over the idea of labeling genetically engineered food and the effect on food sale. More awareness is needed on this issue of food modification so people can make informed food decisions.

Ecological and political factors that influenced food choices, including the production of food in countries that respect basic human rights and treat animals compassionately, were primary considerations in a study conducted among Norwegian participants (Honkanen, Verplanken, & Olsen, 2006). Some people in the study avoided particular foods because it was prohibited by their religion, but religious and ethical values were not a significant factor in determining food selection. The most significant factor that influenced the food choices among the Norwegian participants was the ecological factor. It appears that food grown with an organic protocol was appealing to

people and highly influenced the food choices among the Norwegian participants. Many participants in the study opted to purchase organic foods that were influenced by ecological factors, such as organic foods that were not grown with artificial growth hormones, pesticides, or fertilizers, and animals reared in clean healthy environment with no unnecessary harm inflicted on animals, no growth hormones given to animals, and no genetic engineering involved in the food production.

Mishra and Mishra (2010) evaluated the influence of emotional factors that resulted in impulsive behavior when making food selections. It was determined that some foods stimulated the release of the neurotransmitter serotonin in the brain, which may help to reduce the impulsive eating behavior. A total of 175 people were asked to participate in Phase 1 of an experimental study to document their response to potential impulsive behavior. The participants were asked to indicate what they ate for Thanksgiving dinner (e.g., traditional Thanksgiving foods including turkey) or nontraditional meals (e.g., pizza, or lasagna). Each participant was asked to respond to survey questions after Thanksgiving dinner. The experimental group was the people who ate turkey or other high protein foods for dinner, as these foods were high in tryptophan, which is used to synthesize serotonin. The goal of the survey was to assess the level of impulsivity of the participants who ate foods that were high in protein. The level of impulsivity was not significant regarding purchasing highly discounted items (e.g., a laptop). In Phase 2 of the study, 54 participants were involved in a controlled experimental study. The participants were asked to fast before starting the study. The participants were randomly assigned to an experimental group and a control group. The

control group was given a chocolate drink and the experimental group was given a drink with tryptophan, which was used to synthesize serotonin. It was apparent in this study that an increase in serotonin may reduce impulsive behaviors in people who have high impulsive behavior. Ideas from this study may be used to manage impulsive behavior by encouraging people to choose foods high in protein that will help to release serotonin in the brain. Stress, depression, premenstrual desires and other emotional factors may also contribute to the development of eating patterns that influence food choices (Gibson, 2006). It must be noted that impulsive behaviors may influence the eating patterns of people but moderation principle may limit the quantity of food intake (Friese, Hofmann, & Wänke, 2008).

Food choices were described as a complex experience that was influenced by the benefits that the food provided for the individual who consumed the food (Conner, 1993). According to Conner (1993) a person may make vegetarian choices because of the presumed health benefits. A person's attitude towards the food was directly related to personal pleasure from the food because of the taste or because of the social and cultural memories attained from engaging in food-related activities. A person may have an aversion to food because of an allergic experience and that aversion will influence food choices. The complexity of food selections may necessitate more study as there is limited information that documents the views of Caribbean immigrants regarding food choices and the health implications that may affect their lives.

### **Literature Search Strategy**

Thoreau Multi-Data Base Search (Walden University Discovery Service) supported by EBSCO industries, ProQuest, EBSCOhost, Sage, Google Scholar and Medline were the main databases used to acquire articles for the study. A final literature review was completed after the research study was completed for recent publications on food choices and nutrition. The key search terms included food choices, nutrition ideas, immigration and food use, qualitative study, health behavior and health theories. The initial goal was to obtain peer review journals that were written within the past five years. However, other relevant peer review journals that were written greater than five years were also incorporated into the study. The journals were reviewed multiple times and articles that provided relevant data on the issue of a qualitative study, food choices, nutrition, and immigrant health behaviors were utilized for the study.

### **Theoretical and Conceptual Bases**

Theory of reasoned action was the main theoretical approach that influenced the study of Caribbean immigrant food choices. The ideas of the theory of reasoned action were based on the principles that a person's behavior was influenced by personal philosophies, personal feelings, and personal desire to make realistic behavioral changes (Fishbein & Ajzen, 1975). This means the individual will make health changes because it is a personal decision. The ideas from the theory of reasoned action which included individual attitude, personal beliefs, and the desire to engage in food-related activities were incorporated into a study that assessed food consumption, and food selections (Ackermann & Palmer, 2014). There was a disparity in the study between reported food

consumption and actual food consumption. Participants in the study were consuming large quantities of food that may have contributed to health risk, despite increase awareness of nutritional information.

There were several other relevant theories that may be applicable when researching immigrant perception and use of healthy food ideas when making food choices. The health behavior theory was based on the idea that a person must be aware of the need for a behavior change and the environment may help to facilitate the behavior change (Glanz, Rimer, & Lewis, 2002). The social cognitive model also called the health belief model was designed to promote healthy behaviors in an effort to prevent illness (Rosenstock, Victor, Strecher, & Becker, 1974). The theory of reasoned action and the theory of planned behavior were used to evaluate dietary behaviors for teenagers and young adults as a response to the obesity epidemic in many countries (Hackman & Knowlden, 2014). This was a meta-analytic study and the principles of the theory of reasoned action and the theory of planned behavior were used effectively to evaluate dietary behaviors and dietary changes in teens and young adults. One of the limitations of the study was a need for a variety of treatment tools to engage clients in the treatment process. The extended parallel process model was designed to motivate individuals to change unhealthy behaviors using a fear tactic (Witte, 1992). A typical example of a fear-based strategy was convincing individuals to engage in healthy eating habits to prevent lifestyle illness such as heart attacks. This meant a person may change a behavior because they were scared of a negative health consequence. Fear-based strategies may be effective initially to get the attention of individuals but fear should not be a long-term

strategy to promote healthy eating habits (Soames Job, 1998). Fear-based models were considered as temporary solutions to initiate a change in health behavior until the individual became convinced that a healthy lifestyle was an appropriate action approach to improving health. The theory of reason action promoted individual intention to change behavior and the other theories supported the need for health behavior change.

The Canadian Inuit is a native Indian tribe who was known to be subsistent farmers (Mead, Gittelsohn, Roache, & Sharma, 2010). The Inuit had a cultural shift from planting crops to reliance on purchasing food. The food purchase pattern and food preparation pattern of Canadian Inuit were studied with the intention to develop nutritional behavior programs for Canadian Inuit. The social cognitive theory and the theory of planned behavior were used to assess the participants' intention to engage in a particular behavior pattern. The people who did the shopping for households were targeted to participate in the study. A total of 266 random adults participated in the study. Most participants in the study had some awareness of the significance of healthy eating to prevent lifestyle illness such as obesity and diabetes but on average they purchased 2.9 times more unhealthy foods than healthy foods. Inuit people who appeared to have greater socioeconomic resources consumed more healthy foods. It was proposed that education programs for the Inuit people should focus on consumer intention to engage in healthy behavior change and resources should be provided to support the intention to change behavior. One example of support was to provide education on alternative ways for food preparation, for example, a healthy alternative was to prepare baked foods instead of fried foods.

The intention to change behavior as described in the theory of planned behavior was used as a model to assess Jamaican immigrants' desire to purchase ethnic foods (Nenci, Carrus, Caddeo, & Meloni, 2008). A total of 135 participants who lived in an immigrant community in Brixton, London were interviewed regarding their attitudes, personal customs, behavioral patterns, and intention to purchase ethnic foods. Ethnic foods were relatively available to the immigrants, and past behavioral pattern was significant in determining intention to purchase ethnic foods.

Health and welfare of human beings is a social idea that inspires people to engage in behaviors and activities that prevent diseases (Bandura, 2004). According to Bandura (2004), the social cognitive theory may be used to evaluate health promotion and disease prevention. The social cognitive theory was based on the idea that humans were responsible for their behavior and a positive attitude towards health education and health promotion may motivate a person to engage in positive healthy behaviors. While, a negative view may adversely sway one's belief system and ability to exercise self-control when making food choices, and implementing healthy habits. Attitudes and beliefs may determine a persons' ability to maintain healthy food habits or recuperate from relapses involving unhealthy behaviors. There is a need for comprehensive reform in the initiative to promote change in social behaviors that may positively influence human health.

Based on the ideas of Fishbein and Ajzen (1975) it appeared that the principles of the theory of reasoned action focused on the belief system of a person, and the individual intention and desire to utilize ideas. The principles of the theory of reasoned action supported the idea of personal choice and an informed decision as relevant ideas for

influencing food selections. The philosophical ideas from the theory of reasoned action have helped to guide the focus of this research study on food choices and use of nutritional information.

The concept of phenomenology was profiled by philosophers such as Edith Stein, Edmund Husser, Jean-Paul Sartre, Martin Heidegger, and Maurice Merleau-Ponty and it was concluded that phenomenology was a conscious effort to describe the life experiences of people without involving the views of the researcher (Paradowski, 2013). The interpretive phenomenological analysis was the process of examining how people think about an issue and explaining the meaning of participant lived experience (Smith & Osborn, 2007). The interpretive phenomenological analysis was used to explore the participants lived experiences and the meaning of the experiences to the participants. The principle of bracketing required the researcher to present the ideas of the participants in an impartial, objective manner, and the researcher was required to document only the experiences of the participants (Chan, Yuen-ling, & Wai-tong, 2013). The concept of bracketing was deemed an appropriate approach to avoid researcher biases and researcher subjective influence into a research study.

The factors manipulating eating behavior of teens from Ecuador was studied using 20 focus groups, with 144 people age range 11–15 years (Verstraeten et al., 2014). The study assessed eating behaviors of teens, the perspective of parents, and school staff. The teens were aware of the importance of consuming a balanced diet and they were knowledgeable of foods that may contribute to obesity. The cost and availability of foods, combined with time to organize sit down meals were some of the barriers preventing



teens from consuming nutritious foods. Some teens wanted meals that were more appealing, while parents indicated that food choices were influenced by media commercials.

It was proposed that frequent eating of foods outside of the home has been linked to obesity, so there was a need to study the effect of environmental factors on food consumption (Skov, Lourenço, Hansen, Mikkelsen, & Schofield, 2013). The premise was the brain is stimulated automatically by environmental factors seen in the surroundings. An experimental study was conducted to assess environmental factors such as food display, food labeling, container, and cutlery size, display of price, and display of nutritional value that swayed human behavior. It appeared that environmental factors had an effect on human behavior, for example, the size and shape of bowls have influenced the quantity of ice cream consumption, and all-you-can-eat buffet was associated with increased calorie consumption. It was noted that self-service buffet was designed to regulate consumer freedom to make individual food selections, and this may be a good opportunity to educate consumers on nutritious food choices.

Self-control was defined as the ability to make food choices based on conscious decisions (Salmon, Fennis, Ridder, Adriaanse, & de Vet, 2014). A study involving 177 students were involved in a study to examine the significance of nutritious food choices and low self-control. The control variables in the study included degrees of hunger, and the desire to make healthy food selections. The participants' food decisions were based on impulsive desires. Therefore, there was a need for nutrition programs that encouraged people to do healthy meal plans in advance, so the choices of food would be less

impulsive. The social factors, individual choices, and economic factors were some of the main conceptual factors that determine the food choices of the students.

Aging may alter the taste buds of the elderly, and may determine eating patterns (Payette & Shatenstein, 2005). Therefore, the dietary habits of many elderly individuals are potentially determined by health belief, food belief, access to food, the ability to consume available food, and social support that facilitate healthy eating. The elderly who have adequate economic and social support were able to access quality foods, while many elderly with poor social support experienced malnutrition. There were many gaps in the literature on elderly food choices, and more information was needed on actual healthy eating patterns of the elderly.

Aversion principle is one concept that may be used to initiate nutritious eating patterns (Hollands, Prestwich, & Marteau, 2011). Behavior change may be initiated by communicating the significance of implementing healthy principles in daily activities and avoiding unhealthy food choices. Participants were shown pictures of healthy food and the positive influences on the body. Then they were shown pictures of unhealthy snacks and the effect on the body that may result in obesity, heart disease, stroke, and other negative consequences. The aversion principle was effective on the participants in this study as most people selected nutritious foods when they were offered a choice of healthy or unhealthy snacks.

Wilson and Garcia (2011) explained that it was important to monitor environmental factors that were involved in food production. Consumers are beginning to monitor the environment where food is produced, and their attitude towards organic food

production was motivating their purchasing patterns. The research was recommended to determine factors that facilitated, or prevented the implementation of nontoxic food production strategies in health-related environments. The significance of nutrition information and attitudes towards fat intake from foods such as meat, dairy, and fried foods were also important considerations when monitoring food choices and healthy eating habits (Sheperd & Towler, 2007).

### **Background Literature and Rational for food Choices**

A survey to study the food needs of people who attended recreational facilities were conducted (Thomas & Irwin, 2010). Half of the people in the study had a desire for nutritious foods. The patrons who desired healthy foods avoided consuming foods in recreational areas. These patrons cited that the recreational foods were expensive, poor quality, and unhealthy. This study demonstrated that there was a need for nutritious food options in recreational facilities.

Eating may be described as a spontaneous behavior and environmental cues such as reducing the price of healthy foods, bringing attention to the menu, and offering free samples were used as incentives to motivate a change in behavior towards healthy eating (Lee Olstad, Goonewardene, McCargar, & Raine, 2014). This study was conducted in an outdoor pool center, close to a recreation facility. Concession one sold foods such as candy, ice cream, granola bars, potato chips, sugar drinks, fruit juice, soda, and water. Concession two sold sandwiches, wraps, beverages, water, smoothies, ice cream, and fruit. The environmental cues were established for concession two, and the staff was trained in preparing and presenting the foods attractively for sale. More unhealthy foods

were sold than healthy foods, parents bought more healthy foods when they were alone, and more unhealthy foods when children were present. The vendors in this study indicated that their main goal was to satisfy the demand of the consumers, so foods were prepared and sold based on consumer demands.

A focus group to discuss factors which contributed to food choices was conducted with 141 teenagers (Neumark-Sztainer, Story, Perry, & Casey, 1999). The study conducted by Neumark-Sztainer et al. (1999) determined that the appeal for food was influenced by physiological factors such as food craving, hunger, the availability of appealing food in the community, price of food, the influence of media via advertisement, occasional desire for nutritious foods, combined with cultural and religious views that supported the decision to make food choices. Television was used as a tool to advertise mainly unhealthy snacks to a group of 351 participants (Zimmerman & Shimoga, 2014). This was an experimental study and the participants were divided into four groups to examine the effects of advertisements on food choices. The participants were offered actual snacks during commercial breaks. It appeared that the people who were distracted with other duties and exposed to advertisements were more likely to choose unhealthy snacks. It was also noted that many high-calorie snacks were marketed to low-income communities and people choose snacks that were familiar and available in the community.

The cultural values and traditions of Mexican immigrants were considered a significant factor for evaluating food choices (Lindberg & Stevens, 2011). Food had cultural significance to the immigrant community and it was important for the immigrants

to prepare some traditional foods in an effort to maintain their cultural habits in America. A focus group with approximately 25 women was used to discuss the dietary choices of the Mexican immigrants. The goal of the study was to develop meal plans that were culturally sensitive to the Mexican immigrants, while increasing awareness for health and nutrition to prevent diseases such as obesity and diabetes. The women in the study suggested that choosing to eat nutrient dense food and appearing plump was culturally a sign of health, and desirable by men in the community. An abundance of fast foods combined with limited time to prepare traditional foods has contributed to the immigrant women decision to consume fast foods. Mexican immigrant women in the study were mainly responsible for meal preparation in most homes and it was important that family members enjoy home prepared meals. The women were aware that some of their traditional cooking habits may contribute to diseases such as obesity and diabetes. The women were receptive to health education information, but there was a concern regarding how a change to healthier food choices will affect the rest of the family.

The health and nutritional behaviors of college age students 18 years and older were evaluated pre and post study (Kicklighter, Koonce, Rosenbloom, & Commander, 2010). Prior to the study, the food choices of the students were generally based on cost, taste, convenience, time of day, rather than on the nutritional value of the food. A focus group was used to discuss the students' perception on food and nutrition choices. It appeared that the college-age participants were aware of the need to consume a balanced diet. The students in the study reported additional insight from the information obtained in the education program. Some students reported that they consumed limited drinks with

excess sugar; they have reduced portion size and considered the idea of preparing healthy meals. A convenience sample from one university was a limitation of this study.

The relationship between shopping location, the availability of healthy foods, and dietary behaviors was assessed by tracking the location of participants with a global positioning system for two weekdays, and one weekend (Gustafson, Christian, Lewis, Moore, & Jilcott, 2013). People who shopped in farmers market were more likely to consume fruits and vegetables, people who shopped in supermarkets that provided fruits and vegetable had an increased likely hood of consuming healthy foods, and people who shopped in supermarkets with limited fruits and vegetables were more likely to consume highly processed foods that were less healthy. According to the results of this study, food choices were influenced by the availability of foods in the community.

Socio-economic factors were a major consideration that determined how 100 participants that comprised of dentist and porters determined food choices (Crossley & Khan, 2001). The dentists were able to purchase more expensive high-quality foods, consume foods prepared in restaurants daily, and in general, the dentist had more options in regard to daily food selections because of their economic ability to purchase a variety of foods. The porters had less financial means that limited the quality and quantity of food choices that they could afford. It was noted that many of the women did grocery shopping and prepared meals at home and single men in the study purchased prepared foods. This was a small representative sample study; however, the study provided information and awareness that people can prepare relatively inexpensive foods within a

budget. The dentist in the study explained that the information from the study would be helpful to share with clients to improve oral health, and general health.

The ability to make daily food choices was determined by economic, environmental, and behavioral factors that influenced the consumers' ability to purchase quality food (Dimitri & Rogus, 2014). There were people who experienced severe food shortage because of limited funds, and there were others who were only able to purchase poor quality, calorie dense foods, that were high in fats and processed sugars that may contribute to obesity. Many large stores were able to provide competitive price bargains for consumers and some consumers were able to supplement their budgets with coupons and other incentives to purchase food at a reasonable price. The marketing of products with colorful food packaging that highlighted package size, food brand, and health claims may help to influence food choices. Environmental factors such as store ambiance and store layout may also influence the food choices by making it more appealing for consumers to purchase food products. Many consumers choose supermarket that they believed was clean and where they can obtain fresh supplies such as meat and vegetables at a reasonable price (Krukowski, Sparks, DiCarlo, McSweeney, & West, 2013).

Manilla, Keller, and Hedley (2010) conducted a food tasting session in a senior center to assess the food choices and the needs of the elderly. The purpose of the study was to stimulate the elderly interest in nutritious foods. The elderly were encouraged to sample foods, and to provide feedback on the foods that were sampled. At least 75 percent of the participants indicated that they considered preparing the foods that were sampled. It may be necessary to monitor the nutritional needs of the elderly, and services

should be provided to ensure that adequate nutritional foods were consumed by the elderly. Southgate, Keller, and Reimer (2010) conducted a nutrition screen for older adults in Canada to assess change in behavior with increase information. The seniors in the study responded well to information that was simple and designed for the elderly. The elderly participants had increased awareness for the need to consume a balanced diet. However, there was a need for education programs from dieticians to assist the elderly in making healthy choices over a long-term period.

Shopping for food may be viewed as a mindless behavioral activity that was biased by impulsive behavior (Dimitri & Rogus, 2014). Educational programs may be used as a tool to motivate consumers to monitor impulsive behaviors by monitoring food choices, portion size, and calorie intake. Legislation may be used to monitor food labeling, and higher taxes may be used as a deterrent for consumers interested in purchasing foods with high sugar content like soda and other unhealthy foods. Accurate dietary information was important for consumers to make prudent food choices.

The decision to make food selections was a personal choice that may be based on socio-economic circumstances, or religious circumstances, or on impulsive behaviors. Current research suggested there was no single factor that determined food choices. People may allow personal habits, or an impulsive desire, or simply the convenience of a restaurant to determine food choices. Education programs may be needed to increase awareness on the benefits of conscious eating rather than on impulsive behavior. Ultimately, it is the consumers' decision to determine the food selections that is conducive to his or her individual needs. Conducting a study to learn about actual food



experiences may help to provide scholarly data to support the need for the education programs.

### **Health and Education**

According to the Harvard (2013) report, developing a diet that benefited heart health may help to prevent heart disease, obesity, and diabetes. The Harvard writers reported that lower amounts of sugar, sodium, saturated fat, trans-fat, excess calorie consumption, and increase amounts of fiber, and other nutrients from whole foods may contribute to a healthy heart. According to the Harvard (2013) report some examples of whole foods are fish, vegetables, fresh fruits, yogurt, whole grain cereal, whole eggs, nuts and dark chocolate. Limiting processed foods may also result in decrease sugar and sodium in the diet.

The intake of foods rich in calcium and vitamin D was known to support bone health (Hammond, Chapman, & Barr, 2011). A snowball sampling was used to recruit middle age women to share their views on food choices and the effects on bone health. Women who had a low income indicated that their food choices were based on daily survival and health was a secondary consideration. Most women in the study were aware of the importance of bone health and consuming calcium and vitamins D to prevent osteoporosis. However, most women in the study ate generally to maintain a healthy body, and little consideration was given specifically to maintain bone health. Food labels provided valuable information on food and nutritional information (Borgmeier & Westenhofer, 2009). Many people reported that they were aware of food labels but

education information was not always used to determine food choices because the information on food labels was not always understandable by the average consumer.

Rondinelli et al. (2011) assessed the nutritional habits of immigrants who lived in San Diego, California. The major concern was unhealthy weight gain that was linked to unhealthy food choices and sedentary lifestyle (Rondinelli et al., 2011). There was an issue with under-nutrition which was a result of an unbalanced diet. It appeared that the immigrants' food choices were a result of prior unhealthy habits, and an adaptation to the lifestyle of the new cultural environment. It was noted that the immigrants past history of food shortage may have contributed to eating high-calorie foods available in America. Decreased physical activity may have contributed to increasing weight gain, also immigrant children and young adults developed unhealthy dietary behaviors that were acquired from unhealthy family food selection habits.

An increase in obesity, hypertension, and diabetes was noted among immigrant Chinese children (Chen, Weiss, Heyman, & Lustig, 2011). A variety of unhealthy food selections was a major risk factor that contributed to obesity and hypertension among the immigrant Chinese participants. The parents' limited knowledge of the American culture appeared to contribute to the children having a limited awareness of nutrition and healthy food choices. An increase in the children's weight may contribute to long-term psychological and physical health problems. Health promotion campaigns may help to reduce health inequalities among Chinese American children and other minority people.

Lawrence et al. (2007) studied the food choices of immigrant girls and young women from Africa and South Asia. The immigrant women had a preference for fast

food selections when there was no time to prepare traditional meals. The immigrant women adapted their dietary choices based on the price of food items, availability of food items, and ability to prepare the foods. The immigrant women in the study were consuming limited amounts of vegetables and more unhealthy fast foods. Lawrence et al. (2007) suggested that there was a need for culturally sensitive food and nutrition information to be disseminated in immigrant communities to assist in food and nutrition education programs for immigrant people. Bermudez and Tucker (2004) noted that some elderly immigrant people have adapted to American food choices for breakfast and lunch. However, many elderly people desire traditional meals for dinner. It was emphasized that there was a need to educate health care providers and food preparers on the need to increase cultural sensitivity for elderly immigrant clients.

A pre and post-experimental study were conducted in a simulated fast-food restaurant to study the food choices of 10 teenagers (Allen, Taylor, & Kuiper, 2007). The purpose of the study was to examine the impact of a 30-minute education session on food choices since obesity appeared to be a major health issue among adolescents. After analyzing the results of the study, it appeared the teens demonstrated healthier food choices after the education session. The limitation of this study included a small convenience sample was used for the study, and it was unclear if the information acquired from this teen study may be applicable for future teen food selections.

An education program with 27 women was conducted to assess the information awareness and attitudes of women who were enlisted in the Israeli army (Herzman-Harari, Constantini, Mann, Lencovsky, & Stark, 2013). The theory of planned behavior

and a social cognitive approach were used as the foundation to support the intervention for the health education program. The purpose of the study was to increase the availability of nutritional information to women soldiers, and monitor changes in dietary habits over time. A food frequency survey was used to assess the women behavior at enlistment, 2 months later, and at 4 months when basic training was completed. A baseline was established at enlistment and an 8-week nutrition education course was administered to the women after 2 months of enlistment. An evaluation of the effectiveness of the program was conducted at the end of basic training. A follow-up qualitative assessment was conducted via telephone, 12 months after the intervention was completed. One-third of the participant was randomly selected for the follow-up phone evaluation, 80 % of the participants gained weight at the end of basic training and it was suggested that the weight gain may be a result of increase muscle mass. The participants in the study reported that they were consuming a balanced diet that included adequate protein, fats, carbohydrates, and 50 % of the participants reported adequate intake of vitamins. A Likert scale was used to assess changes in the participants' approach towards consuming a balanced diet. At least 20% of the participants' incorporated a balanced diet into their daily life on a long-term basis, and 50% of the participants indicated that they were making an effort to eat more fruits and vegetables. The rigorous demand of combat life and the limited availability of palatable foods were cited as reasons why it was a challenge for significant changes in the soldier's daily diet. It appeared that eating a balanced diet was not a high priority for the participants in the study. Therefore,

Herzman-Harari et al. (2013) suggested soldiers should ingest a dietary supplement to facilitate a balanced diet.

A global trend that demonstrates an increase in obesity among people of all economic groups was assessed (Popkin, Adair, & Ng, 2012). It was proposed that an increase in obesity among rich and poor, urban and rural individuals was a result of an increase consumption of processed foods, increase in sedentary lifestyle, and decrease in physical activity. It was suggested that there was a need to reduce process foods and sugar intake in foods, increase the consumption of fruits and vegetables, and community rules should monitor the production, marketing, and sale of unhealthy foods. Education programs to assist people with reading and understanding food labeling can help individuals make healthier food choices with manufactured foods. According to Popkin et al. (2012), there was a need for more evidenced based data to support the change in dietary consumption towards healthy habits that may result in reducing the occurrence of obesity.

A focus group approach was used to study the impact of food labels on food choice (Swartz, Dowray, Braxton, Mihas, &Viera, 2013). The focus on food labeling was to encourage people to eat less and exercise more in an effort to manage obesity. The labels in the study depicted calorie content and the intensity of activity required to expend the calories that were consumed. The labels provided the participants with visual pictures that depicted examples of the amount of time, or distance to walk, or run, in an effort to burn the consumed food calories. The participants were a convenience sample of male and female participants from a diverse group of people. Swartz et al. (2013) indicated that

the labels facilitated a discussion and increase awareness on the issue of consumers making healthy food choices. However, more study was needed to develop an appropriate labeling system that was simple and appealing to the needs of many people. It was also affirmed that the Patient Protection and Affordable Care Act of 2010 was a valuable legislation to encourage restaurants to become accountable to consumers by listing the calorie content of foods and drinks served to consumers. While, listing calories was useful, other factors such as cravings, the taste of food, and usability of labels may also influence consumer food choices.

Katz et al. (2011) conducted an experimental study that was designed to assess the impact of nutrition education on elementary school children and their parents. Three schools were provided with resources and two schools served as controls for the experimental program. The children were provided information on how to read food labels, detecting deception in advertising, and ways to choose healthy foods. Written food and nutrition information was given to parents. Katz et al. (2011) proposed that the written food and nutrition information increased the awareness of the children ability to read and understand food labels, and the families appeared to consume fewer calories after being provided health education information in the study. Long-term changes in dietary patterns, weight control, and managing obesity were not adequately assessed in this study. The children and adults who participated in the study were successful in learning the dietary significance of food labels that may be relevant in making healthy food choices in the future.

Cardiovascular disease and malnutrition continued to affect the lives of many Brazilians and there was a need for culturally sensitive nutrition education programs so that Brazilians can utilize available foods effectively (Doyle, Feldman, & Keller, 1995). Three hundred and thirty-two Brazilian teens age 13–20 were involved in a study to assess attitude towards nutrition and snack preference. It was determined that males and females had different attitudes towards health education programs. Different media such as smart boards, dramatization, and written information were recommended to disseminate information to the teens (Doyle et al., 1995).

A nutrition education study was conducted with elementary school students to evaluate the impact of health education on the consumption of fruits and vegetables (Prelip, Slusser, Thai, Kinsler, & Erausquin, 2011). The student survey instrument was used to assess students' attitude and belief on consuming a balanced diet that included fruits and vegetables. The students were randomly chosen to engage in the school-based program. The program was conducted over a 9 month period. Pre-test and post- test was used to assess change in attitude over time. Each participating school was able to develop a nutrition education program that suited the needs of the participants. The students in the study seemed to consume more fruits and vegetables but the results were not statistically significant. The implication of the study was that teachers may be able to positively influence the attitudes of students towards consuming more fruits and vegetables and reduce obesity in the community among children.

African Americans with type 2 diabetes participated in a study to compare a meal plan with healthy food choices versus a traditional meal plan (Ziemer, Berkowitz,

Panayioto, El-Kebbi, & Al, 2003). The participants were randomly chosen to be educated on ways to implement a healthy meal plan. The participants were expected to compare the possible effect of food choices on weight, blood pressure, and other health indicators after 6 months of follow-up. A food frequency questionnaire was used to assess dietary practices. Ziemer et al. (2003) reported that the participants were receptive to the health education information on meal planning.

There appeared to be many studies available to indicate that people were provided with information on nutrition and healthy food choices. However, it was the choice of the individual to utilize the information. There was limited information on the views of Caribbean immigrants on food choices. Therefore, the purpose of this study was to use a phenomenological approach to explore Caribbean immigrants' perception of nutrition and utilization of healthy food ideas when making food choices.

### **Summary**

The perception of healthy eating was defined as the consumption of a variety of foods from different food groups that included fruits, vegetables, high protein products like meat, low fat, low sugar and low salt products, fresh foods, homemade foods, high fiber, and limited preservatives (Paquette, 2005). It was significant for adults over 65 years to have food choices that were soft and easy to swallow, there were preferences of consuming chicken and fish over red meat, and there were many people who linked healthy eating to weight management.

The perception of healthy eating was influenced by information obtained in the media, health professionals, and the food industry. In prior studies, it was determined that



social, economic, and cultural factors, combined with personal desires have greatly influenced the food choices of people. It was explained that there were gaps in the literature, and there was a need for more studies on healthy food ideas, so consumers can have access to updated, accurate information. There was also a need for legislation to continuously monitor commercial claims regarding the health nature of foods. The theme of healthy food selections appears to be a universal concept which influenced the decisions of children, teens, and adults from a diverse cultural, social, and economic environment. The food choices people made may directly influence the health of a person. The food choices and lifestyle of individuals appeared to have an effect on people developing lifestyle diseases like diabetes and obesity. The availability of data and educational information was an advantage of research that may facilitate healthy food selections.

Culture may be described as learned behaviors that were shared in communities, and cultural tailoring was a strategy to provide culturally appropriate interventions to underserved racial and ethnic groups (Kreuter, Lukwago, Bucholtz, Clark, Sanders-Thompson, 2003). Cultural tailoring was effective in Afro-Caribbean Community because acculturation was known to affect dietary practices and health belief of people and research has increased the awareness of the need to modify inquiry to gain information that was fundamental in the minority, and underserved communities (Archibald, 2011). Therefore, health promotion programs and materials may be more effective when they were culturally appropriate and relatable for the target population. Interviewing was a powerful approach for qualitative researchers to investigate the

meaning of life experiences (Kvale, 2006). Interviews can provide an opportunity for the researcher to gather in-depth information and the story behind the experiences can be communicated via the interview responses (Kvale, 2006). The concept of phenomenology was developed by several philosophers, Heidegger idea of phenomenology involved using a comprehensive interview approach to acquiring participant information (Converse, 2012). After reviewing the literature, a semi-structured interview was a viable option to study Caribbean immigrant perceptions on food choices and the utilization of healthy food ideas. The interviewer developed a client-centered trusting approach that facilitated in-depth discussions. The interview process may be conducted by one researcher to ensure consistency for all participants who were willing to share information in an individual interview format. In-depth interviews were appropriate to identify detailed perceptions on issues based on personal behaviors such as food choices. Individual interviews provided an opportunity for the researcher to probe participants for additional data that was relevant to nutrition and food choices. A semi-structured interview approach may be used to encourage participants in sharing their experiences on using nutritional ideas when making food choices. After reviewing the literature, it appeared that the most appropriate approach for this study on utilizing healthy information when making food selections was face-to-face interview approach. The data from this study contributed to the body of academic studies to provide enlightenment on Caribbean immigrant perception on making daily food selections and using nutritional information.

## Chapter 3: Research Methods

### **Introduction**

This study design was qualitative, using a phenomenological approach. The purpose of this phenomenological study was to explore Caribbean immigrants lived experiences regarding the use of nutritional information when making food choices. Interviewing was described as a powerful approach for qualitative researchers to investigate participant experiences (Kvale, 2006). The interview data would provide academic information that contributes to the body of knowledge related to Caribbean immigrants' food choices. An in-depth interview approach was used in qualitative studies to discuss participants' values, attitudes, behaviors, and concerns regarding daily lifestyles (Bagdonienė & Zemblytė, 2005). An in-depth interview approach was suitable to collect data to answer the research questions on perceptions of food and nutrition.

In a qualitative study reliability and validity or trustworthiness were determined by the ability of the researcher to accurately collect data, analyze data, and document the perspective of the participants in the study (Patton, 2002). Trustworthiness depended on the quality of the data collected, data analysis, and verification of results. The strategy to maintain the quality and trustworthiness of the study included reviewing information collected from participants for consistency, monitoring personal biases to ensure the data represented the view of the participants, and assuring participant that the results were an analytic description of each participant lived experiences regarding food choices. The objective was to enable Caribbean immigrants to express their lived experiences regarding nutrition and food choices. Social change was facilitated by using the

participants' experiences to provide data that may be shared with health departments to increase awareness on the significance of using nutrition information when making food choices. The methodology described how the data was collected, analyzed, and documented to answer the research question.

### **Research Questions**

The following research question and sub-questions were used in this study:

#### **Research Question**

1. What are the perceptions of the Caribbean immigrant population in suburban Brooklyn toward their food choices and the use of healthy food ideas?

#### **Sub-questions**

1. What is the immigrants' awareness of the significance of a balanced diet?
2. What are the views among immigrants on making healthy food choices?
3. What is the opinion among immigrants on the effect of cultural values and traditions on food choices and the use of healthy food ideas?
4. Have immigrants used information on healthy food ideas in the past?
5. What are the immigrants' perceptions of the value of a balanced diet when determining food choices?

### **Research Design and Rationale**

Phenomenology was described as an interpretive explanation of human experience based on participant conscious awareness (Uprety, 2008; Dowling & Cooney; 2012, Creswell, 2013; Gee, Loewenthal, & Cayne, 2013; Paradowski, 2013). The concept

of phenomenology was developed by several philosophers including Edmund Husserl, Martin Heidegger, and Hans-Georg Gadamer (Converse, 2012). A synopsis of Husserl phenomenological idea involved the presentation of an unbiased, description of human life experiences, which means presenting the participant's ideas on an issue and isolating the researcher perspective. Heidegger idea of phenomenology involved using a comprehensive interview approach to acquiring participant information. Gadamer focused on providing an interpretation of human experiences. A modern approach to phenomenology was to combine the ideas of several philosophers including Husserl, Gadamer, and Heidegger to present a comprehensive qualitative research project (Converse, 2012). A phenomenological approach was an appropriate method for a research when the purpose of the study was to understand and present the lived experience of participants.

The study of human experiences was a scientific approach that was designed to document variation in human thinking, and ability to process ideas regarding an experience (Trișcă & Ciortuz, 2011). Each individual was required to share a unique, detail, experience on a phenomenon in an honest manner. Empirical data was gathered to support the significance of the phenomenological study from literature review, interviewing participants, and observing participants in the environment (Gee, Loewenthal, & Cayne, 2013). An objective approach was used to analyze the data collected and present the participant perspective on the phenomenon. This phenomenological study gave the participants the opportunity to discuss details on daily nutritional behaviors and habits. Therefore, the research study represented a detailed

description of each participant lived experiences; hence a phenomenological approach was considered an appropriate method to represent lived experiences.

A focused qualitative inquiry was facilitated with a clearly defined research question and theoretical ideas (Romand, Donovan, Hsinchun, & Nunamaker, 2003). The Theory of Reasoned Action was based on the idea of personal desire or choice to change health behavior (Fishbein & Ajzen, 1975). The theory of reasoned action was used to support the theoretical construct for this nutrition and food choices research study. The theory of reasoned action supported personal choice and was used to establish the foundation for collecting raw data on participant experiences regarding the use of nutritional information while making food choices. The researcher examined and selected data that were relevant to current theories and research questions.

The choice of research method was determined by the nature of the research question. The research question required the immigrants to express their opinion on the use of nutrition ideas when making food choices. Therefore, a qualitative approach was considered an appropriate research approach for the participants to share their experiences. A review of the literature supported the value of qualitative research as an effective method to document participants lived experiences. The Qualitative research was considered a scientific method, that was designed to collect data, answer questions, and document results that were not predetermined (Creswell, 2013). Qualitative research included observing and interviewing people in their local environment regarding daily experiences and documenting the data (Endacott, 2008). A qualitative paradigm was

designed to explore the meaning or significance of an issue to people in a community (Creswell, 2013).

The contextual explanation in a qualitative study was a representation of participant perspective of lived experiences (Creswell, 2013). Interviews were used to acquire textual information in an effort to discuss participant values, attitudes, behaviors, and concerns regarding daily lifestyles (Bagdonienė & Zemblytė, 2005). The researcher chose to collect the qualitative data using a direct approach, for example, in-depth interview. An advantage of an in-depth interview was the researcher ability to obtain a comprehensive report of participants' experiences via discussion and sharing of ideas. The responses from a qualitative study provided detailed descriptions of participants' views, concerns, and experiences (Romand, Donovan, Hsinchun, & Nunamaker, 2003). These concepts supported the appropriateness for choosing a qualitative study to discuss the participants' perceptives on food choices and use of health information. Based on the review of the literature, it appeared that a qualitative study using a phenomenology approach to document the Caribbean immigrants lived experiences was a viable method.

It was appropriate for a researcher to document and evaluate raw data that was obtained from a qualitative study (Romand, Donovan, Hsinchun, and Nunamaker, 2003). This meant it was feasible to collect qualitative data from interviews, and analyze the participants' experiences electronically using the NVivo 11 Plus for Windows to code and analyze the data. Frequently occurring ideas were identified and grouped into categories to form themes. Then, categories and themes that emerged from the data were used to document the results of the study. The analysis and results were described in a

clear and concise manner, so readers can understand the content of the study. The researcher had an ethical obligation to monitor personal biases and present the perceptions of the participants. Therefore, I reviewed the analyzed data with the participants to ensure the document represented the views of the participants. An analytic description of the participants' lived experience was used to document the results of the study.

### **Role of the Researcher**

The researcher role was to obtain Institutional Review Board permission (approval number 10-06-15-0266179) to begin recruitment of participants, discuss the purpose of the study, disclose the participants' rights, and respect the rights of the participants during the research process. The researcher role was to explain to each participant their rights. Some of the participant's rights included the voluntary nature of the study. This means the participants were not paid for the study and the participant had the right to discontinue the study without prejudice. The research role included explaining to each participant their right to confidentiality and the right to have their personal information secured. The researcher role was an independent interviewer, and there was no personal or professional relationship that influenced the expressed views of the participants. The researcher's role in this phenomenological study was to collect data via interviewing the participants and document the participant experiences.

The researcher role was to conduct interviews with 15 participants. The sample size was a reasonable quantity for a dissertation project because the expectation for this dissertation study was to document the experiences of Caribbean immigrants regarding



nutrition and food choices and present the participants views. The sample size in a qualitative study was usually small since there was no set sample size for the qualitative studies. Data obtained from a meta-analytic study that included ideas from 83 articles revealed there were no evidence-based guidelines to support sample size, sample size should be based on the expectation of the study (Marshall, Cardon, Poddar, & Fontenot, 2013). The expectation was to present the participants experience with using food and nutrition ideas, and the sample size served the purpose of the study. There was a constraint of time for the researcher to conduct a manageable dissertation project and 15 participants were reasonable for the researcher to conduct a study.

The researcher role was to apply the principle of reflexivity to introspectively assess the interpretation of the participant lived experience. The researcher was required to separate personal experiences from participant experiences by using a diary to document personal thoughts in an effort to manage personal biases. The researcher was required to manage personal biases by applying the principle of bracketing which means the interviewer documented only the lived experiences of the participants for the study.

### **Nutrition and Food Choices Methodology**

The study population was adult Caribbean immigrants who lived in Brooklyn, New York and migrated from islands located in the Caribbean Sea, between 1990 and 2015. Walden University's IRB approval was secured and the approval number for this study was 10-06-15-0266179. The participants were recruited from public areas located near restaurants, supermarkets, and farmers market in Caribbean immigrant communities in Brooklyn, New York, using information fliers (Appendix A). Each flyer had

information to contact the researcher. Interested individuals contacted the researcher to participate in the study. The interested adult participants were prescreened (Appendix C) via phone or in person to established inclusion criteria. The inclusion criteria were adults from the Caribbean who traveled to Brooklyn, New York and had knowledgeable on food and nutrition.

Robinson (2014) suggested that a purposeful sampling strategy was appropriate to gather data for a phenomenological study because a purposeful approach was designed to gather data from participants who were knowledgeable, and who have a unique perspective on a study. An ethical approach was used during purposeful sampling to inform potential participants about the voluntary nature of the study and written consent was obtained from people who wanted to participate in the research study. Snowball sampling was another approach that was useful for potential participants to recruit acquaintances that were able to contribute ideas to the research study (Creswell, 2009).

The primary recruiting strategy for the study on Caribbean immigrant food choices was purposeful sampling strategy and the secondary strategy was a snowball strategy. A purposeful sampling strategy was described as acquiring information from knowledgeable individuals who decided to share their experience (Patton, 2002). A snowball sampling strategy means existing participants in a study recruited acquaintances that were appropriate for a study (Creswell, 2009). A snowball sampling strategy was a secondary strategy that was used to recruit participants for the study.

The sample size in a qualitative study is usually small and there was no set sample size. However, a sample size was determined by the ability of the researcher to

successfully collect and analyze data from the sample group, and establish information saturation from a group of individuals (Robinson, 2014). The goal was to interview at least 10 participants and no more than 20 participants. The final sample size was 15 people because the researcher acquired adequate information to answer the research question on nutrition and food choices. The relationship between sample size and information saturation was the amount of participants recruited for the study who were able to contribute data until no new information was gathered from the existing population. The sample size provided adequate information to answer the research question and inundated the process with scholarly information that was relevant for the study, to the point that no new data was collected and resulted in information saturation.

The researcher may be acknowledged as an instrument in a qualitative research study (Guba, & Lincoln, 1981). The researcher conducted semi-structured interviews with 15 participants who consented to participate in the study. A list of 20 questions was used to interview each participant. The researcher was able to inquire for more details on the topic as needed, ask clarification as need, and observe facial expression and body language in the interview process. The researcher facilitated a research process that was respectful to the participant views and rights to voluntarily participate, or terminate participation. The researcher facilitated a research process that gave the participant time to respond to open ended questions and the researcher listened attentively to the responses. The researcher redirected participants as needed, so the interview process was conducted in a timely manner. Written notes were taken during interviews and all data was recorded during all interviews. The researcher facilitated a research environment that

encouraged trust between the participant and the researcher. The objective was to have an authentic experience for both researcher and participant in the process of collecting data on participant experience. The material source for collecting data was (Appendix A-E). The source included the information flyer that was used to recruit participants for the data collection process. The prescreen questions were used to select potential participants. The Semi-Structured Interview Guide for Food Choices was a list of 20 questions that was used to interview each participant, the phone script document was used to contact the participant via phone, and the National Institutes of Health (NIH) certificate was a training course that highlighted ethical ideas for working with human participants. Each document (Appendix A–E) was necessary to facilitate the data collection process.

Each person who agreed to participate in the study was interviewed in person using the Semi-Structured Interview Guide for Food Choice (Appendix C). The questions were designed by the researcher to facilitate in-depth discussion on Caribbean immigrants' food choices and the use of nutrition information. The time needed to complete the in-depth interview was 45 minutes. The interview was recorded with permission from each participant and written notes were used to document data. The written and recorded data was stored in a locked secured safe. The interview data was transcribed to electronic data and stored in a password-protected computer, and no personal information was used for the study. Each participant chose a convenient public location to discuss their experience regarding nutrition and making food choices.

The interview questions followed the qualitative theoretical design of the research plan to ensure appropriate data was collected for the study (Cooper, 2010). Gill, Stewart,

Treasure, and Chadwick (2008) supported the idea that interviewing is one of the most common data collection method used in qualitative research. This included participants consent to participate in an interview before the study commenced. The participants were provided information on the nature of the study and their ethical rights which included confidentiality. The study was conducted in an environment that was comfortable, with limited distractions.

There are many identifiable features of a semi-structured interview protocol which included; a semi-structured interview being a list of questions to establish the basis of a study, and the interview should facilitate open discussion on a topic, and the researcher should be flexible to facilitate a discussion (Gill et al., 2008). A semi-structured interview may increase the possibility for the participant to divulge pertinent information. Semi-structured interviews were designed to explore the experiences of the participants and provide detail information about a phenomenon. The questions should be unbiased and written on a level that is understandable by the participants.

Opdenakker (2006) suggested face-to-face interviews has the advantage of conducting an interview in real time and place, and the interviewer is able to observe social cues such as voice intonation and body language. The interviewer can obtain an immediate spontaneous response from the interviewee, and the response may not be censored. The interviews can be tape recorded and notes can be written simultaneously. The disadvantage of face-to-face-interview is the time and cost that may be needed to travel from one location to another to conduct interviews.

According to Opdenakker (2006) as an alternative to in-person interviews, the researcher can take advantage of telephone access, Email, and other electronic media. Alternative media has the advantage of having access to participants at an alternative time, there is a savings of time and money because there is no travel cost and participants can engage in the interview process in a convenient location such as their home environment, and participants can provide more reflective responses to questions. Some participants may relax in their secluded environment and may divulge more information on issues regarding attitude and feelings. One example of divulging data is the awareness that peer pressure does influence food choices (Gill et al., 2008). The interviewing process was about communicating ideas using different valid media options. The most common medium to obtain information from participants was face-to-face interview; however telephone interview is effective in reducing stress for people with sensitive issues relating to reputation, employment, finance, and issues such as post-traumatic stress disorder (Mealer & Jones, 2014).

After reviewing the literature, it appears that the most appropriate approach for this study on utilizing healthy information when making food selections was face-to-face interview approach. The semi-structured interview questions were used to interview the participants. All data for the study was documented for analysis. Endacott (2008) emphasized that the researcher has a duty to document the experience of participants using field notes or another form of documentation. I made concisely, accurate, descriptive notes of the participant experience and I was sensitive to the participant views during documentation.

Content validity of the study was determined by identifying the main idea of the research question and formulating a list of questions that aligned with the philosophy of the research question. The objective was to develop ideas for questions that facilitated an interview process for Caribbean immigrants to express their view on food choices and use of nutrition ideas. The experiences shared by participants contributed to the body of academic data for future references. The final list of questions facilitated open discussion because they were designed to address the research phenomenon. The final questions were reviewed by the research committee for content validity. The research committee included a dissertation chair, content advisor and a University Research Reviewer. The research questions were written on a level that was understandable for participants and the questions facilitated discussion on the topic of nutrition and food choices.

Patton (2002) suggests that time, money, the purpose of the study, and the creditability of the study was factors that determined the size of a study. Other basic factors for data collection included identifying the target population, choosing sample size, identifying a strategy for collecting data, and choosing a media recruitment strategy (Robinson, 2014). The purpose of the study was to acquire academic data and facilitate increase enlightenment on the shared experiences of Caribbean immigrants regarding the use of nutrition ideas when making food choices.

### **Data Analysis**

Data analysis is the process of reviewing primary or secondary data, coding data, interpreting data, and making a conclusion from data collected (Endacott, 2008). The data obtained from the face-to-face interview was one example of primary data (St. Pierre &

Jackson, 2014). Coding and content analysis was two of the most common methods used for qualitative data analysis (Glaser, & Laudel, 2013). In this qualitative study, the researcher identified and separated relevant raw data that applied to the research question, from other data that were not relevant to the research issue. The raw data pertinent to the research study were linked to relevant theoretical ideas and separated into categories to form themes.

The responses from the interview were transcribed from written and audio recording to computer notes and analyzed. The NVivo 11 Plus for Windows computer program were used to organize and analyze the data collected. In the analytic process of the food choices study, the researcher reviewed transcripts of each participant notes and attach codes to the data. The researcher identified phrases, patterns, semantics, and general ideas, related to participant food choices. The data was coded and categories were developed to form themes. The main ideas generated from the themes determined the meaning of the study. The data were stored on the computer with password protection to ensure the data remained confidential. Glaser and Laudel (2013) supported the idea that a researcher can structurally organize raw data by identifying recurring ideas and attaching codes or labels to blocks of information relating to the content of the research study, or an electronic database may be used to develop categories of information. Codes were labels used to describe the cluster of data ideas. Coding was an important part of data analysis and it involved the researcher understanding of the phenomenon and attaching labels to the ideas shared by the participants (Weston et al., 2001).



The codes may be based on theoretical ideas or emerging ideas from the research study (Glaser & Laudel, 2013). The conclusions from a qualitative study should integrate with theoretical ideas (St. Pierre & Jackson, 2014). However, occasionally new theories develop after data analysis. The researcher's role is to present an accurate representation of participant experience which may be subject to interpretation (Raddon, Raby, & Sharpe, 2009). Therefore, codes were reviewed and discussed with research participants for clarification and accuracy.

Research is one option for health care experts to assess the need for evidence-based health data (Hirschberg, Seidel, Strech, Bastian, & Dierks, 2013). The interpretive phenomenological analysis was one approach used to evaluate the participants' responses. The analytic process was an academic interpretation of the data collected. The analyzed data and explanations were supported by literature review, emerging ideas from the study, and ideas that connected theory with participant perspective.

The interpretive phenomenological analysis approach was used to investigate and explain the Caribbean immigrant experiences with making food choices. Roberts (2013) have explained how an interpretive phenomenological analysis was used to evaluate and identify change relating to motherhood. A small purposeful sample was recommended to study the individual participant experiences. A semi-structured interview format was used for this study and the data collected was coded and analyzed to develop themes. A relevant theme that emerged from the study was motherhood influenced change in identity. Trustworthiness of the study was assessed using reflexivity, which was the process of making researchers aware of potential biases in a

research. The concept of reflexivity was used in the food choices research study to monitor the researcher awareness of potential biases, and the process of bracketing was used to manage the researcher biases, while presenting the participants' lived experiences. The analyzed data was reviewed with the participants to ensure the analysis was an authentic representation of the participant experiences.

According to Tuohy, Cooney, Dowling, Murphy, and Sixsmith (2013), one of the challenges of an interpretive study is to manage personal biases. In an effort to manage biases, I was aware that the research was based on the participant perception and experience, and avoided personal input or interpretation in the study. The researcher used the concept of bracketing to avoid personal biases and an objective study was presented. A researcher may be influenced by personal life experiences that may impinge on the research process but the solution was to set aside personal biases via the implementation of the bracketing principle which was compatible with an interpretive, phenomenology study.

Member checking was the process of receiving feedback from participants to increase accuracy in the study (Creswell, 2013). In the analytic process, the researcher reviewed transcripts and codes to check for accuracy and reliability. The themes were reviewed with the participants to check for validity in a process called member checking to ensure the analyzed data reflected the views of the participants. It was necessary to review the data with the participants as the phenomenological study was a reflection of participants' life experiences.

The quality control aspect of the study was relevant to manage the potential for biases. The researcher developed and documented a quality, accurate study that represented the ideas of the participant while isolating personal feeling, ideas, and viewpoint. An effective qualitative study represents the experiences of the participants and this study was designed to document participant experiences.

### **Evidence of Quality**

Reflexivity and bracketing were two processes used to monitor quality in research projects (Chan, Yuen-ling, & Wai-tong, 2013). Bracketing was used to demonstrate validity in the research by the researcher documenting only participants' experiences and being aware of the influence of the researcher's belief, experiences, and value system. While, reflexivity was the process of identifying and monitoring potential biases. The principle of reflexivity was a strategy used by the researcher in every phase of the research process, including literature review, data collection, and analysis, to identify potential biases that may influence the research process.

Reflexivity was described as an introspective evaluation of a researcher views and actions during the research (Clancy, 2013). Reflexivity was utilized in the interpretive phenomenological analysis, to examine the researcher's interpretation of the participant experience. The reflexivity process was designed to increase the researcher's awareness of potential influences or biases on the data collection or analysis process. The researcher was able to separate personal experiences from participant experiences using a personal diary to document personal thoughts in an effort to manage personal biases.

A naturalistic qualitative study was designed to research the experiences of people in their local environment (Guba, 1981). A valid naturalistic inquiry included truthful, consistent statements, from reliable individuals. Quality control strategies in this study included checking creditability of participant statement by reviewing and rechecking information collected from participants in a process called member checking. The members of the dissertation team facilitated with peer debriefing by reviewing the research project, asking relevant questions, providing constructive critique, and supported revisions in the process of reducing biases and developing a consistent project.

The process of triangulation was used to improve validity in the research project by reviewing the literature, reviewing experiences of participants, and accepting feedback from professionals who were knowledgeable in the subject area, to facilitate the development of a rational project (Guba, 1981). Credibility in qualitative research was verified by reviewing the data in a process called audit trail, reviewing the coded data for accuracy, and discussing the analyzed data with participants to confirm accuracy (Endacott, 2008).

Trustworthiness was a necessary feature of academic research development. The principles of member checking, peer debriefing, triangulation, reflexivity, and bracketing were valuable quality controls that were used in the study to ensure biases were monitored, and a valid, reliable study that represented the perspective of the participants was documented accurately. Participant debriefing for the study included assuring each participant that no confidential information was used in the study and the results of the study was an analytic description of each participant lived experiences regarding food

choices. The participants were contacted via phone conversation to review the analyzed data to ensure the results represented their lived experiences. It was imperative that this qualitative study represented the participants lived experiences regarding nutrition and food choices.

### **Limitations**

A qualitative study using a phenomenological approach was a good design to document the ideas and experiences of participants. A noted limitation of a qualitative design was the subjective nature of participant self-reported experiences and the ideas presented may be applicable only for the people involved in the study. The sample population was Caribbean immigrants from Brooklyn. This means the results may not generalize to other populations. Romand, Donovan, Hsinchun, & Nunamaker (2003) suggested there was the potential for minor human error in recording and analyzing data because of the volume of data, and the complexity involved in coding and data analysis

### **Proposed Social Transformation**

The proposed social change included an increase in academic data on Caribbean immigrant views on food and nutrition. The data from the study may be shared with local and state health departments, health facilities, and local community groups for educational purposes. The health departments and community groups could use the data to foster a conversation on the ideas shared by immigrants relating to making healthy food choices and consuming a balanced diet. The results of the study may be used to increase the awareness of health care providers on immigrants' perception on food choices. The data may be used to develop health education and health promotion

programs in the Caribbean immigrant community. The study may result in people in the community developing healthy food habits. Diseases like diabetes and obesity may be reduced as people learn to incorporate healthy food choices into their lifestyles.

### **Ethical Considerations**

There were several ethical committees who were responsible for reviewing research proposal (McCarron, 2013). Some of these committees included University Research Ethics Committees (UREC), Research Ethics Boards (REBs), and Institutional Review Boards (IRB). The IRB was the governing body which regulated the actual research process and IRB approval was necessary before data collection commenced. The members of the theses committees have knowledge of research law, and ethics, to adequately evaluate research studies. The ethical committee supported the need for the researcher to be educated on ethical issues, to be skilled in evaluating for ethical dilemmas, proficient in conducting research that was beneficial to participants, and is a proponent for social change to benefit the community. The IRB monitored ethical issues that related to the research study. The IRB evaluated the rationale for the study and monitored considerations for using human subjects. This means all agreements to gain access to participants or data was issued by the IRB before the research process was initiated. One of the roles of the IRB was to monitor research proposals, with the intention to regulate the ethics in research. The IRB board continued to scrutinize the research proposals to ensure the researcher conducted an ethical study that safeguarded the rights of participants. The National Institutes of Health (NIH) course was completed to increase the researcher competency, skill, and experience to conduct an ethical study.

Effective communication with the review board was an ethical challenge that may be experienced by qualitative researchers (Ells, 2011). The qualitative researcher clearly articulated the theoretical focus of the study best practices, legal implications, and ethical consideration of the study. It was important for the researcher to explain to the review board the purpose and benefit of the study and the potential for social change. The researcher explicitly explained the role of the participants in the study, and indicated that the participants were not exposed to unnecessary research that had no merit. In general, approval to commence the research study was contingent on a research plan that clearly demonstrated the need for the study and an ethical plan that demonstrated intent to protect the rights of the participants.

According to the Belmont Report (1978), the fundamental ethical principle for research is to protect the participants and maintain the rights of the participants. The researcher was required to obtain research training to increase the level of awareness of ethical principles and participants' rights. The autonomous rights of the participants were respected at all times and participants were not exploited to accomplish the research objective. The participants were able to contribute to academic data on the immigrant use of nutrition ideas with food choices, and potential risk to the participants was minimized. The participants were treated fairly, and the values of people in the community were respected at all times. The researcher clearly articulated the social implication of the study. It was important for everyone involved in a research study to be aware that their roles in the study can potentially benefit the community and society. These ethical

principles indicated in the Belmont Report were a helpful guide to direct the behavior of the researcher, and protect the rights of each participant.

The experiences of patients with health issues and the role of spouses were documented in a qualitative study by a group of nurses as the participants shared detail, personal, and emotional feelings about their phenomenon (Haahr, Norlyk, & Hall, 2014). The ethical and moral challenge in the patient and nurse study was for the researcher to trust that the participant was sharing truthful information, and the participant to trust that the researcher handled the data in an ethical manner to maintain confidentiality and demonstrate professional conduct. The researchers had an obligation to follow ethical principles that ensured human subjects were respected, treated fairly, and no harm was unduly inflicted on participants. Therefore, the researcher had an ethical responsibility to maintain a level of professionalism and avoid developing friendships with participants during the research process. Also, the researcher avoided prejudices and assumptions and presented data in an objective manner.

Ethics are principles that guide the conduct of researchers and on occasion the use of secondary qualitative data which is information that is collected by another researcher may pose an ethical challenge (Irwin, 2013). The data may be used to answer new questions that were not discussed in the original study. The ethical challenge was obtaining consent to use the primary data. Another challenge was interpreting the meaning of the original data accurately in the new study. An effective use of secondary qualitative data was the presentation of a critical analysis of results, and the results should stimulate new ideas and be a source of new information for future research.



## Summary

The effectiveness of qualitative research has evolved over the years in market research and academic research (Bailey, 2014). Qualitative research provides an opportunity for a person to investigate new ideas and experiences. The researcher reviewed the literature to explore research data on past experiences, and the literature provided the theoretical ideas to support future research projects. In this qualitative study, the lived experiences of the participants were presented in an unbiased manner that reflected the views of the participants. The duty of the participant was to provide an accurate description of their experiences to the researcher. The duty of the researcher was to provide an accurate description of participants' experiences. The study was intended to provide a better understanding of the impact of the Caribbean immigrant utilization of healthy nutritional information when making food choices. The actual data collection for the study commenced upon receiving approval from the chair, committee member, the University Research Reviewer, and the Institutional Review Board. This process was important to ensure that the study respected and protected the rights of participants; there was sufficient need for conducting a study, and the study contributed social change including making a contribution to the body of academic data. Chapter 4 described the factors influencing the study setting, participant demographic information, the data collection process, analysis of interview data, evidence of trustworthiness, results of the study and summary of ideas. The result of the study was a detailed description of the participant experiences of incorporating traditional nutritional information in daily life.

## Chapter 4: Results

### **Introduction**

The purpose of this Caribbean immigrant study was to discuss and analyze Caribbean immigrants understanding of nutrition, and their experiences of including nutrition principles with daily food choices. The study focused on the participants' perspective on nutrition and dietary choices, as well as their attitudes toward making healthy food choices. The participants were chosen using a purposeful sampling strategy because these participants had an awareness of nutrition ideas and food choices. The participants' awareness was evident by their ability to provide detailed descriptions of their daily food choices and their use of nutrition information in daily experiences. The experiences of the participants were studied using a phenomenological approach. The phenomenological approach provided an understanding of the actual experiences of the participants.

After receiving IRB permission to commence the study, flyers with the researcher phone contact information (Appendix A) were distributed in Caribbean immigrant communities to recruit participants for the study. People who were interested in the study contacted the researcher and they were prescreened using the questions from Appendix B. The main criteria for participant selection included adult Caribbean immigrants who were able to communicate in English, and had knowledge on nutrition and food choices. The participants who indicated they had knowledge on food and nutrition ideas were considered for the study. The sample size was 15 participants who signed a consent form before being interviewed.

Caribbean immigrants who lived in Brooklyn, New York, were interviewed individually using the list of 20 semi-structured questions (Appendix C) to facilitated in-depth discussion on each participant experience with using nutrition ideas when making food choices. After 10 interviews, it appeared that a point of information saturation was apparent. I continued to interview an additional five participants. The results highlighted the participants' dietary choices and their attitude towards making healthy food choices.

### **Research Questions**

The following research question and sub-questions were used in this study:

#### **Research Question**

1. What are the perceptions of the Caribbean immigrant population in suburban Brooklyn toward their food choices and the use of healthy food ideas?

#### **Sub-questions**

1. What is the immigrants' awareness of the significance of a balanced diet?
2. What are the views among immigrants on making healthy food choices?
3. What is the opinion among immigrants on the effect of cultural values and traditions on food choices and the use of healthy food ideas?
4. Have immigrants used information on healthy food ideas in the past?
5. What are the immigrants' perceptions of the value of a balanced diet when determining food choices?

The research questions facilitated in-depth discussion on Caribbean immigrants shared insight on food and nutrition issues. The sub-questions examined the participant

awareness of healthy food ideas, balance diet, and cultural traditions that affected food choices. In Chapter 4, I describe the factors influencing the study setting, participant demographic information, the data collection process, analysis of interview data, evidence of trustworthiness, results of the study, and summary of ideas. The results of the study are a detailed description of the participant experiences of incorporating traditional nutritional information and Caribbean cultural food ideas to maintain a healthy diet. The essence of the participant experience was based on each person application of nutritional data with daily food choices. Discussion of the results was presented in Chapter 5.

### **Factors influencing Setting**

This study was conducted in Brooklyn, New York, Kings County because this area has a dense population, which includes Caribbean immigrants. In 2011, there were approximately 946,500 foreign-born immigrants living in Brooklyn, and 31% were from non-Hispanic Caribbean countries including Jamaica, Haiti, Trinidad, and other non-Hispanic Caribbean countries, whereas Hispanics from Caribbean countries such as Cuba, Dominican Republic, and Puerto Rico were grouped with Latin American immigrants (Lobo & Salvo, 2013). Caribbean immigrants settled in Brooklyn because of the proximity to transportation, cultural and social events, and the availability of Caribbean restaurants, and Caribbean food markets. The densely populated area of Brooklyn provided a diverse group of people to participate in the study.

Each participant determined a convenient, location for the interview that ensured the participant personal privacy and safety. The interview sites included sections of community parks that were quiet mid-morning, and weekdays, local churches with open

access to the public, and participants' homes. The participants were informed that at least one other adult was to be available in the participant home environment at the time of interview for participant safety and security, and the participants obliged the request. The interviews were conducted on the day and time that was convenient for each participant. All participants were pleased to contribute data that may be used for educational purposes to increase nutrition awareness relating to Caribbean immigrants use of nutritional information when making food choices.

### **Demographics**

The 15 adult immigrant participants were from Caribbean countries which included Trinidad, Grenada, St. Vincent, St. Lucia, Barbados, Jamaica, and Haiti. This was a purposeful sample of people who volunteered to participate in the study and were capable of discussing their perception of nutrition when making daily food choices. There were 5 men and 10 women who participated in the face-to-face, open-ended interviews to discuss their views on nutrition and food choices. The youngest participant was 20 years old and the oldest was 78 years old. There were 5 participants age range 20–29, 3 participants age range 30–39, 3 participants age range 40–49, 3 participants age range 50–59, and one participant age range 70–80. All participants emigrated from the Caribbean between 1990 and 2015 and lived in Brooklyn, New York

### **Data Collection**

The recruiting process began with distributing information flyers, with contact information (Appendix A), to adult Caribbean immigrants. The flyers were distributed outside public locations in Caribbean immigrant communities in Brooklyn, New York.

The sidewalks, near supermarkets, restaurants, and farmers market were deemed public domain for flyer distribution. The main flyer distribution days were Fridays and Saturdays because many immigrants were visiting restaurants, shopping, and purchasing food in supermarkets for the weekend. Approximately 100 flyers were distributed over a four week period.

The flyers were not handed out indiscriminately. Each potential participant was asked for a few seconds to state the research project was designed to recruit adult Caribbean immigrants and information flyers were given to people who expressed interest in participating in the study. Each participant contacted the researcher via phone contact information provided on the flyer. The “Phone Contact Script” (appendix D) was used to communicate with potential participants. Initial communication with each participant involved discussing the criteria for the study and administering the prescreen questions via phone. Each participant was prescreened for knowledge on food choices and nutrition, using Appendix B. The participants who were able to communicate ideas relevant to the prescreen questions were deemed candidates for the research study and the terms of consent were discussed with those viable candidates. Interview date, place, and time were established with each participant. Each participant determined a private, convenient, location for the interview that ensured the participant personal privacy and safety. Some interview locations included quiet sections of community parks, local churches with open access to the public and no reservation required, and the homes of participants who had at least one other adult in the home environment at the time of interview to ensure participant safety and security.

Approximately 1 minute per person was needed to hand out the flyer, approximately 20 minutes was needed via phone to discuss each participant's rights, and discuss the criteria for study which included the prescreen questions, consent form, interview date, place, and time. The date, time, and place for the interview were determined by each participant and the researcher accommodated the schedule times. Approximately 45 minutes was needed to complete the in-depth interview, and approximately 5 minutes was needed to review the data directly after the interview to attain clarification of participant views as needed. Approximately 10 minutes was needed for participant debriefing and discussing the analyzed data. The duration of the data collection process was 4 weeks to distribute flyers, arrange each interview, and complete all interviews. The process of flyer distribution and arranging interviews occurred simultaneously. Flyers were distributed each week and interviews were arranged and conducted when each participant agreed to the process. Each person who agreed to participate in the study was interviewed in person using the Semi-Structured Interview Guide for Food Choices (Appendix C)

The data was documented using audio and written recording with permission from each participant. The written data were stored in a locked secured safe. The audio and written notes from each interview were transcribed to electronic data and stored in a password protected computer. Each transcribed interview was assigned a number based on the order of each interview. The transcript was uploaded to NVivo 11 Plus for Windows computer program for electronic coding and analysis. No personal information

was used in the data coding and analysis process and the final document was an analytic description of the participant food and nutrition experiences.

The actual data collection process was based on the plan outlined in chapter three which included flyer distribution, phone contact with participants, prescreening process, interviews and participant debriefing. The average interview time was 45 minutes. The longest interview time was 1 hour and the shortest was 30 minutes. The longer interviews were based on participants who reminisced on cultural culinary experiences and shorter interviews were people who were direct with their responses to the questions. Each participant was able to articulate their experience to respond to each interview question. The data collection process was conducted as planned and there were no unusual circumstances.

## **Data Analysis**

### **Data Coding**

The raw data collected was transcribed from the handwritten and audio data to computer notes. A manual coding approach was used to identify relevant raw data that was pertinent to the research study. The manual coding process included reviewing the transcripts several times for similarities, differences, frequently occurring ideas, patterns, and themes that occurred in the transcript. An idea that was recurring was highlighted using computer based text highlight color. Codes or labels were attached to blocks of information to identify recurring ideas. The data was separated into categories to form themes.



After the manual coding was completed the transcript was uploaded to NVivo 11 Plus for Windows, the computer program. An initial inquiry was completed to identify a list of frequently occurring words. A specific parameter was set for the query to include the words that appeared a minimum of three times in the data. A word cloud was formulated using the frequently occurring words in the transcript. A tree map inquiry was completed to identify recurring ideas. The data was coded using the analyze function, then auto code mode to generate the themes. The explore function and maps were used to formulate the layout for the themes. Food choices were used as a parent node, and the themes family history, cultural ideas, nutritional value, balance diet, body healthy, nutrition and education emerged in the child nodes.

The NVivo 11 Plus for Windows, the computer program was used as a secondary mode to code the interview ideas and produce diagrams to represent the computer generated codes and themes that emerged from the study. An interpretive phenomenological analysis approach was used to formulate an academic interpretation of the ideas and experiences expressed by participants concerning using nutrition information when making food choices. The main ideas generated from the themes were used to determine the meaning of the study.

**Theme 1: Healthy Mind and Body** is described as the participants' perspective that the purpose of food is to nourish the body and it is the consumer's responsibility to purchase quality food to maintain a healthy body. The participants described quality foods as whole foods which included plant and or animal products. The participants explained that in their home country people plant crops and rear animals, and consumed

the food products from the home farm. All participants continue to purchase whole foods from Caribbean food markets and whole food stores to prepare daily meals. All participants indicated that they eat foods that they enjoy, and foods that have a positive impact on their mood. The participants explained that the sight, smell, and taste of the foods were a pleasurable experience that positively stimulated their mind and body. The pleasure from food can be attributed to the release of the hormone serotonin and dopamine in the brain in response to the pleasurable experience from food.

**Theme 2: Balanced Diet and Portion Control** was described as eating foods that contain nutrients from all food groups which included protein, carbohydrates, vitamins, fats, minerals, and water. Each participant described foods that contained nutrients from all food groups that were eaten for breakfast, lunch, and dinner. The participants explained that a balanced diet was important to maintaining a healthy body. Portion control was described as consuming a serving size of foods from all food groups that included meat or protein based products, vegetables, fruits, and starchy foods like rice, yams, sweet potatoes, and plantains. The participants explained that quantity of food was managed by using small plates, eating when they were hungry and consuming adequate fluids which included 6–8 glasses of water and other fluids. The participants explained that portion control was important to manage body mass and maintaining a healthy body.

**Theme 3: Nutrition and Education** were described as gaining knowledge on the rudiments of nutrition and applying the information in daily life. The participants explained that they have learned the essentials of nutrition from different sources that included family, friends, radio and television shows, medical doctors, nutritionist, food

programs, the internet, food labels, and nutrition courses. The nutrition information provided increase awareness on nutrient values and managing food intake.

**Themes 4: Culture and Family History** was described as family traditions, ethnic beliefs, and values that inspired the types of food Caribbean immigrants consume. Religious and social activities also influenced the food choices and recipes that were passed on for generations. Cultural traditions required immigrants to include specific spices in meals to facilitate an ethnic flavor. Different Caribbean islands have national dishes, and people from different islands favored one style of cooking from another. The participants consumed the foods that were prepared in the home but occasionally food was purchased. Caribbean traditional cooking was taught by mothers and grandmothers. One participant indicated that every meal she prepared was based on recipes she learned from her mother. All participants indicated that cultural values and traditions were important and it influenced their food choices.

### **Evidence of Trustworthiness**

#### **Creditability**

The raw data and analyzed data were reviewed with each participant to ensure the views of the participants were accurately documented. Each participant views and experiences were compared against each other for consistency. Creditability was established by conferring with participants in all documentation phases to ensure the data continues to represent the experience of the participants.

**Transferability**

Qualitative results may be described as experiences that are specific to a small group of people who were located in a specific environment and other groups of people may not relate to the issues expressed in the study. A researcher may provide a detail description of the participant experiences to demonstrate generalization of the research ideas (Lincoln, & Guba, 1985). This was a purposeful study that involved Caribbean immigrants sharing their experiences using food and nutrition information. The participants explained that food was eaten to provide nutrients for their body. The food was eaten to facilitate the experience of cultural nostalgia and happy mood. Food choices were also influenced by the taste of food. Food selection is an activity that all cultures indulgent in, so it is probable that people from other regions and culture may relate to the experiences shared by the Caribbean people.

**Dependability**

Flyers were handed out in Caribbean immigrant communities to recruit participants for the study and participants voluntarily agreed to be interviewed for the study. The interview provided data that described each participant experience regarding using nutrition information when making food choices. Each participant was asked the same questions in the same order to facilitate consistency in the interview process. The prescreen questions (Appendix B) was used to establish participant initial knowledge and awareness of nutrition ideas, and the research interview questions (Appendix C) was used to facilitate a discussion on nutrition and food choices. Audio and written notes were utilized to document the responses from the interview. The recorded data was available

for the researcher to review during the transcribing, coding, and analyzing phase. Audio and written data provided a reliable account of the data collected. The notes were transcribed verbatim the same day the data was collected. The transcripts were reviewed multiple times to ensure the data were transcribed accurately. The data was coded and analyzed using the NVivo 11 Plus for Windows computer program and themes included family history, cultural ideas, nutritional value, balance diet, body healthy, nutrition and education, emerged from the analyzed data. The raw data, analyzed data, and themes were reviewed with each participant to ensure the data accurately represented the participant views. The participants' debriefing process included assuring participants that no confidential data was used in the study and the results of the study were documented as an analytic representation of the participant experiences. The intent of the study was to present the participant experiences and the results were consistent with the participant experiences.

### **Confirmability**

The process of confirmability was implemented in the study by asking all participants the same questions in the same order and documenting a detail description of each participant experiences. The data was transcribed verbatim from the interview notes and analyzed using NVivo 11 Plus for Windows which was a qualitative computer program. The themes that emerged from the study were noted, and a detailed description of participants' experiences and perspective were documented. The researcher biases were monitored by following the process of reflexivity. The researcher was able to

separate personal experiences from participant experiences using a personal diary to document personal thoughts in an effort to manage personal biases.

### **Summary of Trustworthiness**

This study was a phenomenological study that documented the life experiences of Caribbean immigrants who shared their perception on using nutrition information when making food choices and the participants voluntarily shared their experiences.

Trustworthiness was dependent on the quality of the data collected, data analysis, and verification of results. Trustworthiness of the study was assessed by using audio and written notes to record the responses of the participants as they shared their experiences.

The audio and written notes were reviewed many times during the transcribing phase.

The notes were reviewed with the participants to ensure the data was an authentic representation of each participant experience. Reviewing the notes with participants was useful to clarify any ideas that were ambiguous, and to ensure the data clearly represented the participant views. The analyzed data were reviewed with participants to confirm accuracy. The literature was used to compare past studies with current participant data.

The researcher monitored and managed potential biases by documenting personal feelings in a diary. The final document was an analytic representation of the participant ideas, while isolating the researcher's personal feelings, ideas, and viewpoint. The strategy to maintain the quality and trustworthiness of the study included reviewing information collected from participants for consistency, monitoring personal biases to ensure the data represented the view of the participants and assuring participants that the results were an analytic description of their experiences.

## **Results**

The research question explored Caribbean immigrants' views on food choices and the use of nutritious food ideas. Each interview question (Appendix C) was systematically utilized to present the data collected for the study. The interview data was coded and analyzed using the NVivo 11 Plus for Windows computer program to formulate the themes that emerged from the study data. The themes were an analytic explanation of the participant experiences with using nutrition information as a guide to facilitate their food choices. The responses from the research questions provided the data for the themes that emerged in the study.

### **Research Questions**

The following research question and sub-questions were used in this study:

#### **Research Question**

1. What are the perceptions of the Caribbean immigrant population in suburban Brooklyn toward their food choices and the use of healthy food ideas?

#### **Sub-questions**

1. What is the immigrants' awareness of the significance of a balanced diet?
2. What are the views among immigrants on making healthy food choices?
3. What is the opinion among immigrants on the effect of cultural values and traditions on food choices and the use of healthy food ideas?
4. Have immigrants used information on healthy food ideas in the past?

5. What are the immigrants' perceptions of the value of a balanced diet when determining food choices?

### **Healthy Mind and Body**

Fifteen Caribbean immigrants participated in individual interviews to explore their views on nutrition and food choices. The participants' perception in this study was food is a source of nourishment for the body and quality food is needed to maintain a healthy body. The participants described quality foods as whole foods which included plant and or animal products. There were three participants who were vegetarian and they consumed fish and plant products. The participants explained that in their home country many people plant crops and rear animals, and consumed the food products from the home farm. The participants purchased whole foods from Caribbean food markets and whole food stores to prepare daily meals. The participants explained that the quality and freshness of the food products are important and the cost is not a factor that impact purchase. The general participant perception was food is eaten to maintain good health and knowledge of nutrition was necessary for an individual to make healthy food choices.

One participant indicated that he struggled to incorporate his knowledge of nutrition with his lifestyle as a full-time student and he works full-time. He plans to learn how to prepare quick healthy meals, while continuing to include nutritional information on his daily food choices. Another participant explained that she is a dancer, so food is eaten to provide nourishment and fuel for her body. She also explained that a high protein diet was essential to build muscles and carbohydrates were consumed for energy. Her food choices were based on her personal habits, lifestyle as a dancer and her desire to maintain



a healthy body, cultural values and traditions also influenced her food choices. She focused on maintaining a healthy body, balancing physical activity with food consumption, and consuming foods to nourish the body. She explained that food choices and healthy eating were a life-long journey, mindful eating which included thinking about the quality of the food and enjoying the eating experience was important. She maintained that quality food was important to fuel her body. She expressed the need to continue to live a healthy lifestyle, to maintain the health of her body.

All participants' indicated that their food choices were influenced by psychological and physiological factors that included the taste of food, habitual eating patterns, and mood. Every participant indicated that their personal feelings or desire usually dictate their food choices. The desire for food which included food cravings was intensified with visual images of food (Kemps & Tiggemann, 2010). The hypothalamus regulates hormone production, metabolism, hunger, food, and water intake, among other autonomic function and it was normal for people to unconsciously crave the foods that they see and enjoy, since the hypothalamus automatically facilitated and controlled personal pleasure, including the desire for foods. The hormone serotonin and dopamine were neurotransmitters that were released in the brain in response to the pleasurable experience, for example eating tasty food. Serotonin regulated appetite and carbohydrate cravings while dopamine improves mood, and stimulate the desire to engage in an activity. All participants continued to consume Caribbean inspired foods that were familiar. Eight participants indicated that occasionally they experimented with foods from other cultures. All participants expressed that cost did not impact their decision to

purchase quality foods because healthy foods that they enjoy was more important than money.

### **Balanced Diet and Portion Control**

The participants described a balanced diet as eating foods that contain nutrients from all food groups which included protein, carbohydrates, vitamins, fats, minerals, and water. Each participant discussed foods that contained nutrients from all food groups that were eaten for breakfast, lunch, and dinner. Some of the popular breakfast items discussed included orange juice and other juices, oatmeal, eggs, ackee and codfish, whole grain toast, and whole grain cereal, fruits, yogurts, and milk. One participant explained that he was lactose intolerant, so he consumed alternative to milk from coconut or almonds. Dinner was the largest meal of the day for 11 participants while lunch was the main meal for four participants. Each participant made food choices that accommodated their personal needs and desires. Lunch included different combinations of dishes, such as salads, plantains, rice and beans, callaloo, fish, chicken, oxtails, soups with meat, dumpling, yams, green banana and codfish. Dinner items included Caribbean inspired dishes such as curry chicken and rice, pilau, roti, oil down, and Cou Cou with flying fish, green banana salad, and vegetable salad, with non-alcoholic drinks like fruit juices, sea moss, sorrel, and mauby. These dishes provided a combination of nutrients including, proteins, carbohydrates, fats, vitamins, and minerals. The participants explained that a balanced diet was important to maintaining a healthy body.

The participants described portion control as consuming a serving size of foods from all food groups that included animal or plant based protein, vegetables, fruit, and

starchy foods such as rice, yams, sweet potatoes, and plantains. The participants did not observe a regimented dietary plan that restricted their food choices. The participants explained that quantity of food was managed by using small plates, eating when they were hungry and consuming adequate fluids which included 6–8 glasses of water and other fluids. Caribbean dishes were composed of complex carbohydrates and participants indicated that they felt full after a meal, so small quantities were satisfying. The participants indicated that they believe eating in moderation was a good plan for living longer and eating a variety of foods was good for the general function of the body. All participants indicated that they prepared their own meals but occasionally meals were purchased. Thirteen participants consumed three meals daily, two participants indicated that occasionally they skip meals, and snacking was an occasional activity. The participants explained that portion control was important to managing body mass and maintaining a healthy body.

### **Nutrition and Education**

The participants obtained nutrition information from sources that included family, friends, radio and television shows, medical doctors, nutritionist, food programs, the internet, food labels, and nutrition courses. The nutrition information provided increase awareness on nutrient values and managing food intake. The participants explained that they were more conscious of salt and sugar amounts and calories in food and recipes were modified to manage salt and sugar. Foods with high fiber were important to manage cholesterol and bowel movement. A balanced diet of foods from all food groups was a major consideration when the participants made food choices. The participants indicated

that generally, they were satisfied with their food choices because healthy food choices have become a part of their daily lifestyle.

### **Cultural Ideas and Family History**

Family traditions influenced the type of foods the participants consumed. The participants consumed the foods that were prepared in the home and they were comfortable with those decisions. Caribbean traditional cooking was taught by mothers and grandmothers and they influenced the meals that were prepared in the home. One participant indicated that every meal she prepared were recipes she learned from her mother. Caribbean dishes require extensive preparation time and three participants with young children indicated that preparation time was considered when they made their food choices. These participants indicated that cultural dishes were made on the weekend or prepared foods were purchased and the dishes were modified at home. Dinner was the biggest meal for 11 participants because of family traditions to gather for a meal at the end of the day. The participants were aware of the family medical history that included cerebral vascular accident (CVA or strokes), cholesterol, obesity, diabetes, and hypertension, and they made a conscious effort to manage salt and sugar intake. The participants maintained a balanced diet because of personal health conditions, or family medical history. Participants explained that they were able to communicate food and nutrition information to friends and family, and they encouraged them to make healthy food choices.

The illustrated diagrams in Figures 1–4 were generated from the data transcribed from the handwritten and audio data to computer notes. NVivo 11 Plus for Windows

computer program was used to code and analyze the frequently occurring ideas. A specific parameter was set for the query to include the words that appeared a minimum of three times in the data. A word cloud was formulated using the frequently occurring words in the transcript (Figure 1). The tree-map inquiry was completed to identify recurring ideas (Figure 2). The auto code was used to analyze and generate the themes and the diagrams (Figure 3). The explore function and maps were used to formulate the layout for (Figure 4). Food choices were used as a parent node, and the themes: family history, cultural ideas, nutritional value, balance diet, body healthy, nutrition and education emerged in the child nodes.



Figure 1. Word cloud of frequently occurring words.

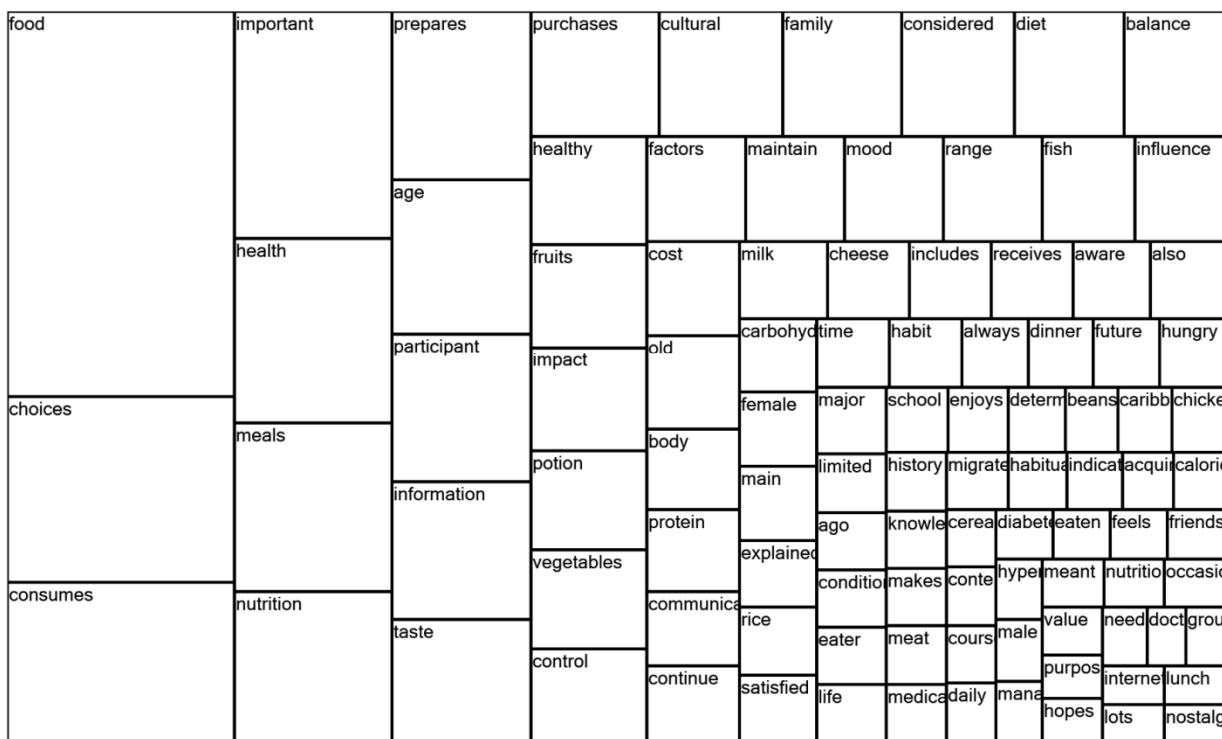
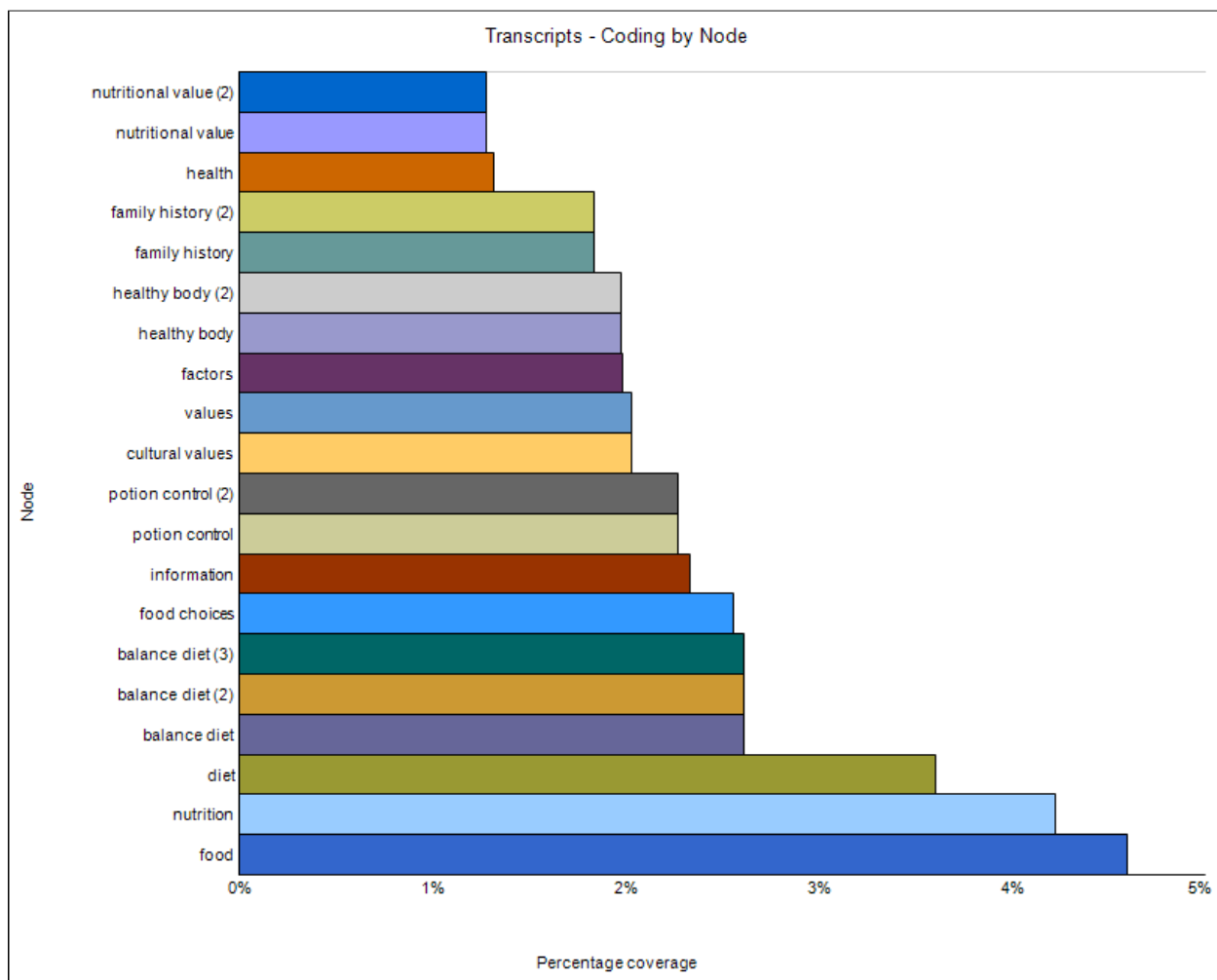
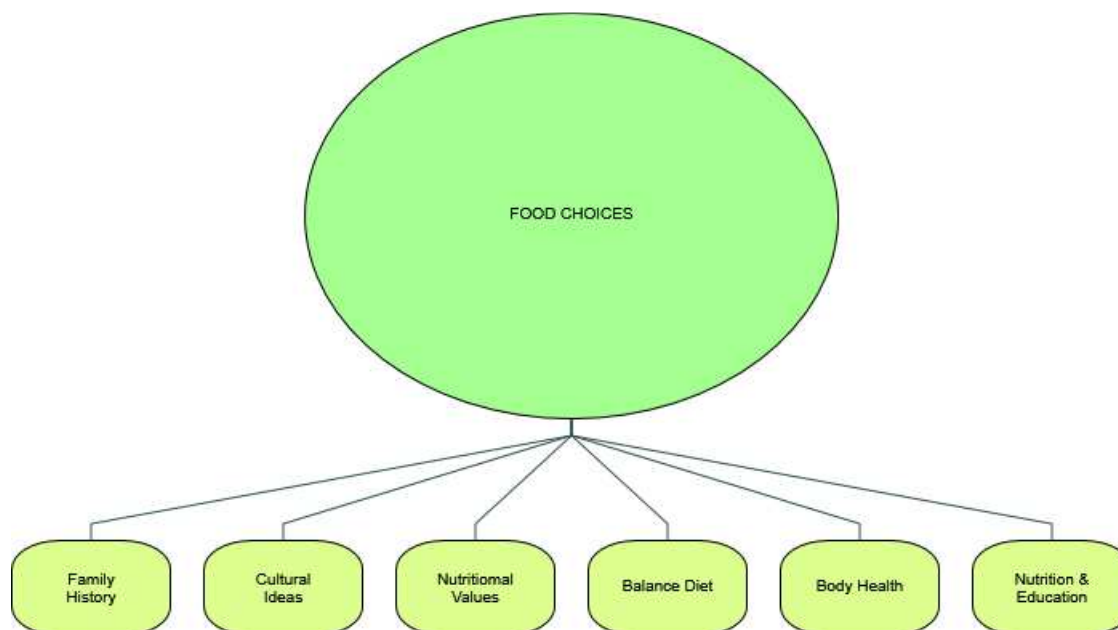


Figure 2. Tree-map analysis to identify recurring ideas.



*Figure 3.* Coding by node to analyze and generate themes.



*Figure 4.* Themes ideas.

The concept food choice is represented in the single parent node

The themes family history, cultural ideas, nutritional value, balance diet, body healthy, nutrition and education are represented in the 6 child nodes

### **Summary**

The Caribbean immigrants in this study embraced their rich Caribbean heritage by continuing to eat Caribbean inspired cultural foods. The immigrants were able to blend the knowledge of Caribbean foods with current nutrition information to make healthy food choices. The age of information has increased the availability of nutrition information which included the Nutritional Labeling and Education Act of 1990 that supported the idea of nutrition information on food packages, and the 2010 Patient Protection and Affordable Care Act which mandated restaurants to post nutritional information on menus. Current dietary data included serving size and portion size. The



availability of nutrition information from multiple sources that included medical doctors, nutritionist, the internet, nutrition courses, friends, and family has helped consumers to make informed decisions regarding food choices. The participants in this study have indicated that they were aware of the importance of nutrition and they have included the information in daily food choices.

According to the ideas of the theory of reasoned action, a change in health behavior was a personal choice (Fishbein & Ajzen, 1975). The nature of a participant experience may be the result of the participant decisions, actions, feelings, and memories regarding an experience, and the meaning of the experience to the participant (Yüksel & Yıldırım, 2015). The Caribbean immigrants who participated in the study made a conscious choice to acquire information on food and nutrition and integrate the information into their daily lifestyle. The immigrants were able to embrace their cultural food traditions and integrate current data on nutrition to make healthy food choices. The results of the study suggested that the general Caribbean immigrants' perception of food and nutrition is food should be enjoyed for the taste, as well as the nutrients that were essential for maintaining the body. The participants supported the concept of a balanced diet and eating foods from all food groups. While, the participants were not regimented with portion size they embraced the concept of moderation to manage their food portions. Chapter 5 provided a detail discussion on the interpretation of findings, limitation of the study, implication for social change, and recommendations for future research.

## Chapter 5: Discussion, Conclusions, and Recommendations

### **Introduction**

A review of several databases revealed that there was a gap in the literature on Caribbean immigrant perceptions on nutrition and their experiences with using nutrition ideas. A qualitative study using a phenomenological approach was used to study the Caribbean immigrant experiences. The participants were able to share their experience with using nutrition ideas when making food choices during in-depth interviews. The Caribbean immigrants have acquired nutrition information from many sources and the information has helped participants to make informed decisions regarding food choices. Maintaining a healthy body and consuming a balanced diet of foods from all food groups was significant for all participants. The research study was a meaningful process that contributed to the body of academic knowledge, as new information was acquired in the research process.

### **Interpretation of the Findings**

This research study was initiated because limited data are available on Caribbean immigrant perceptions on nutrition and food choices. This purposeful sample of Caribbean immigrants valued knowledge, and they have acquired nutritional information from nutrition courses, medical doctors, nutritionist, friends, family traditions, cultural ideas, the internet, television, radio programs, and other sources. The nutrition information provided increase awareness on nutrient values and managing food intake.

The participants valued the nutritional information and the information was useful for making informed food choices. The participants believed that food provided essential

nutrients such as protein, fats, carbohydrates, vitamins, minerals, and water that were used to nourish the body. The nutrients were obtained from foods that included protein from animal or plant products, and the food nutrients were eaten to maintain a healthy body. The participants described quality foods as whole foods, which included plant and or animal products. The participants in this study purchased whole foods from Caribbean food markets and whole food stores to prepare daily meals. The participants explained that the quality and freshness of the food products were important and the cost was not a factor that influenced the food purchase. The participants explained that they were more conscious of salt and sugar amounts and calories in food. Therefore, recipes were modified to manage salt and sugar. Foods with high fiber were important to manage cholesterol and bowel movement. A balanced diet was a major consideration when food choices were made, and making healthy food choices was a way to maintain a healthy lifestyle. The participants believed the food was a source of nourishment and quality food was needed to maintain a healthy body. The participants indicated that they were satisfied with their food choices because their food choices have become a part of their daily lifestyle. The participants believed the food was eaten to maintain good health and knowledge of nutrition was very important. The participants' food choices were influenced by the taste of food, habitual eating patterns, psychological mood patterns, and the general desire to eat a particular dish.

The concept of consuming a balanced diet of foods from all food groups was significant for all participants. The participants explained that a balanced diet was important to maintaining a healthy body. Each participant described foods that contained

nutrients from all food groups that were eaten for breakfast, lunch, and dinner. Some of the popular breakfast items included orange juice and other juices, oatmeal, eggs, ackee and codfish, whole grain toast, and whole grain cereal, fruits, yogurts, and milk. Each participant ate a combination of foods that suited their dietary needs. One participant explained that he was lactose intolerant so he consumed an alternative to milk from plant products such as coconut or almonds. Dinner was the largest meal of the day for 11 participants while lunch was the main meal for four participants. Each participant made food choices that accommodated their personal needs and desires. Lunch items involved a combination of food items which included dishes like salads, plantains, rice and beans, callaloo, fish, chicken, ox tails, soups with meat, yams, dumpling, green banana, and codfish. Dinner included Caribbean inspired dishes such as curry chicken and rice, pilau, roti, oil down, and Cou Cou with flying fish, green banana salad, and vegetable salad, with non-alcoholic drinks like fruit juices, sea moss, sorrel, and mauby.

Portion control was described as consuming a serving size of foods from all food groups that included plant or animal based protein, vegetables, fruit, and starchy foods like rice, yams, sweet potatoes and plantains. Portion control was important to manage body mass and maintaining a healthy body. The participants did not observe a regimented dietary plan that restricted their diet. The immigrants explained that quantity of food was managed by using small plates, eating when they were hungry and consuming adequate fluids which included 6–8 glasses of water and other fluids. Thirteen participants consumed three meals daily, two participants indicated that they skip meals occasionally, and snacking was an occasional activity. Portion control was important to

manage body mass and maintaining a healthy body. Many Caribbean meals were composed of complex carbohydrates and participants expressed that they felt full after a meal, so small quantities were satisfying. The immigrants prepared their own foods but occasionally meals were purchased. The participants believed that eating in moderation was a good plan for living longer and eating a variety of foods was good for the function of the body.

Family traditions influenced the type of foods the Caribbean immigrants consumed. The participants consumed mainly foods that were prepared in the home and they were comfortable with their food choices. Caribbean traditional cooking was taught by mothers and grandmothers and they influenced the meals that were prepared in the home. Recipes were shared by family and friends. Many Caribbean dishes required extensive preparation time and three participants with young children indicated that preparation time influenced their food choices. These participants indicated that cultural dishes were made on the weekend or they purchased prepared foods and modified the dish at home. Dinner was the biggest meal for 11 participants because of family traditions to gather for a meal at the end of the day, while lunch was the main meal for four participants. The participants were aware of family medical history that included cerebral vascular accident (CVA or strokes), increase cholesterol, obesity, diabetes, and hypertension, and they made a conscious effort to manage salt and sugar intake.

Purposeful samplings of Latino immigrant families were recruited to participate in an in-depth interview to collect data on good eating habits before and after immigration (Martínez, 2013). The family cooks were interviewed because they were responsible for

the family meals. It appeared that the Latino immigrants used a limited quantity of processed foods in their home country. However, it appeared that more processed food was consumed in the United States because of the availability of food distributed at food banks, and fast food available outside the home. Dietary changes were a result of acculturation and lifestyle changes in the United States. Immigrants from South Asia who emigrated to Canada were aware of the importance of consuming a healthy diet but, many immigrants also adapted to North American dietary habits that included large serving sizes, fast-foods, and other processed foods (Lesser, Gasevic, & Lear, 2014). The maintenance of body weight for health reasons was an important consideration for a group of Irish University participants who were involved in a focus group on maintaining weight (Reilly et al., 2015). The nutritional lifestyle of other immigrant groups was highlighted to formulate a comparison with the nutritional lifestyle of the Caribbean immigrants who participated in this study.

The findings in this Caribbean immigrants study extended the knowledge and experiences regarding food choices, and the research data in this study were supported by the information presented in the literature review. According to Paquette (2005), healthy eating was consuming moderate amounts of foods from all food groups that included fruits, vegetables, and protein products with limited preservatives. Current dietary data has provided information on nutrient content, serving size, portion control, and the significance of consuming a balanced diet that included fruits, and vegetables. The information age has increased the availability of nutrition information, and nutrition laws such as the Nutritional Labeling and Education Act of 1990 which supported the idea of

nutrition information on food packages, and the 2010 Patient Protection and Affordable Care Act which mandated restaurants to post nutritional information on menus, has facilitated the circulation of nutrition information. The Patient Protection and Affordable Care Act of 2010 was a valuable legislation to encourage restaurants to become accountable to consumers by listing the calorie content of foods and drinks served to consumers. Food choices were influenced by nutritional content and satisfying the feeling of hunger (Gibson, 2006). While listing calories was useful, other factors such as cravings, and taste of food also influenced consumer food choices. The taste of food greatly influenced the desire for food, since people were inclined to choose foods that have a pleasant taste (Chadwick et al., 2013). Friends and associates also influenced food selections (McFerran et al., 2013).

There were many Caribbean grocery stores and restaurants in New York and other metropolitan cities for Caribbean immigrants to access foods from their home country (Plaza, 2014). Caribbean immigrants expressed a feeling of alienation from their home country and the food was used to ease a perceived nostalgic feeling for their home country. Maintaining cultural food habits in America was significant for immigrant communities (Lindberg & Stevens, 2011). Consuming Caribbean foods had a perceived cultural significance for the participants. The participants explained that Caribbean foods evoked cultural memories and traditions that were used to connect with memories from their homelands. The participants explained that these memories and traditions were also significant to pass on to future generations. Some typical Caribbean foods included Grenada “Oil Down” which is a savory dish, Jamaica stewed oxtail or jerk chicken; St.

Lucia green bananas and codfish, Barbados Cou Cou (corn meal) and flying fish, Trinidad roti and doubles, Haiti pumpkin soup, St. Vincent roast breadfruit and Jackfish, many islanders also consumed rice and beans, fry pork, a variety of fish and other sea foods, dumplings, plantains, macaroni pies, soups, fresh fruits, and vegetables. The smell of spices and the taste of the food have helped the Caribbean immigrants to connect food to holidays and family celebrations.

Physiological factors such as food craving and hunger have influenced the food choices of many people (Neumark-Sztainer, Story, Perry, & Casey, 1999). Emotional factors such as stress and depression were known to impact food selection and people were encouraged to choose foods high in protein to release serotonin in the brain (Mishra & Mishra, 2010; Gibson, 2006). The immigrants in this study valued eating a balanced diet of foods from all food groups and the participants indicated that they ate breakfast, lunch, dinner, and snacked occasionally. They ate when hungry and managed the quantity of food intake. The participants were aware of food nutrition content, and they monitored sugar and salt intake. They rarely counted calories or attached “guilt” or “shame” to food consumption. Portion control was monitored by using small plates and they limited the quantity of food on the plate. The food was enjoyed for the taste and for the nutrient value.

The participants mentioned that healthy food choices were an integral part of maintaining a healthy weight, the participants explained that nutritious food choices were a normal part of their routine. The participants also explained that mood, personal perception, and personal desires also inspired their food choices. The decision to



managed weight was a personal choice, and each individual made an effort to exercise and manage nutrition intake. People made healthier food choices when there were explicit, standardized guidelines, that recommend specific nutrients that individuals should consume (Hieke & Newman, 2015). Food and nutritional information that were available on food containers were helpful with food and nutrition content (Borgmeier & Westenhofer, 2009). The availability of nutrition information on food packaging was used as a tool to provide specific nutrition information for consumers and encourage healthy dietary habits (Wahlich, Gardner, & McGowan, 2013). The decision to make healthy food selections was a personal choice and it was the decision of each individual to choose foods that satisfied their individual needs.

Food choices were a complex experience that was influenced by the benefits that the food provided for the individual who consumed the food (Conner, 1993). A person makes vegetarian choices because of the presumed health benefits. A person's attitude towards the food was directly related to personal pleasure from the food because of the taste or because of the social and cultural memories attained from engaging in food-related activities. This research study has contributed to the body of academic knowledge, as data on Caribbean immigrant perception on nutrition and food choices were documented in this study. The data from this study has confirmed and extended the knowledge in the discipline by comparing them with information found in the literature.

### **Theoretical and Conceptual Analysis**

The interpretive phenomenological analysis examines the meaning of participant experience (Smith & Osborn, 2007). Fishbein and Ajzen (1975) theory of reason action

promoted individual desire to make food choices. The principles of the theory of reasoned action supported the idea of personal choice and an informed decision as relevant ideas for encouraging food choices. The social cognitive theory was based on the idea that humans are responsible for their behavior and a positive attitude towards health education and health promotion will motivate a person to engage in positive healthy behaviors (Bandura, 2004). The Caribbean immigrants who participated in this study made a conscious choice to acquire information on food and nutrition and integrated the information into their daily lifestyle. The immigrants were able to embrace their cultural food traditions and integrate current data on nutrition to make healthy food choices. The general Caribbean immigrants' perception of food and nutrition was food should be enjoyed for the taste, as well as for the nutrition value that was essential for maintaining the body functions. While the participants were not regimented with portion size they embraced the concept of moderation principles to manage their food portions. The ideas from the theory of reason action and the social cognitive theory were evident in the ability of the participants to learn about nutrition, and make informed food choices that were suitable for their individual needs. The participants had a positive attitude towards food that included cultural eating habits, enjoying food, eating in moderation, and choosing nutritious foods from all food groups.

### **Limitations of the Study**

This was a qualitative study, and a phenomenological approach was used to examine the experiences of Caribbean immigrants with using nutrition ideas and making food choices. A limitation of the phenomenological study was that the data represented

the experience of a small group of people who were interviewed individually to share their experiences regarding nutrition and food choices. This was a purposeful sample; this meant the individuals had knowledge of nutrition and food choices. However, other Caribbean immigrants may not have the knowledge of nutrition as the study population, and the experience may not generalize to other population. This study represents the lifestyle of 15 people. This was a small sample size and the experiences of these individuals may not represent the experiences of other Caribbean immigrants. The participants were selected from Caribbean immigrants who live in Kings County, Brooklyn New York. This area provided a dense population of Caribbean immigrants and there were a variety of supermarkets, farmers market, and restaurants available for shopping in this area. This geographical experience may not be available in other areas and other immigrant groups may have difficulty accessing a variety of foods at a reasonable cost to supplement their dietary habits. Therefore, immigrants in other areas may not relate to the experiences of this sample group. The major limitation was the data may not generalize to other Caribbean immigrant groups.

### **Recommendations**

This study was an exploratory study on Caribbean immigrants' views on nutrition and food choices, and a purposeful sample of participants was used for the study. These participants had knowledge on nutrition and they were able to share their personal experiences with using nutritional information. The study has contributed to increasing academic information on Caribbean immigrants' perception on nutrition and food choices. A similar study could be conducted with Caribbean immigrants from other

geographic locations, for example, different states or different countries. This phenomenological study was designed to obtain participant experiences. Another recommendation for future research may include using a quantitative approach to acquiring data from another group of participants. A larger sample of random Caribbean immigrants may be accessed for knowledge on nutrition and food choices, this approach will increase the potential for generalization. A food and nutrition education program could be conducted with Caribbean immigrants who are affected by lifestyle diseases, for example, obesity and hypertension to evaluate the impact of the education program on the Caribbean immigrants.

There is a need for more data on Caribbean immigrant experiences with using food and nutrition ideas. There is also a need for forums for immigrants to share their experiences and concerns regarding the use of nutrition information in daily life. Therefore, there is a need for community health education programs and forums for Caribbean immigrants to share their objective and subjective experiences on food choices.

### **Implications for Social Change**

This food choices study has increased the participants' awareness of their personal food selections and this awareness has increased the participants stated resolve to continue to utilize nutrition information in their daily food choices, including eating from all food groups in moderation, and monitoring salt and sugar intake to prevent diet-related illness, for example, obesity. This study has the potential to increase the availability of academic information on Caribbean immigrant perception on nutrition and

food choices. The information can be used by students, educators, and healthcare professionals to increase awareness of Caribbean immigrant views on nutrition. Community health educators can use this information to encourage and support discussion to develop nutrition based programs. The ideas from the theory of reason action have encouraged individual choices and the social cognitive theory supports individuals being responsible for their behavior. The combination of these theoretical ideas can be used as the foundation to develop community education programs that encourage and embrace Caribbean cultural food traditions while integrating healthy food choices.

The data from the study may be shared with local and state health departments, health facilities, and local Caribbean community groups for educational purposes. The health departments and community groups could use the data to initiate a conversation on the ideas shared by Caribbean immigrants relating to making healthy food choices, and consuming a balanced diet. The results of the study may be used to increase the awareness of healthcare providers on immigrant perception on food choices. The data may be used to develop health education and health promotion programs in the community. The results will provide increase awareness on issues related to nutrition and food choices as more data is available on food choices. The study may result in people in the community developing healthy food habits. Diseases like diabetes and obesity may be reduced as people learn to incorporate healthy food choices into their lifestyles.

## **Conclusion**

A review of the literature has revealed limited data on Caribbean immigrant view on food and nutrition ideas. This study has provided an extraordinary opportunity to explore the food and nutrition experiences of Caribbean immigrants. The research question focused on the perceptions of the Caribbean immigrant population in suburban Brooklyn toward their food choices and the utilization of healthy food ideas. The ideas from the theory of reason action have facilitated the academic foundation that supports the idea that people are responsible for their personal health and well-being. Therefore, the consumer is responsible for their dietary choices. Fifteen Caribbean immigrants participated in the study to discuss their daily dietary experiences. The general perception is people have a responsibility to consume quality foods from all food groups to maintain a healthy body. People can continue to eat foods that they enjoy, including cultural foods in moderation. The participants expressed one way to manage food consumption is to use small plates, eat when hungry, and consume 6–8 glasses of water and other fluids. People can continue to obtain nutrition information from knowledgeable sources to increase awareness on food nutrients. These ideas are crucial for Caribbean immigrants who want to maintain their personal health and well-being via consuming nutritious foods.

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Appendix A: Information Flyer

Nutrition and Food Choices of  
Caribbean Immigrants in New York

Share Ideas in Research Study

Caribbean Immigrants: Adults

Immigrated: 1990–2015

Contact: Judy Pilgrim-Hector

## Appendix B: Prescreen Questions

1. Do consume fruit and vegetables?
2. Do you consume protein-based foods?
3. Do you consume Carbohydrate-based foods?
4. Do you usually prepare meals?
5. Do you purchase meals?
6. Are food nutrients considered with food choices?
7. How do you decide what you should eat?
8. Is health a factor in food choices?
9. Is cost a factor in food choices?
10. Is taste a factor in food choices?
11. Is habit a factor in food choices?
12. Is culture a factor in your present food choices?
13. Do you communicate food and nutrition ideas to friends and family?
14. Are you satisfied with your food choices?
15. Where have you received food and nutrition information in the past?
16. How have you used information on food and nutrition in the past?
17. Is a balanced diet a consideration for determining your food choices?
18. Is portion size a consideration with your food choices?
19. Do cultural values and traditions impact your food choices?
20. Will you consider healthy food choices in the future?

## Appendix C: Semi-structured Interview Guide for Food Choices

1. Describe your typical meal plan (breakfast, lunch, dinner)?
2. Do you usually prepare meals or do you purchase meals?
3. What ideas influence your decision to prepare meals or purchase meals?
4. How do you decide what you should eat?
5. What factors determine the variety of food that you eat (Ex. cost, taste, habit, health)?
6. Share your view on the issue of food is only a meal or something to eat.
7. Share your view on what you think are healthy food for your body.
8. What ideas from the past have continued to influence your present food choices?
9. What are your views on communicating food and nutrition ideas to friends and family?
10. Share your opinion on the food and nutrition information that you have received.
11. Describe how you use ideas on food and nutrition in daily life?
12. What is your opinion on your food choices, and are you satisfied with your food choices?
13. Where have you received food and nutrition information in the past?
14. How have you used information on food and nutrition in the past?
15. Share your views on the concept of balanced diet when determining your food choices.
16. Discuss your views on the importance of a balanced diet in your daily life?
17. What are your views on the concept of portion size?
18. How do you apply portion size when you make your food choice?
19. How do cultural values and traditions impact your food choices?
20. What is your opinion on making healthy food choices in the future?

#### Appendix D: Phone Contact Script

My name is Judy Pilgrim-Hector. I am a doctoral student from Walden University, College of Health Sciences. I will like to discuss details regarding your participation in the Nutrition and Food Choices research study.

Topics:

Criteria for study

Terms of Consent form

Establishing Interview date, place, and time

Review of transcript data. Thank you for your time and your cooperation.

## Appendix E: National Institute of Health Certificate of Completion

