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Hardiness and Attitude on Hypertension Treatment Adherence Among Nigerian Health Care Workers

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Abstract

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Dissertation Submitted in Fulfillment

of the Requirement for the Degree of

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Abstract

Racial and ethnic minorities in the United States have higher rates of hypertension than European Americans. In this ethnographic study, 30 Nigerian immigrant health care workers with hypertension described their self-efficacy management of the disease to ascertain the relationship between health-related hardiness, individual attitudes on compliance, and medication adherence self-efficacy. Using a mixed methods design comprised of survey tools and focus-group questionnaires, the research questions were focused on understanding attitudes and health practices within Nigerian culture that support self-efficacy management. The theoretical framework for this study is the social learning theory and in the social cognitive theory postulated by Bandura. Content analysis of the focus group transcripts revealed that all participants agreed that culture directly influences their self-efficacy practices. Interview responses generated 4 major themes in which the study participants expressed positive attitude towards adopted values including culture practices, faith, enculturation, and fear of medication effects. Cross tabulations of frequency data from the survey tools showed no relationship between self-care management, attitude, and medication adherence. Factor analysis of the Health Related Hardiness (HRH) scale identified 6 constructs with a cumulative variance of 64.9%. Implications for positive social change include culturally specific health intervention programs that focus on the impact of culture on hypertension self-efficacy practices and self-care management.

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Dedication

I dedicate this dissertation to my father Chief Gordian O. Egwuagu, whose untimely death on May 1, 2003, conveyed the need to increase awareness regarding the mortality associated with hypertension and its complications. I also thank my husband, Chiedu Ndubisi, my daughter Mimie Ndubisi, and my sons Odera Ndubisi and Somto Ndubisi, for their support and understanding throughout this journey. I also extend my gratitude and thanks to my mother, Lady Josephine Ugo Egwuagu, for constantly reminding me of the goals ahead.

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Table of Contents

List of Tables

List of Figures

Chapter 1: Introduction to the Study

Introduction

The United States is a diverse nation composed of individuals from a multitude of cultures. According to the statistical data from the National Center for Health Statistics report, the population of the United States includes 12.1% African Americans, including Nigerian immigrants (NCHS, 2007; Rosamond et al., 2008). Following the 20th century economic growth, especially evident in the areas of health care and technology, the United States experienced an unprecedented rise in minority populations, including a significant number of immigrants, growth that is predicted to remain the norm (Llacer, Zunzunegui, Amo, Mazarrasa, & Bolumar, 2007).

As immigrant populations acculturate and integrate into the workforce, their risk for cardiovascular diseases increase (Llacer et al., 2007). By 2020 cardiovascular diseases may become the leading cause of mortality and morbidity globally (NINDS, 2008). African Americans have the highest incidence of hypertension which remains the most prevalent chronic illnesses in the United States and disproportionately affects African Americans, including Nigerian immigrants, making this health variance the single most endemic culprit in the disparity in morbidity and mortality between African Americans and European Americans (Jones & Hall, 2006). The prevalence of hypertension among minorities including Nigerian immigrants residing within United States is among the highest in the world (Carter, 2004). Hypertension tends to manifest at an earlier age, and those individuals affected are often less inclined to seek treatment to minimize and eradicate the effects of high blood pressure (Jones & Hall, 2006). African Americans have prevalent rates of tertiary hypertension compared with their European Americans

counterparts, predisposing this vulnerable ethnic group to organ dysfunction, attributed to complications due to hypertension (Baquet, Carter-Pokras, & Bengen-Seltzer, 2004). The onset of hypertension early in life, wide prevalence, and higher rate of tertiary hypertension among African Americans are catalysts to the estimated 80% increase in the number of stroke mortality rate since the mid-1980s. It accounts for about 50% prevalence in heart disease date rate, and a 20% rate in the hypertension-related tertiary-stage kidney disease that is predominant in the entire population (NCHS, 2007). These statistics reflect Nigerian health care workers in the United States labor force who, like their African American counterparts, face a high incidence of morbidity/mortality. Few studies have been conducted on the effects of cultural beliefs and practices on self-efficacy and management practices of hypertension conditions on this population (Kawachi & Berkman, 2003).

Baquet et al. (2004) indicated that despite a U.S. health care system that upholds preventive health measures, the practice of public health among minorities remains suboptimal. The societal influence and emphasis placed on the material wealth and technological development has overshadowed awareness towards health self-efficacy and practices among younger members of the society (Crespo, Smit, Anderson, Carter-Pokras, & Ainsworth., 2000). Regardless of the evidence of the increase in preventable health variances, many people in the Nigerian community choose not to acknowledge the relationship of cultural behaviors, attitude, and practices to increasing societal health problems, as seen with the morbidity and mortality variances associated with hypertension and its debilitating complications (Daroszewski, 2004).

Health awareness and understanding health-related determinants of health are thought to be an individual responsibility (Degner & Slogan, 1992). Several researchers with a focus on societal health issues have indicated that the societal awareness towards health is deteriorating as a result of other competing interests, yet there seem to be minimal effort made by health care advocates and managers to effect meaningful behavioral change, in an effort to increase health practices awareness (Dressler, 1990). Understanding health and wellness importance, in relation to cultural influences, depends largely on social research (Dilworth-Anderson et al., 1993). According to researchers, health and wellness perceptions especially among the poor and ethnic minorities have deteriorated over the last century (DHHS, 2004). The ability to embrace health and wellness is largely dependent on the cultural perceptions and health practices within the culture. That is especially true among Nigerians, who fail to equate health with wealth (Edwards, 2004). As indicated by one health care theorist, "The development of effective forms and prevention means understanding how social and economic structures impinge on people and what kinds of policies might be beneficial" (Eckersley, Dixon, & Douglas, , 2002, p. 73).

Every culture is unique. Therefore, effective health care policies should take into account availability of resources and the norms and values of the community which may impede health. According to Miller (1999), several factors contribute to ineffective allocation of health resources, especially to the culturally disadvantaged poor, low socioeconomic group and minority race. Globalization and environmental factors have promulgated inequalities in both domestic and international levels, the effects of which

predispose social groups to occupational health-related variances such as hypertension and its complications, compounded by cultural differences (Miller, 1999).

Statement of the Problem

Differences exist and continue to widen between racial and ethnic minorities, including vulnerable minority subgroups, in the accessibility of both primary and preventive care, ability to have early diagnosis and in receiving treatment for specific health conditions. According to Edwards, Merritt, Bennett, and Williams (2004), differences exist even among care given by the health practitioners in terms of physician decision making in addition to challenging and rising concern regarding the effects of cultural and communication barriers experienced by minorities when seeking medical care. As revealed by Wang and Vasan (2005), irrespective of the efforts instituted both at the federal and the local government levels to bridge the health care gap in the United States, differences continue to surface even among the insured, the educated and in individuals with knowledge about health and wellness. Rust and Copper (2007) found that despite the plausibility of the hypothesis that socioeconomic status, lack of health care insurance, inaccessibility to health care, and illiteracy may harm somatic health, limited empirical data have addressed the prevalence of hypertension among Nigerian immigrants working in the health care system. There is a need for more information on the influence of behavior on vulnerable Nigerian immigrant health care workers. These Nigerians otherwise may not fall within the criteria known to be responsible for poor hypertension treatment adherence, but whose cultural effects on hardiness and attitude may have significant impact on health and wellness perception. Several factors may

contribute to these disparities in health, including cultural health perception and practices. This study will contribute to the body of knowledge needed to develop and implement culturally tailored interventional modalities that will increase awareness of the negative cultural effects on hypertension and related diseases.

Historical Overview of Nigeria

A historical overview of Nigeria is necessary to provide information about the character and origins of Nigerian customs, lifestyle, and health and cultural systems, which are significantly different from their U.S. counterparts. Those differences may affect both Nigerian immigrant health care workers as well as the health risks of these immigrants.

Although globalization has positively affected societal development, especially in areas of industries and technology, the social inequalities that resulted from globalization have fueled poverty and deterioration in health conditions, especially in developing countries like Nigeria (Eckersley et al., 2002). Institutions and organizational establishments structured health insurance availability to the benefits of the white-collar workers. As a result, many immigrant Nigerians hold jobs that do not qualify for health insurance coverage (Daroszewski, 2004). Developing countries, especially the African nations, face high mortality and morbidity rates resulting from health behavioral conditions, as seen in health conditions such as hypertension and stroke, infection with HIV, hepatitis, malaria, and the cumulative collateral damaging effects from hunger and malnutrition conditions (Llacer et al., 2007).

Enculturation Effects on Health

Changes in both health care infrastructures as well in area of health care deliverance have occurred in developing nations like Nigeria, where self-efficacy practices and management is frequently practiced (Eckersley et al., 2002). Equipment designs known for use in health care practices are more complex and expensive than in the past, and the cost of human resources training required for the operation and maintaining of the equipment is high. The people of the communities directly or indirectly absorb the cost of procurement of the equipment essential in developing countries to advance health technology practices (Chobanian, 2001). The cost of health care in developing countries like Nigeria has remained beyond the reach of the poor and little is done to bridge the health care gap between the wealthy and the poor and disadvantaged (Wang et al., 2005).

Evident especially among low socioeconomic status Nigerian immigrants in countries like United States is the disproportionate attention to the basic necessities of life and little or no emphasis on health and wellness practices (Corbie-Smith et al., 1999). People of low socioeconomic status and the poor do not take advantage of health insurance coverage even when available, because the jobs they hold may pay minimum wage making it difficult to afford payment of the required health insurance premiums (Chua & Iyengar, 2006). Individuals in this societal group tend not to embrace health and wellness, not because such a concept is not viewed as important, but rather as a result of other competing interests. Negligence of wellness practices has negative health consequences and an urgent need for attitudinal change. Chua et

al. (2006) indicated that there are eminent threats to the health of the society globally, especially in developing countries like Nigeria, indicating a need for health education and awareness measures to effect change in the attitudes and perceptions of the people towards health.

Certain illnesses are predominant among some communities, with the assumption by the communities' dwellers that such illnesses have been around with little or no impact on humans (National Center for Health Statistics, 2007). Therefore, societal changes are not only evident on the individuals attitude and behavior, but more significantly, also on the behavior of the micro-organism in the community, in an effort to survive and thrive (Williams, 2005). Community stability is important in order to cope with internal and external aggressions or stressors, which could manifest in the form of economic, natural, social, or health threats (Williams, 2005). Clinically all diseases and causes of death are unequivocally evident in lower socioeconomic groups, including immigrants than among individuals from middle and upper income statuses due to the relationship between health and nutrition (Eckersley et al., 2002).

Diseases conditions notably hypertension, diabetes, obesity and high cholesterol could be prevented or curtailed in terms of the rate of infectivity, morbidity, and mortality rates, through mere change in attitude and behavior of the individuals at risk (Williams, 2005). Deficits are a result not of ignorance but of competing societal economically motivated interests, a lack of insight to the nature of the eminent threat, and poor behavior health perceptions and practices (Jones & Hall, 2006). Health-related social issues are not unique to one ethnic minority group.

Rather, racial subcultures like the Nigerian immigrant society's health arena today deteriorate as a cycle of an economic factor that gradually eludes the health of the society, which further affects the societal gross expenditure. From the government's point of view and based on the funding allocated for low income health care subsidy, the health care funding for the immigrants, the poor, the low socioeconomic group, and the minorities is stretched to the maximum due to increase in population. A lack of funding may culminate in changes in behavior, attitudes, and perceptions of the individuals towards health and wellness practices as available funding is allocated for payment of health services rather than health prevention (Thorpe, 2007). The inability of the poor and low socioeconomic groups to seek health as preventive rather than curative, often leads to multi-organ dysfunction and failure, resulting in poor outcomes and prognosis, with increase in the morbidity and mortality rates, as seen with the Nigerian community (Dressler, 1990).

A healthy nation is a wealthy nation as maintenance of the community roles, structures, and processes are directly related to the workforce of the system, which has positive correlation to the health index of the community (Eckersley et al., 2002). The core of the system is combination of the individuals and learned adaptive self-efficacy behaviors, which must coexist harmoniously, for the existence of the individuals without effective adaptation will lead to an increase in the tension that already exists between them (Kawachi & Beckman, 2003).

When a community system is experiencing difficulties or lacking the coping mechanism needed for internal or external survival capabilities, community

development intervention is imminent in other to rectify the deficit and strengthen the ability to maintain health and wellness (Kawachi & Beckman, 2003).

The Nigerian immigrant society's health perception and practices have flaws that result from health practices. Nigerian immigrants tend to treat rather than prevent illness and diseases (Becker, 2001). Nigerians, especially those in the health care system, are more likely to display negative cultural attitude and hardiness, which may prove detrimental to health and wellbeing (Geschiere & Meyer, 1999; Llacer et al., 2007). It is important to study Nigerian immigrant heath care workers with hypertension, in order to ascertain if hardiness and attitude affect hypertension treatment adherence. Such a study could reduce heart disease and hypertension disproportionately associated with this vulnerable population, as will be discussed in detail in the next chapter.

Purpose of the Study

The purpose of this ethnographic research study was to explore the cultural influence related to self-efficacy and attitude on hypertension treatment adherence among the Nigerian health care workers. The results of this research may be used to better understand the possible impact of hardiness and attitude on Nigerian health care workers and their ability to comply with hypertension treatment. Improvements could influence the development of preventive mechanism in epidemiological studies on migration and health. Issues regarding the psychological and social factors affecting hypertension treatment adherence in minorities, particularly among ASA USA members in health care, were examined in this study. Conceptual gaps and methodological deficits were highlighted. A mixed-method design was employed and utilized to collect research data

from this African American sub-culture that originally emigrated from Nigeria, and were employed in all sectors of heath care system in Washington, DC, metropolitan area.

The ethnographic research method not only recognizes individual experiences as valid but also places great emphasis on shared phenomenon among those experiences as described by the individual (Creswell, 2002). As a result, the ethnographic approach was utilized in this study, affording a voice to Nigerian health care workers and identifying common themes based on their shared experiences. The goal of the study was to present testimonies in a realistic and humanistic manner to the unbiased reader, supported by quantitative data from the study.

Significance of the Study

Results of this research may contribute to positive social change by adding to the body of information and to the medical practitioners' clinical database. Doing so may support the tailoring of cultural-intervention health education programs that will effectively increase cultural awareness and decrease the effects of hardiness and attitude on medication adherence in hypertension control, especially among African Americans. Furthermore, the study may benefit administration and employers of minority health care personnel by providing valuable literature about the correlation between hardiness and attitude on self-care practices. The results may help hospitals and health care organizations in tailoring cultural intervention program that will address the need for migrant health awareness in the perception and practices of wellness maintenance, which could be paramount for a healthy work force, high productivity, and a decrease in health care expenditure and cost.

The findings of this study add to the limited body of scholarly research involving Nigerian immigrants by increasing awareness of the significant role that hardiness and attitude play as cultural influence in hypertension control among minorities. It addresses this aspect of racial and ethnic disparities in health care, as well as fosters a climate for social change. Increasing employer awareness with regard to health disparity and cultural effects and competence will lead to the design of a more efficient health awareness program that will specifically address minority's health concern, which will culminate to more efficient use of health care dollars. That can contribute to employee productivity and a reduction in sudden deaths and absenteeism (McCunney, 2001).

Finally, this study may help to increase the perception and knowledge of African Americans, most importantly Nigerian immigrants in the United States, on how change in psychological and social behavior may hold the answer in promoting social change within the Nigerian community.

Theoretical Framework

The primary theoretical framework for this study is crafted in the social learning theory and in the social cognitive theory postulated by Bandura (1997, 2001). Both the social learning theory and the social cognitive theory were appropriate for this study, in view of the emphasis and focus behavior effect on self-efficacy and self-management practices (Bandura, 1977). Bandura (2001) postulated the self-efficacy, which suggests that an individual engagement or participation on a task or behavior occurs only when there is the realization that the outcome equates to success. In social cognitive theory and social learning theory, Bandura (2001) argued that an individual's behavior relates to the environmental factors, which influence choices made. This argument holds true

especially in Nigerian culture as self-efficacy practices are transferred from generation to generation. The need to maintain self-efficacy and self-management practices may fuel negative attitude and hardiness towards health and wellness. Such maladaptive behaviors culminate in the perception that health deviations occur not as a result of a microorganism or an inability to maintain health and wellness, but as disharmony between the individual and the immediate environment (Bandura, 1971). Such maladaptive behaviors by the Nigerian community influence their behavior and leads to health and wellness deviation as theorized by Bandura (1969).

Bandura (2002) conducted extensive studies involving individuals' behavior through which he developed the theory of personality. Bandura (1963) supported the concept that an individual's behavior is impacted by the environment with which the individual interact on a regular basis. However, Bandura (1963) indicated that an individual's behavior also influences the environment that the individual dwells in. The mutual effect and interactions shared between an individual and the environment according to Bandura (1971) is known as "reciprocal determination." The profile depicted by Bandura (1971) fits the Nigerian community, which is a vulnerable group marked with behavior volatility and emotional instability compounded by reciprocal determination in the form of increase in hypertension and stroke morbidity and mortality rates. The social learning theory and social cognitive theory postulated by Bandura (1971) provide a model to establish the connection between learnt cultural behavior, observational learning, modeling and social learning, as it relates to the sample population.

According to Bandura (1977), self-efficacy, when combined with positive outcome expectancy, can be utilized to best predict behavioral outcomes. Bandura (1969) viewed social foundation of thought and action as the belief that the performance of a particular behavior will produce the desired result. Based on Bandura's philosophical concept, individuals with hypertension believe that they have the ability to effectively display a particular behavior and that the engagement in the said behavior will result to some control of the illness will be most likely to adhere to the treatment regimen. For a Nigerian, especially one in heath care who has the notion of understanding many aspects about health fails to engage in health prevention and wellness maintenance as such is contrary to their belief about health.

In addition to Bandura's (1977) theories, the study is supported by two secondary theoretical frameworks. These theoretical underpinnings include Orem's (1991) self-care concept, and the theory of reasoned action (Ajzen & Fishbein, 1980). The theory of reasoned action dwelled on the relationship as it affects an individual's intention and the resultant attitude or behavior (Nicholas, 1998). Based on the theory analytical view, prior to display of a patient's behavior, a subconscious analysis that affects the individual's intention to behave in a peculiar is reviewed. An individual's behavior is said to reflect the beliefs, values, and other related social norms, which determine the locus of the behavior (Bandura, 1969; Orem, 1991). In the analysis of the social learning and social cognitive theories, attitudes are described as a domain, which is made up of beliefs and marked by values and acceptable norms of the individuals' culture (Bandura, 1973; Nicholas, 1998). As a result, an individual that perceives a particular set of behavior as potential benefit that engaging in certain behavior will result in positive outcomes will

continue to exhibit positive concepts (Orem, 1991). If an individual believes that he or she should comply with what was advised by the health care professional regarding adherence to hypertensive treatment, he or she will adhere to the regimen, while individuals who are skeptical about hypertension management will not adhere to the treatment modalities. Personality variables, such as knowledge, anxiety, locus of control, education, age, and gender, influence the individual's interpretation of one's environment and therefore, influence the belief one holds (Ajzen & Fishbein, 1980).

Attitude is a representation of a person's thought (cognition), perception (affect), and the ability of the person to supreess his or her behavior in other to influence an attitude object (connotation) (Pollock, 1984). An individual's behavior includes not necessarily participation that directly influence the environment, but equally important are peoples perception of intended acts like, social norms, habits, as well the expected and unexpected consequences of mal-adaptive behavior (Pollock, 1984). An attitude contains beliefs, practices, evaluations, and action intentions that may affect behavior (Rosenberg & Hovland, 1960).

Based on Orem (1991), self-care is the direct participation in self-care practices an individual embarks upon and fulfills in other to improve health and maintain life expectancy. Furthermore, the individual's ability to meet their care-needs in order to maintain activities of functional living, which is aimed at improving health and wellness, is referred to as self-care agency (Orem, 1991). According to Orem, self-care involves attaining to practical needs with the sole aim of maintaining health and supporting a meaningful life through wellness. Hardiness has a direct relationship to a person's fortitude and meaningful capability towards coping with stressful situations. Similarities

exist in both hardiness and attitude that could have a positive relationship to Orem's self-care adherence (Nicholas, 1989). Orem theorized that the ability to engage in self-care is influenced by various factors including genetics and constitutional factors as seen with culture influence, values, norms, life experiences, and wellness state. Since both self-care and the hardiness characteristics manifest as behavior traits, hardiness has a direct relationship to an individual's capacities, social skills, acquired knowledge, genetic disposition and constitutional factors such as norms, values, culture, life experiences, and wellness state (Nicholas, 1989).

Significantly, hardiness and self-care agency have similarities, and hardiness as a personality trait could be an external variable that could influence attitude; therefore, hardiness is utilized as a link to integrate both the theory of reasoned action and Orem's (1991) self-care theory to guide this study. On the other hand, hardiness could influence self-care behavior directly as stress response as a well as through its influence as a personality trait, on the belief an individual holds and behaves in a certain way.

Research Questions

The following research questions guided this study:

1. What is the relationship between hardiness and attitude, and hypertension treatment adherence among Nigerian health care workers?
2. What changes have occurred in the self-efficacy behaviors of Nigerian health care workers that influence the choices they make towards hypertension treatment?
3. To what extent has culture been a factor in the change in Nigerian health care workers' attitudes towards self-management health behavior?

4. When given the choice for health insurance and not having health insurance for higher wages, do Nigerian health care workers' perceptions about health impact self-control and adherence to hypertension treatment?

Operational Definition of Terms

For the purpose of this study, the following specific terms are defined to enhance the reader's understanding of this study:

Attitude: This concept represents the recognition and application of ego boost necessary to support, evaluate, and response to health variances (Pollock, 1986). As attitude is closely related to hardiness, a subscale of the HRHS by Pollock (1986) will be employed to quantitatively ascertain this concept.

Hardiness: An attitudinal indices and acquired skills that enhance resilience amidst challenging circumstances by supporting performance, leadership, morale and health self-care practices (Maddi, 2001).

Health-related hardiness: Appraisal and coping mechanism used in adaptation to chronic illness (Pollock, 1986). In other to measure this concept quantitatively, a subscale of the Health-Related Hardiness Scale (HRHS) designed by Dr. Susan Pollock will be utilized in this study.

Hypertension: Systolic blood pressure of greater than 140 mmHg (Upper BP Number) and diastolic blood pressure of greater than 90mmHg (Lower BP Number), (Ayanian et al., 2003).

Medication adherence: Ability to comply with medical treatment as proposed by the medical practitioner (Ogudegbe et al., 2003).

Nigerian immigrant: A person born in Nigeria who relocated to the United States, currently working in health care system and resides in the Washington, D. C. Metropolitan area.

Nigeria Heath Care Association: A social organization with common interest and a subsidiary of Anambra State Association-ASA USA. In 2010 NHA merged with ASA USA. ASA USA exists as a nationwide social organization that encompasses several subsidiaries, including the former Nigerian Heathcare Association (NHA), which no longer exists as a separate entity.

Outcome expectancy: a belief the performance of a particular behavior will result to desired result or outcome (Bandura, 1997).

Perception: The appraisal and determination to cope with stress (Lazarus & Folkman, 1984); those collective mental cognitive processes that give coherence and unity to sensory input (Ruber & Ruber, 2001, p.519).

Psychosocial: a situation in which both psychological and social factors are combined to play a role (Ruber & Ruber, 2001, p.519).

Reciprocal determination: The mutual effect and interaction shared between an individual and the environment, an idea that one's behavior also influences the environment that the individual dwells in (Bandura, 1997).

Self-control: Ability of one's' mind to actively develop and construct reality (Bandura, 1969).

Self-efficacy: The belief that the performance of a particular behavior will produce the desired result, an individual engagement or participation to task or behavior that occurs only when the outcome equates success (Bandura, 1977). In this mixed-method study, the

research attempts to evaluate how self-efficacy is related to the behavior of adherence to hypertension medication, which was quantitatively assessed using Medication Adherence Self-Efficacy Scale (MASES) designed by Ogedegbe, Mancuso, Allegrante, and Charlson (2003), for assessment of medication adherence with hypertensive patients.

Assumptions

The following have been identified as the critical assumptions of this study:

1. Health perceptions of African Americans, specifically Nigerians, negatively influence adherence to treatment.
2. The economic disadvantages of Nigerians and other African Americans over-shadow the perception for health and wellness need.
3. There is a commonly held view that African American culture endorses materialistic values and less concern about positive health change.
4. When confronted with health issues, African Americans adequately reported their feelings, beliefs, and perceptions about adherence to health regimen.

Delimitations

For the purpose of this study, the following delimitations are necessary to narrow the scope.

1. In other to qualify for the study, the participants were born and raised within the Nigerian culture and be between the ages of 21 to 65 years.
2. Subjects had immigrated to the United States from Nigeria longer than 1 year, prior to the study.
3. The study participants were presently working in health care system.

4. Subjects were diagnosed with hypertension and on hypertension medication for more than 6 months prior to the study.

Limitations

The following are limitations in the study:

1. As a nonprobability survey method study, the strata were not a representation of the overall Nigerian or African population.
2. The population consisted of Nigerian immigrants residing in Washington, DC, metropolitan area, which may not be the true representation of the population.
3. The questionnaires for the focus groups were self-reported instruments with some of the questions closely related.
4. The findings of this study are subject to interpretation and this study cannot generalize the overall Nigerian or African population in Washington D.C. metropolitan area with hypertension.
5. The estimated moderate sample size may be minimum sample required for this study and may affect the result of the study.
6. The limitations of this study are likely to increase the potential weakness of the findings and results.

Research Design, Methods, and Data Analysis

Both qualitative and quantitative investigative methods were utilized to examine the effects of hardiness and attitude on hypertension treatment adherence among Nigerian health care workers, residing in the Washington, DC, metropolitan area diagnosed with hypertension. Descriptive statistics were utilized to obtain the profile of the participants. The data that represent individual questions on hardiness, patient attitude towards

compliance and self-care adherence to hypertension management are interval data. The mixed method research approach will support the findings as well as elaborating the results (Creswell, 1998). A mixed-method design was utilized with one demographic questionnaire to collect personal data such as age, gender, education, employment, hours of work and nationality/ethnicity. In addition, the study design employed two survey questionnaires along with focus groups sessions. The purpose of the study was to evaluate the phenomena that influence the attitude and behavior of Nigerian health care workers in their perception about self-care adherence towards hypertension medications/treatment. Descriptive statistics were applied to evaluate the relationship between the variables. Data analysis of the raw data collected from the instrument was conducted with the aid of Statistical Package for Social Science (SPSS) 14.0.

Justification of the Study

As the world global recession worsens, immigration of labor force influx from countries with lower gross domestic product (GDP) to industrialized nations like United States surge, as a result, immigrants from countries with overwhelming population in addition to declining economic and deplorable health conditions like Nigeria face massive reflux of mostly the egalitarian members of the society. Since relocation, especially millions of miles away from home is a stressor to health, psychosomatic illness like hypertension with hidden and covert symptoms compounded by the cultural perception that affect attitude and hardiness continues to erode the life of Nigerian immigrants, as seen with the population intended for use in this study. Therefore it is necessary to ascertain the correlation between attitude and hardiness on medication adherence among Nigerians employed in health care that are afflicted with hypertension,

who otherwise are faced with cultural perception conflict about health and wellness maintenance, leading to increasing mortality associated with “acute coronary syndrome” (ACS), seen lately with this venerable population.

Within the Nigerian culture, there are negative and positive behaviors that support effective self-efficacy and self-management practices which are often modeled from the elders and learned through observation. In a research studies that assessed the effects of hypertension on mortality of African population, limited data exist that ascertain the role of attitude and hardiness in the racial and ethnic health disparities among Nigerians, especially as it relates to hypertension treatment adherence. This research could establish a benchmark for future research on migrant health in an effort to reduce and eliminate health disparities among disproportionately affected minority populations like African-Americans, particularly Nigerians, whose culture in addition to other variables and factors, make them more vulnerable to chronic health conditions like hypertension. The result of this study may help support other documented research in the area of culturally tailored health interventional modalities, in an effort to address the role of cultural perception and influence in health and wellness maintenance (Helman, 1994)

Summary

Studies on health and wellness of the migrant workers in industrialized nations including United States are sketchy (Eckersley, et al., 2002; Liacer, et al., 2007; Rust & Copper, 2007; Thorpe, 2007). However, of the immigrants identified in this writing, no specifications were made regarding former Nigerian Heath Care Association members or members the parent organization, ASA USA. As a result, the study provided a closer look

at the role of cultural differences in relation to attitude and hardiness effect on Nigerian heath care workers health self-efficacy and management.

Chapter 1 presented information about (a) the relationship of people's perceptions and maladaptive behaviors; (b) the statement of the problem including evidence of widening racial and ethnic disparities in hypertension area of health care, among Nigerians, as a minority group; (c) the purpose and rationale for studying the effects hypertension has on minorities health status; (d) relevant research regarding the prevalence and complications of hypertension among Nigerian immigrants; and (e) empirical research regarding individuals' cultural perceptions, beliefs, practices, and effects on blood pressure.

The theoretical framework, related research questions, assumptions, limitations, and operational definitions are equally inclusive. In conclusion, the Nigerian culture influences the health of the indigenes through cultural perceptions and practices that influence the choices made and subsequently affecting health status. Health beliefs, attitudes, values and lifestyle of the populace are interwoven with the culture, which in this study showed to negatively impact self-control, self-efficacy, and outcome expectancy among this population. Chapter 2 explored the related literature to the research questions, while in chapter 3 the presentation of the research design is featured, in addition to the assessment instruments, procedures for analysis, ethical concerns, the procedure for the participants' selection and recruitment. In chapter 4, the data analyses are featured while in chapter 5 the discussions of the findings were tabulated. In chapter 5, the recommendations as well as the conclusion of the study are reviewed.

Chapter 2: Literature Review

Introduction

This chapter presents a review of available literature on the connection between the psychosocial development of an individual and outcome expectancy to situations like health variances. According to Bandura's (1997) social cognitive theory, there are psychosocial variables, like self-efficacy and outcome expectancy, that are related to treatment adherence. Bandura defined self-efficacy as the belief that one can successfully carry out the actions demanded by a specific situation. Self-efficacy is indicative of the perceived behavior in relation to the perceived situation. In addition, two supporting theories; Orem's (1991) self-efficacy theory and the theory of reasoned action (Ajzen & Fishbein, 1980) were instituted as part of the theoretical underpinning for this research. The integration of all the theories is necessary to guide the reader to better understand the psychosocial variables in hypertension and the effects on minority health care workers.

Organization of the Literature Review

A comprehensive multiple literary sources were instituted in the preparation of this research project. These sources included a literature search of medical journals, psychological journals, psychological abstracts (PsycINFO), PsycArticles, University International Dissertation Abstract Database (UMI), and various Internet search engines (Google, Yahoo, Bing, Atlas Vista, Wikipedia and others). Books and magazines related to cultural studies and self-health practices were extensively reviewed to support the study. Several search strategies were employed to help retrieve needed articles, periodicals and textbooks that support this study. The Library of Congress (LOC),

National Library of Medicine (NLM), National Institute of Health (NIH) Library, The Smithsonian Library, Johns Hopkins University Library, Walden University Library, Georgetown University Library, Howard University Library, George Washington University Library, and The Catholic University Library, were few of the many resources utilized for database search.

Keyword combinations utilized in the searches included, but were not limited to *Nigerian culture, migrant health, immigrant in the United States, culture and health, ethnicity and health, immigrant and employment, qualitative and quantitative studies and migrant health, ethnographic and phenomenological studies and migrant workers health, qualitative and quantitative studies,* and *attitudes and hardiness effects on health*.

Collection of related articles for the study span over three months, focusing on published articles and periodicals from the last 5 years. In addition, published books and text related to effects of hardiness and attitude on health management were reviewed to support the database. The database was extensively exhausted and the search completed when previously reviewed data started to re-emerge, with no new information needed to support the study.

Theoretical Framework/Conceptualization Foundation

The theoretical framework for this study is in social learning theory and also the social cognitive theory postulated by Bandura (1997, 2001). According to Bandura (1997), culture has direct effect in the shaping of human life and the human mind. As indicated by Bandura (1997), human adaptation is influenced by the product of one's experiences, which are greatly influenced by the culture. The differences in one's life are representations of direct attributes of the previous learning experiences. For Bandura

(1997), the previous knowledge that is acquired enable for the articulation and evaluation of new concepts that will result to the determination and utilization of the concepts.

Specific data related to Nigerian health care workers health management and self-care efficacy barely exist. Existing data are not exclusive to former Nigerian Heath Care Association members or members of ASA USA in the Washington, DC, metropolitan area. The limited amount of research pertaining to Nigerian health care workers health management and self-care efficacy suggests that more research is needed. In previous studies conducted on the effects of attitude and hardiness on health, the study population was not focused on a specific ethnic group (Pollock, 1989). The small percentage of minorities represented in prior studies is not a fair representation of former Nigerian Health Care Association members practicing health management and self-care efficacy modality.

Previous studies in related conditions indicated that behavior includes not necessarily participation that directly influence the environment, but also that peoples perception of intended acts like, social norms, habits, as well the expected consequences influence maladaptive behavior. According to Rosenberg et al. (1960) study, hardiness was related to health status and that self-care practices were positively related to health status. The researchers hypothesized that hardiness is related to self-care practices. Findings from the study *(n*=72) showed positive correlation between hardiness and self-care practices, pointing out that hardiness accounted for 46% of the variance in predicting self-care practices (Rosenberg & Hovland, 1960; Uutela, 1985). The study findings support the concept that hardiness influence people's perception and ability to take control in conditions like hypertension medication self-efficacy, the focus of the study.

According to similar study that utilized survey data, hardiness and self-care agency both affect self-efficacy practices, including outcome expectancy, and hardiness was shown to be a personality trait that could influence attitude;, therefore, hardiness is utilized as a link to integrate both the theory of reasoned action (Ajzen & Fishbein, 1980) and Orem's (1991) self-care theory to guide this study. In another related study, physiological status, coping, and hardiness were found to be predictor of outcomes in chronic obstructive pulmonary disease, (Narsavage, & Weaver, 1994). In the evaluation of hypertension self-efficacy and management, the effects of attitude and hardiness may directly or indirectly affect disease outcome and life-expectancy.

The literature review in this study included studies that provide a background on the health and cultural customs in Nigeria, showcasing difference between the Nigerian and the U.S. health management and self-care efficacy. Corresponding to the theoretical foundation of this study, a qualitative, quantitative ethnographic methodology was chosen to conduct research on the health of immigrants who work in the United States Heath care System following their arrival from Nigeria.

Societal Changes and Influences of Culture on Health

In order to understand the cultural perception of health and health practices among ethnic groups like Nigerian immigrants, it is important to revisit the evolution of humankind (Chirot, 1994). Chirot (1994) indicated, “The cultural forms elaborated thousands of years ago have remained unchanged or that what we believe to be their message is exactly what they felt at the time” (p. 86). Although no culture is said to be static, Chirot (1994) indicated that the evolution of the modern cultures could still be traced to the primitive year’s influence of the original culture and practices.

Scholars are studying why some cultures view health as least priority while others see it as a vehicle to effect societal change.

Africans, especially Nigerians and other cultures in developing countries tend not to protect health but rather attend to health as needed. Culturally, certain health perceptions may have indirectly affected the negative health attitude and behavior adopted by Nigerians and other African American minority subgroups (Markus & Kitayama, 1991). The extent to which these maladaptive perceptions of health behaviors are affecting the health and ability of these groups to compete with the rest in health promotion and disease prevention may be answered through research. As a result, health deviations in many countries of Africa and Asia are viewed as a lack of harmony between the body and the environment or in extreme cases, attributed to an ancestral way of marshalling punishments for atrocities committed by the afflicted or sometimes their families (Markus & Kitayama, 1991). The latter about health deviations often lead to negligence, social isolation, ostracism, and inability to seek medical care (Geschiere & Meyer, 1999).

Evolutional cultural changes is credited for some of the medical changes that occurred in our human cultures, especially in the developing countries, however, the new technological products and procedures have developed so radically that less attention is paid to health of the societies. Community development theory suggests a balance respect for healthy thriving of both tradition and social invention (Helman, 1991). The neglect of the basic health practices which including exercise and obesity control among others, have lasting consequences. Communities must strive to maintain optimal health practices and innovations while working to avoid inclinations

towards blindly following traditional patterns and practices that will alter people's health and ecological situations. According to Chirot (1994), "Human culture evolves much more quickly than human biology . . . and peasants whether formally free or as often happened bound to the soil by their masters, by slavery or serfdom did not have the option of cultural ground visions and ethical systems" (p. 97). Enculturation occur in every societal culture, which often is positive but may result in negative health practices. The later is the case especially when deficiency in education and basic health knowledge is predominant. As Chirot indicated, health evolution occurs at a more rapid pace, which explains the reason behind acceptance of western health concepts in the rural area and sometimes among the urban dwellers. A case of cultural practices overshadowing western health practices among urban dwellers is evident in some parts of United States, where group of parents are against childhood immunizations, despite state laws to the contrary.

Often societal needs are ignored due to an inability to properly assess the needs of the community (Chirot, 1994). The principal of social justice according to Chirot (1994) should be adhered to and should be based on the individual and community need. The concept of societal needs must be well understood in other to justifiably allocate resources based on the need of the society (Chirot, 1994). Needs-assessment will begin with needs identification that should specify how needs would be met, and the modus operandis for successful needs implementation. Health needs among minorities, including Nigerians, are displaced by economic needs in a system where concepts like health and wellness may be placed at the bottom of the priority need list, thus paving way to massive influx of Nigerian health care workers to the

western countries, especially to the United States (Chirot, 1994). In most African countries, poverty is a direct result of combination of effects of oppression and erratic economic decisions made as a resultant effort to maintain global trade agreement with the Western World, notably economic agreements between many developing countries and International Monetary Fund (IMF), and World Bank, which culminated to the devaluation of the countries' currencies and removal of their oil subsidies (Hicks et al., 2003). Those countries that engaged in trade agreements with IMF and World Bank, following the successful procurement of the loans, experienced deep recession with worsening economic conditions that affected among other areas of development, health care availability, affordability, and accessibility (Jensen, 2004). Unless the community considers a practical solution to bridge the poverty gap, curtail social inequalities and place more emphasis on health of the people, the society health will continue to deteriorate therefore it became critical to formulate several factors that influence and affect migration state in addition to ascertaining the factors that deteriorate this populations' health and compromise their welfare.

Health of Nigerian Migrant Populations

The health of the migrant worker has been documented as being in better state when compared with their host country populations. A phenomenon known as "The healthy migrant effect" is said to occur as a result of the stringent selection processes instituted and for which every labor migrant must successfully undergo and complete prior to arriving at their work destination (Llacer et al., 2007). Because most people who migrate to foreign counties aim to work for wages, the workers who successfully complete the processes are often the healthiest and the most energetic, best suited to

overcome adversities associated with migration to another country (Llacer et al., 2007). Also, in a regularized migrations process, excellent health is a precursor to clearing the required comprehensive medical screening before entry is authorized. According to Llacer et al. (2007), shortly following migration, immigrants' health status begins to decline and chronic health conditions, such hypertension may manifest as a health variance.

According to Llacer et al. (2007), three dimensions form the basis for social inequalities, which includes gender, ethnicity and social class. The efficacy of empowerment to augment health is defined by the WHO (Chua & Iyengar, 2006) as "a process by which people, organizations and communities gain mastery over their affairs" (Chua & Iyengar, 2006). Empowerment is shown to have the greatest impact on migrant workers with economic hardship prior to migration, especially on the migrant women's health life which indirectly affects the quality of life of the entire family, including the children (Llacer et al., 2007). In the case of the female Nigerian migrant, empowerment means the ability to change the cultural role of a housewife to the head of house with the stresses that are associated with such male dominated situations. In an effort to acquire personal autonomy and able to navigate the traditional roles that gender plays in the country of origin often crates family conflict adding to the stressors that may affect health among this population (Llacer et al., 2007).

Nigerian migrants moving to industrialized countries, encounter different disease and death patterns characterized by increase morbidity and mortality rates. The stress associated with migration often proves detrimental to both the physical and

psychological health of all immigrants, with the most effect evident among illegal migrant workers who in addition to health variances is faced with fear of deportation and the agony of failure (Llacer et al., 2007). On arrival to their country of destination, Nigerian immigrants are faced with problems associated with enculturation as related to physical and socioeconomic environment (Llacer et al., 2007). These environmental events may influence health, leading to psychosomatic-related illnesses, such as hypertension. The absence of a cultural-tailored program that would immense this vulnerable population into the system, has led to present health variances, ranging from complex structural factors as seen with employment navigation, to health-related individual variances affecting self-efficacy and health-management behavior issues as seen with undiagnosed, uncontrolled hypertension, and its many disability complications.

Social Inequalities and Health Consequences

Many developing countries and minority races or cultures in the world are faced with social alienation stemming from poverty and illiteracy. Consequently, health practices reflect the volatility of lack of capital and understanding of what determine wellness. People of low socioeconomic group have health issues are that affect not one or two organs dysfunction but rather multiple organs disease failure, which may not be easily identified due to affordability and accessibility of health common with the population (Wilkinson, 1996). Because of competing interest in the world today, the poor and the low socioeconomic group pay little or no attention to their health. As a result of health complexities with people of low socioeconomic groups, homeless shelters are becoming “mini hospitals,” some of which house the

medical staff onsite, in other to accommodate emergency medical conditions of the residents (Goodman, Saxe, & Harvey, 1991). The average man or woman seeking for food at the outreach program no longer fits the stereotype of a homeless person, but rather the list is a representation of both white and blue collar jobs holders. Typical homeless roster include professionals, former executives, artists, laureates, and other dignified professions and egalitarian members of the society, who were unfortunate with life realities (Peters et al., 2006). Although individuals of low socioeconomic groups are synonymous with health variances, other social behavioral issues are known to afflict this group as well. These societal issues in addition to poor health status include poor health maintenance, noncompliant with treatment modalities, hypertension, nicotine and other substance abuse and dependency, HIV/AIDS, Hepatitis C, ear infections, dental carries, diabetes, chronic wound infections especially with methacillin resistant staphylococcal aureus (MRSA) infection, community acquired pneumonia, multi-organ dysfunction failures, lack of support system, and lack of health insurance coverage (Hicks et al., 2003).

According to Cowen (2000), early socio-cultural evolution theories indicated that societies develop from a primitive state and gradually become more advanced and civilized over time. This concept is not only evident in cultural, educational, and technological evolution but also in health and wellness changes. Minority races are yet to embrace the health philosophy, a great oversight by all the theorists so far reviewed for the purpose of this text. Therefore, people of low socioeconomic group are known to have worse outcomes of preventable diseases (Cowen, 2000). Preventable health deviations like breast cancer, testicular cancer, hypertension, and

lung cancer related to smoking, diabetes, renal diseases, and obesity are some of the health issues that are preventable but still with high mortality and morbidity rates among people of low socioeconomic group and minority race. The obesity rate among African-Americans has reached an alarming rate, and, according to research, is the most single cause of co-morbidity for other known preventable health conditions that prey the society today (McNamara, 2003). Hypertension prevention and treatment among people of color, especially in people of African descendants, both the elite and the poor socioeconomic groups, had proven to be a challenge to medical practitioners. With obesity leading the chart as a predisposing factor to hypertension, lifestyle, attitude and behavior had become important yardstick to measure health and wellness. Again as a result of competing social interests individuals of African descent with known genetically predisposition to hypertension, have vehemently refused to embrace the concept of health and wellness (Messerli, Ritz, & William, 2007). Emphasis if any is placed on curative rather than preventive medical practices. Since hypertension is a disease with minimal external debilitations, but with long-lasting internal organ damage and sequella, individuals afflicted with this disease usually do not seeking medical help until when multi-organ dysfunction become evident with poor prognosis and high medical cost. Even with obvious high number-recordings indicative of long standing, uncontrolled hypertension, which is made worse by the asymptomatic nature of disease condition of hypertension (Eckersley, 2000) Nigerians are adamant in accepting the fact that hypertension affects African-Americas more than any other race. These very preventable modern conditions according to Eckersley, are no less a socioeconomic flaw than issues like

suicide, all of which occurs due to the growing health gap widening health status of the privileged rich against the disadvantaged poor. Eckersley (2000) rightly describe the trend, when he stated, “As health and society are so closely tied together, the society tells us about health and learning health is like studying the society” (Eckersley, 2000). The urgency in medical attention paid to psychosomatic conditions like suicidal ideation with low morbidity and mortality rates, is indicative in hypertension and high cholesterol that have more prevalent mortality and morbidity rates than suicide. In a society where many are competing for health care availability, affordability, and accessibility, in the face of increasing health insurance premium and stringent protocol for the procurement of health insurance coverage, the poor and low socioeconomic groups stand little chance of making the health coverage lists (Eckersley, 2000). Health coverage through Medicare and Medicaid for the poor and uninsured still poses restraint of bureaucratic magnitude. The resultant effect of a combination of lack of insurance and health discrimination of the homeless and the uninsured led to the use and abuse of the hospital emergency rooms, which are used as point of care or primary contact by the uninsured. Present policy in place that prohibit Hospital’s Emergency Room from refusing care to individuals that seek medical help from ER, had made possible for patients that would otherwise not received care in an out-patient medical facility, to attend to their medical needs (Messerli et al. 2007). Since the cause of medical care sought from the emergency departments is usually much higher, inappropriate use of emergency rooms for medical care not only delay response time for attendance to real emergency

conditions, but drive the cost of health to the disadvantage of taxpayers (Ong et al., 2007).

The classical social evolutionists associated with the writing of social theorists like Herbert Spencer as seen in 19th century, introduced the concept of the "survival of the fittest." Such a social evolution affects biological phenomenon, which is the basis of social behavior. Behavior acquisition is often influenced by other variables that directly or indirectly affect ones health. Wilkinson in his book argued that statistically, the death rates in different social classes or income groups differ by about fourfold, indicating the importance and the influence of social and economic determinants of health (Wilkerson, 1996). Invariably, in a world were only the fittest are expected to thrive and survive, the standard of living and the poverty status are compounding variables to health and wellness state, both in the developing and developed countries. Cowen in his book agreeably indicated that effective health prevention is dependent on the correlation between social and economic well-being and the societal health and wellness (Cowen, 2000). Perhaps understanding the relationship between culture, social and economic status and ones state of health and wellness might help to stipulate the kinds of polices that might be beneficiary in bridging the health disparity among people of low socioeconomic group and certain vulnerable races, as seen with Nigerians. In a similar topic of health and wellness, Wilkinson stressed that lower class health is one ridiculed by multi-organ failure and dysfunctions, accounting for death rate for 78% men and 82% for woman, occurring more in blue collar than in white collar workers (Wilkerson, 1996). Statistically, these figures are staggering and the numbers bouncing off the health record since no

meaningful needs assessment and medical interventions is propagated for the at risk groups. Inadequate knowledge regarding the risk factors of the preventable diseases and health conditions, resulting from little or no basic education and attitudinal influence, prevalent with the poor and the low socioeconomic groups, is a huge factor for consideration. Health education at the grass-root, particularly targeting children in elementary and high schools, will increase societal awareness and result to increase participations in health and wellness, among adult populations (Pouter et al., 2003).

Essential Hypertension

Essential hypertension also referred to as idiopathic or primary hypertension refers to persistent elevation of systolic blood pressure (SBP) and/or diastolic blood pressure (DBP) at or above the normal parameters of 120 mmHg SBP and 80 mmHg DBP on at last three conservative readings, and is responsible for approximately 95 percent of all patients with hypertension (NHLB, 2003). In view of the varied numbers involved in high blood pressure, the illness is classified under categories based on the systolic, the diastolic, and both numbers, as evident by increased blood pressure the average readings taken at one, two or more visits after the first pressure reading (NHLB, 2003; Wang & Vasan, 2005).

The risk factors for developing hypertension are not fully understood; however, there is a general notion that the risk factors are a heterogeneous combination of both the environmental and biological factors. The disease continues to ravage increasing morbidity and mortality rate among cardiovascular disorders in the United States, inflicting health variances to over 60 million Americans over the age of 60 years (Wang & Vasan, 2005). High blood pressure is more prevalent in males than females and higher

levels seen with people older than 65 years than in younger population. Despite increasing awareness, hypertension remains a health variance with great impact because it has virtually no early warning symptoms and many individuals with hypertension are unaware of the existence of the illness in their system. According to Sowers et al. (2002), the prevalence of hypertension increases with age, affecting people of color more commonly than their White counterparts. The prevalence of hypertension in young adult and middle age population appears higher males than seen in females; therefore, young adults are at greater risk of complications resulting from unattended hypertension. Hereditary factors are exerting greater influence in the pathogenesis of essential hypertension. Children with one or even two parents with a history of hypertension are at greater risk of developing the disease. In considering the role of environmental factors as contributory factors to hypertension, obesity, increased salt intake, smoking, chronic alcoholism, medication effects, and conditions like extensive burns have all been linked to hypertension. Various studies showed a positive correlation between obesity and inactive lifestyle in African-American women with hypertension (Sowers et al. 2002). Recent studies have revealed the cardiovascular morbidity and mortality increase as both systolic and diastolic blood pressure rise and in individuals over 50 years of age, the systolic blood pressure is a better predictor of complications (NIH, 2003; Wang & Vasan, 2005).

In a study involving 1,893 African Americas with variety skin shades or colors, interaction with skin reflectance was a predictor for blood pressure levels (Sweet et al., 2007). According to the findings of the study, data revealed that among lighter skinned African Americans, systolic blood pressure decreased with increase in income, while

systolic blood pressure increase with income among those with darker skin (Sweet et al., 2007). When compared with hypertensive European American males and females with their African American counters, African American females with hypertension have an overwhelming increase risk for heart disease and in young adults cardiovascular disease prevalence is much higher in African Americans when compared with their White counterparts. Equally disturbing is the report that in addition to racial differences in the incidence of hypertension, there appears to be significant differences in the blood pressure pattern seen over the entire 24-hour ambulatory period, with African Americans showing significant higher nocturnal blood pressure and a smaller difference between daytime pressures. Usually, at night the blood pressure drops slightly, referred to as "dipping," but when compared with European American, African Americans have minimal drop. The inability for drop blood pressure among this population is said to be significantly related to increase rates of cardiovascular disease among this ethnic group (Jones & Hall, 2006).

Other social and economic variables associated with high blood pressure include heath care and heath care information accessibility, educational status, unemployment and employment status, individuals' income level, area of residence, and utilization of medical services (Sowers et al., 2002).

Secondary or Nonessential Hypertension

According to Sowers et al. (2002), approximately 1% to 3% of hypertension cases may be attributed to other diseases as the causative risk factors. Most commonly, secondary hypertension is attributed to kidney disease, obesity, cigarette smoking, pregnancy, drugs as seen with contraceptives, renal artery stenosis, coarctation of the

aorta, diabetes, and other related endocrine diseases, including a rear condition known as pheochromocytoma, which characterized by persistent hypertension despite pharmacological intervention. If left unaddressed, this silent killer could result to serious health conditions as seen in arteriosclerosis or atherosclerosis, enlarged heart, heart attack, stroke, vision impairment, and kidney damage. The efficacy in the treatment of secondary hypertension lies in the identification and prompt treatment of the cause (Ogedegbe et al., 2004). Regardless of the type and cause of hypertension, the hallmark of management is maintaining systolic blood pressure of that falls below 140 mmHg and diastolic pressure of below 90 mmHg, in both diabetic and non-diabetic patients (Ogedegbe et al., 2004). Notable biological or genetic variables that contribute to secondary hypertension include abnormal percentage of body mass index, cardiovascular sequel, hyperlipidemia, hyperglycemia, hyperinsulinemia and insulin resistance metabolic state, ventricular hypertrophy, kallikrein-kinin level, left ventricular hypertrophy, prostaglandin level, rennin level, salt sensitivity, vascular disease, and waist-line adipose tissue accumulation with resultant increase in waist circumference (Sowers et al., 2002).

Barriers to Adherence

When compared to many other chronic health conditions and illnesses such as coronary artery disease, which manifest with chest pain that sometimes radiates to one shoulder and with shortness of breath even at rest, or gastric esophageal reflux disease with known agonizing symptom like heartburn, symptoms associated with hypertension are very insidious (Ong et al., 2007). According to various studies and theories reviewed, hypertension (HTN) remains more prevalent and relentlessly severe and responsible for

disproportionate numbers of premature disabilities and deaths from heart attack, cerebral vascular accident, and chronic renal disease including end-stage renal disease among African Americans when compared to other racial and ethnic groups in the United States, and with negligible symptoms that will otherwise alert the victims to seek for medical help (Kawachi & Berkman, 2003). The current thinking about barriers to adherence to medical treatment is sometimes controversial and said to be the contribution of racism. Minority groups find it difficult to function with reduction and inequalities in wealth, partly due to generational poverty, making it difficult to afford health insurance coverage and medication procurement. Health services even when located at disadvantaged neighborhoods are mostly staffed by members of not same race the at- need population, but rather members of the racial and ethnic majority, polarizing the minority race trust in the health care delivery system (Llacer et al. 2007). Inequality in education, inadequate health education, unfriendly health care delivery system, and distrust in the health care system may be contributory factors to lack of compliance to medical treatment seen among minority population (Bhopal, 1998).

The initial onset symptoms of hypertension appear to be so inconsequential. In addition, African Americans, especially males, have limited contact with the health care delivery system, which, as a result poses considerably lower rates of hypertension detection and treatment (Ong et al., 2007). Therefore, it becomes convincingly evident as to the reason supporting the decision why many minorities go undiagnosed, why many others even with a confirmed diagnosis, and fail to take the diagnoses seriously enough to seek for medical help. Although the clinical onset of hypertension could linger undetectable, the long-term effects and complications of the disease are life threatening

and put overwhelming strain on the health care cost of the nation. These complications include heart attack, stroke, and end-stage renal disease, among others (Hyman et al. 2001).

Another barrier to adherence in hypertension treatment is the relationship between health-perception, self-efficacy practices, health-management, and medical decision making modalities (Peters et al., 2006). In a seminar entitled "Promoting Health for Culturally Diverse Workforce: The Impact of Racial and Ethnic Health Disparities on Employee Health and Productivity," the article revealed that Dr. Carol Scott of The Medical Education Group, a private health care organization in Baltimore, MD, discussed the role of race and ethnicity in health care decision making. The speaker engaged participants in a provocative discussion that outlined effective ways for health care providers to engage patients in health talk (DHHS, 2001). Utilizing a scenario depicted from an episode of a popular television program ER*,* Scott drew attention on how unconsciously and subconsciously racial bias can play a role in the individual's ability to adhere to medical decision-making. The critical point made in the discussion is the fact that although race plays a contributory role in the racial and ethnic disparities in health, the major factor negatively affecting disparities in health care is directly related to how different cultures defines health and illness and the effect of such cultures on the individual's decision on seeking health care (Nesbitt & Victor, 2001). According to Scott, individuals, because of their earlier exposure to their cultures, emulate earlier on in life from their culture, ethnicity and identity groups how to recognize, maintain, and manage illness, which sometimes impedes one's decision as to when an illness is serious enough to seek for medical help. The cultural influence may explain the lay-back attitude often

adopted by Nigerians and other African Americans towards health care decision-making, as the culture support the notion that "if it is not broken, try not to fix it." In the discussion, Dr. Scott described the four models attributes of the physician-patient relationship to characterize the philosophies often overlooked that may be influenced by the patient's cultural values (DHHS, 2001). These attributes according to Dr. Scott include physician's willingness, patient values and culture, patient autonomy and physician's role that is often seen as multidimensional which features multiple roles of the practitioner, from being a confidant, clinical expert, psych-counselor, friend, adviser, teacher, and guardian (DHHS, 2001). As indicated by Scott, current research supports the findings that patients' seeking for health-related information supersedes the desire to be become part of the health decision-making. Yet many health care practitioners tend to neglect and underscore the importance of patient's information, often letting the prescribing-decision be guided by perceptions of the patients' expectations (DHHS, 2001).

Equally significant in the adherence to the treatment of hypertension is the prescribed treatment regimen associated with the illness. The typical treatment for hypertension involves taking medication, checking of blood pressure for life, in addition to dietary modifications of low sodium, low fat, and low cholesterol diet (Bennett, 2004). Some of the medications include diuretics which are components of the medication that cause frequent urination and running in an out of the restroom. Although there is no research to support the belief that hypertensive medications are associated with erectile dysfunction (ED), most Nigerians and many other African American sub-groups perceived this notion statement to be false, believing that hypertensive medications lead

to erectile dysfunction, rejecting the theory that untreated and uncontrolled hypertension is indeed the cause of erectile dysfunction (Boyd et al., 2000). Therefore, the trend of non-adherence to antihypertensive is a problem for most African Americans diagnosed with hypertension. Also as part of the regimen for hypertension control and very encouraged are regular exercise and maintenance of ideal body mass index (Llacer et al., 2007). Especially among Nigerians, exercise is perceived as a luxury rather than an interventional modality that makes significant difference in many diseases associated with racial and ethnic disparities like obesity, high cholesterol, diabetes, and cardiac diseases, in addition to hypertension control (Sharkness et al., 1992).

In support of cultural influence in hypertension treatment, Dr. Scott presented evidence suggesting that medical schools and other allied health schools lack teaching in cultural diversity and where offered, is for the most part limited (DHHS, 2001). According to the data presented, only 8% of the schools had a separate course on cultural diversity, while only 28% of the medical schools teach about African Americans and health, 26% deliberate on Latino cultures, and only 35% visited the minority group cultural issues of health significance in their state (DHHS, 2001).

Research has shown that out of the 40 percent African Americans affected with hypertension with blood pressure being controlled with medication to the recommended value of below 140/90, less than one third of this population of high risk individuals have their blood pressure controlled (Sweet et al., 2007). In the other two thirds of the population, hypertension is either not treated or sub-normally treated (Sweet et al. 2007). Despite plausible research and its many efforts in identifying the resultant health effects of untreated hypertension, including death, there is no convincing reason why individuals

with hypertension fail to seek medical help. In some of the studies reviewed, non-compliance to medication is identified as the major reason for failure to bridge the disparity gap in hypertension (Ogedebge et al., 2003). This, according to the study conducted by Sweet et al. 2007, the perception attributed to the patient perception that hypertension is a symptomatic condition which is an erroneous concept. In a cross-sectional study conducted on outpatients U.S. military veterans, although over 70% viewed hypertension as symptomatic, the symptoms were not significant enough to be associated with increase in medication compliance (Sharkness & Snow, 1992).

Peters et al. (2006) examined qualitatively the role of attitudes and belief of African Americans in hypertension-prevention self-care behavior. The study interviewed five focus groups with the questions loosely based on the Theory of Planned Behavior (TPB) with the conclusion that individuals perceived themselves as integral part of the community, which ultimately stipulates the acceptable norms for culturally acceptable health behaviors. Health behaviors, according to the study, are transferred from generation through emulation of the elders of the society; the older members of each household are culturally responsible for the health care of the other members. Individuals and members of the culture whose health behavior practices are contrary to the societal norms are viewed as nonconformists and moving outside the culture (Peters et al., 2006). This philosophical construct of cultural health practices places a huge barrier to adherence to medical regimen. Because hypertension morbidity and mortality rates are rising at an alarming rate due to the lack of obvious symptoms associated with hypertension, by the time the system is “broken” to alert the individual to seek medical help, cascades of multi-organ failure are inevitable. Kidney failure, ophthalmic

complications, coronary artery disease, and acute coronary syndrome account for most of the mortality associated with untreated hypertension (CDC, 1998; NIH, 2003).

Psychological and Social Factors Affecting Adherence

Although it is unclear why hypertensive patients fail to adhere to treatment modalities and recommendations, several psychosocial variables may contribute to poor treatment adherence. Attitudes, knowledge, values, beliefs, self-efficacy, self-care practices, and problem-solving ability to directly impact health behaviors known to influence lifestyle changes and decrease adherence to recommended treatment (Des et al., 2004; Peters et al., 2006). Some authors indicated that individuals differ in the perception of a stressful event and the manner a person appraises and determines how to cope with such stress (Milchak et al., 2006). According to Seaward 2004, personality component of hardiness may directly affect the persons' coping mechanism negatively or positively, influencing stress level (Seaward, 2004). In his effort to study the responses of individuals towards adaptation to chronic illnesses such as hypertension, diabetes mellitus, and rheumatoid arthritis, jet another author formulated the effects of health-related hardiness on individuals' health decision making self-management (Pollock, 1984). The Health-Related Hardiness Tool is designed to three social attributes: (a) adherence or to agreed to commitment and ability to effectively institute positive coping mechanisms needed for effective adaptation to conditions as seen with chronic illness; (b) ability the control ego reward needed which is necessary for cognitively analyze and effectively institute positive health habits and interventional modalities, known as the control dimension; and (c) individuals assessment of the conditions that significantly

affect their health as either potentially positive or negative, based on these cognitive assessment referred to as challenge domain (Pollock, 1986).

Other confounding variables in the consideration for the psychological and social factors that affect treatment adherence to hypertension include lack of knowledge, as seen will illiteracy as well as lack of health insurance. In a study conducted by Ayanian et al. (2003) on uninsured adults, evaluating the prevalence of undiagnosed hypertension and hypercholesterolemia among the population of interest, the findings supported other data that individuals without health insurance are less likely than insured adults to receive routine checkups or preventive, including screening for hypertension and hypercholesterolemia. Among adults with hypertension and hypercholesterolemia, uninsured adults were significantly more likely than insured adults to be unaware of their condition, with less access to health care, and unaware of their hypertension condition (Ayanian et al., 2003).

According to the Theory for Reasoned Action, the immediate determinant of active self-care is intention, which in turn is determined by attitude to and social norm on self-care (Ajzen & Fishbein, 1980). Attitudes are beliefs and opinions which propel and govern an individual to behave in certain ways or as the case may be, act in a peculiar way (Allen & Santrock, 1993). Ability of the patient to comply with recommended treatment modalities is considered an attitude, which determines the individual acceptance of the recommendations by health professionals (Fitzgerald, Anderson, & Davis, 1995). The hypothesis therefore is that if hardiness has a direct effect on a person's ability to cope with stressful situation like an illness, and if attitude could determine self-care behavior, both hardiness and attitude could have a positive

relationship to self-care adherence to medication compliance among adults with hypertension (Rose, 2000). The results of this study would contribute immensely to the body of information and to clinical database, which will support medical practitioners in tailoring interventional modalities for effective interventions that will increases medication adherence in hypertension control, especially among Nigerians with higher prevalence to the disease.

Elevated blood pressure is associated with racial discrmination at work , exposure to movie scenes that display angry and racist confrontations, and an internalized reaction to racial discrimination and unfair treament (Krieger & Sidney, 1996; Nesbitt & Victor, 2004; Rich & Ro, 2002; Siegrist, 1996). According to one descriptive research study, there is overwhelming evidence that blood pressure among the U.S. minority polulance may be highest among individauls who actively strive to overcome adversity but have limited socioeconomic resources. Equally significant is the conception as per research findings that elevated blood pressure is predominant among persons employeed in stressful jobs who otherwise report low job stressor cores (Krieger & Sidney, 1996).

In view of extensive publication of the seven guidelines for the treatment of hypertension by the National Heart, Lung, and Blood Institute (NHLB), hypertension control remains suboptimal. Based on literature reviewed, approximately 40% of the 50 million individuals in the United States, which includes Nigerian immigrants, who are afflicted with high blood pressure remain untreated, while 66% of known hypertensive patients' obtain blood pressure indices that represent values much higher than NHLB recommended values (Milchak et al., 2004).

Literature Related to the Methods

Mixed research methodology involving the use of multiple methods had paved way to results that showcase broader perspectives on the problem of culture and health. Similarly, results from or more methods often increase credibility of the findings, allowing for the research problem to be examined from different angles. The broad area of social research encompasses measurements procedures that involve engaging questions of study participants. In this study, a combination of paper and pen questionnaire feedback form and an in-depth focus group interview, utilizing open-ended questions to extrapolate crucial information pertaining to their ability to self-efficacy and self-management of hypertension. A group-administered questionnaire involves sampling of the population with the study participants asked to respond to structured sequence of questions, administered in a group setting for convenience (Trochim, 2001; Molina-Azor, 2011; Hesse-Biber, 2010).

Qualitative technique which involves the use of open-ended questions when combine with quantitative method enables the collection of limited data in an issue that otherwise will be difficult to answer in the structured format. The use of group-administered questionnaire in the form of a focus group interview enabled each respondent to describe their self-efficacy and practices and how that influence management of their hypertension condition (Ulin et al., 2005). In the focus group interview, the researcher moderated the sessions, allowing the participants ample time to narrate their experiences while recording and taking notes of pertinent information valuable for data analysis. Selection of appropriate study survey is the most crucial

decision in any social research context. Therefore, in an effort to ascertain strong relationship between hardiness, attitude, and hypertensive self-efficacy, the researcher combined qualitative and quantitative methods in this study (Bryman, 2006; Trochim, 2001). Using the life experience narratives, the present study investigated process of self-efficacy and self-management modalities of 30 Nigerian health care workers diagnosed with hypertension (Babbie, 2007; Ulin, Robinson, & Tolley, 2005).

Mixed methods have been described as the most strategic and complete modality that encompass the most critical design of qualitative and quantitative methods. According to one of the articles reviewed, researchers often over look the crucial issues that occur while conducting a mixed method research. The author argued that most of the incompatible problems encountered in a mixed method research could be avoided by what was described as an "armchair walkthrough" (Morse, 2010; Ulin, Robinson, & Tolley, 2005).

A similar article reviewed pointed to methodological practices can influence how a mixed method is carried out in other to visible identify methodological assumptions often embedded in mixed method research which may influence large portion of the social inquiry. The article argued that placing quantitative research first over qualitative piece second in a mixed method, indicating that focusing on positivism in a mixed research method will empower individuals (Hesse-Biber, 2010).

Conducting reputable research involves acknowledging that the issues at stake are important to the researchers as evident through informed consent, participants' observations, interviews, reciprocity, and events accurate documentation. Posing questions in a focus group setting that arise during the research, that will contribute to

continuing conversation and meaningful discussions will pave way to conducting respectful research and cultural practices with mixed method with focus group. The essential importance of interaction for producing the data in focus group in that reporting and quotations from a single individual is the most efficient and effective modality to accomplish the study's objectives (Morgan, 2010).

Literature Related to Different Methodology

Additional Literature Related to Study Methodology

In reviewing other study methods employed in mixed method research, a study that utilized focus group methodology indicated that while examining three different projects, the researcher was able to assess some of the strengths and challenges of the focus group as a research method. In addition, the study analyzed the design and implementation of focus groups, including information on participant recruitment, the most effective group size, group composition and issues of segmentation, how to carry out focus groups, as well as the ideal number of groups to conduct. The study concluded that use of focus group in a qualitative may serve as a social support or empowerment function, and this research points to the strength of using this method with marginalized, stigmatized, or vulnerable individuals as seen with Nigerian health care workers (Peek, 2010).

The focus group method often refers to as team research enables for the collection multiple and often conflicting information and stories about the individuals' experiences, values, practices, and family migration status. In an effort to illustrate and buttress this point, a researcher discussed a study if settlements and migration of East Africans in Vancouver, Canada. The study discussed the experience of the immigrants, utilizing focus group method in addition to household interview strategy and post interview

dialogue, with an advantage of depicting the participants' own words; however, the large body of information may sometimes pose difficulty during data summation and coding, requiring the help of outside coders to help aggregate the data (Houston, Hyndman, Mclean, & Jamal, 2010).

In a study by Oliver, Serovich, and Mason (2005), the complexities of interview transcription were discussed. The authors described transcription as a powerful act of representation, indicating that the process could be accomplished in different ways, often involving the process termed as naturalism, a powerful act of representation. Transcription as stated by the authors, allows the researcher to capture every utterance in as much details as possible and/or denaturalism involving grammar correction, removal of interview noise such as stutters, pauses and hisses. Other methods denaturalism involves standardization of non-standard accents all of which place constraints on the transcription process. The authors suggested that researchers incorporate reflection into their research design through interrogation of the transcript process and the possible impact the decisions could inflict on participants and the research outcomes. The methods often utilized in focus group data collection enables the researcher to collect unbiased opinion of the study participants.

The importance of sampling and recruiting process for the focus group became the area of discussion for author MacDougall and Fudge, while discussing the process for planning and recruiting the sample for focus groups and in-depth interviews. According to the authors, a three-stage checklist is a strategy to addressing some of the problems encountered in focus group sessions, which involve prepare, contact, and follow-up with the subjects. The contact stage involves negotiation with key contacts and potential

participants, confirmation, and plans for continued involvement with the research process (MacDougall & Fudge, 2001). In this study, the combination the process discussed above and the addition of the focus group helped allay the participants' anxiety and created a calm atmosphere that enabled the participants to narrate their experiences without fear or stranger anxiety.

Qualitative focus group data analysis involves quick word counts to laborious, in-depth, line by line scrutiny of the responses from the study participants. Techniques for analysis of the words includes notation of word repetitions, key-indigenous terms, and key-words in context. Also larger block of texts are compared, and contrast, applying the technique of social science queries that enable the researcher to search for missing information, conducting analysis of missing linguistic features like metaphors, transitions, connectors, including sorting out of procedures (Babbie, 2007).

Theoretical Bases of Potential Effects

The theoretical underpinning for this study is embedded in Albert Bandura's social cognitive theory. Secondary theoretical framework integrated into the study includes Orem's self-care theory and the theory of reasoned action postulated by Fishbein and Ajzen, 1980. The constant exposure to any given form of behavior, either cultural attitude or hardiness, can challenge the observer's perceptions about a desired behavior. Hardiness directly affects a person's fortitude and meaningful capability towards coping with stressful situations, and if attitude could determine self-care behavior, both hardiness and attitude could have positive relationship to self-care adherence (Orem, 1991). Based on the analysis of the theory of reasoned action, the known drive of active self-care is intention, which is determined by attitude to and social norm on self care (Azjen &

Fishbein, 1980). These three theories show different perspectives on the correlation between social variables of attitudes, hardiness, self-efficacy and problem-solving capabilities influence health behaviors associated with lifestyle changes as seen with hypertension treatment adherence.

Bandura's Social Learning Theory and Social Cognitive Theory

Bandura's (1991) vastly read and documented social learning theory and social cognitive theory is the main theory used in this study. Social learning theory proposed that learning is a process of acquisition in which the individual acquires new behavior through observation and imitation. Bandura is the notion that negative behaviors are learned through observation. He argued that through the context of one's inner world, one is exposed to learning new behaviors. In his philosophical views, Bandura suggested that through the same context of knowledge acquisition, behaviors are accepted or rejected. The social learning theory postulates that behavior are accepted, adopted, modeled and/or challenged through the process of observation or acquisition. As shown in research studies, if observable behavior is attractive or appealing, the likelihood increases for imitating that behavior (Bandura, 1991). The Nigerian health care practices from ancestral and cultural modeling is very fragmented and complex, and may have led to the callous attitude seen with health and wellness maintenance among this high risk population.

In the Nigerian culture, social learning which also includes health perception and practices, involves close observations of specific health behaviors within the accepted societal norms. As indicated by Bandura (1971), modeling and imitating occur primarily through informative functioning. Learning acquired through observation shows symbolic

representation with significant amount of influence on the learning process. Based on Bandura's philosophical view, observational learning in human involves two primary components: imagery and verbal. The process of acquired learning transferred from the elders in Nigerian culture may negatively affect health perception due to the complex health practices, believe and use of non-traditional methods for health and wellness maintenance. According to researchers, the risk of death associated with hypertension mortality in rural Nigeria increase by 60 percent for mere increase of 20 mmHg increase in diastolic blood pressure, attributed to behavioral influence of the people (Kaufman et al., 1996).

Bandura (1971) provides a useful yardstick for measuring the effect of Nigerian culture on attitude, belief, hardiness, perception, values and self-efficacy (Pollock & Duffy, 1990) and perceptions among Nigerian health care workers, members of ASA USA in the United States. Social learning theory is less concern with the individuals' cognitive skills, rather is more focused with environmental influences, peoples' behavior and personality traits can influence a person's ability to acquire and learn new behaviors (Ormond, 1999). The relationship between behavioral, environmental and personal factors is related to Bandura's reciprocal determination causation model, which postulates that personality factor can influence both behavioral and environmental factors and vice versa. This phenomenon could be applied to explain how specific cultural practices affect individuals differently, especially in a culture like Nigerian with over two thousand varied dialects, all complexly equipped with different self-efficacy practices and health perceptions.

Self-Care Practices Concept

According to Orem (1991), self-care reflects the practice of activities of daily living and the functional activities individuals engage in routinely in an effort to sustain life or maintain health status. Several studies have linked African cultural self-care practices as positive health maintenance modality; however, the certain health self-care practices depicted in African culture had proven to be detrimental to health. In a study of Kenyan Luo migrant study on hypertension effects, the researchers indicated that the individuals' ability to meet their care needs in other to maintain life and improve their health lacks efficacy (Poulter et al., 1990). Based on Nicholas (1989) analysis, Orem's concepts of self-care agency and hardiness shared similar concepts and sometimes exhibits close ideology.

An individual's ability to engage in self-care practices may be influenced by factors controlling genetic disposition and sometimes environmental influence as seen with racial and ethnic cultural factors, life-style practices and self-efficacy health perceptions (Orem, 1991). Similarly, hardiness can be influenced by the individual's capabilities, knowledge, health perceptions, beliefs, values, culture, racial and ethnic practices and self-efficacy practices. As indicated in some research, both self-care and hardiness characteristics develop as behavior patterns (Nicholas, 1989). In a related study, self-care model was used by Nicholas (1989) as the theoretical framework to investigate if significant correlation exists among the variables of hardiness, self-care practices and perceived health status in the elderly patients, with the presumption that health status has direct relationship to hardiness, self-care adherence and health status perceptions among the elderly. The research hypothesized that hardiness would also

affect positive effect to self-care practices. The study findings (n=72) supported the hypothesis that there is significant correlation between hardiness and self-care practices and with hardiness accounting for 46 percent of the variances in predicting self-care practices.

Behavior, Attitude, and Social Norms

The theory of reasoned action is integrated to serve as the framework for this study as postulated by Ajzen & Fishbein (1980). According to the theory of reasoned action (TRA), prior to instituting a behavior, a patient first contemplates the behavior in weighing the risks and benefits and ultimately deciding which one outweighs the other. As a result, if an individual holds the view that the risk of the treatment is far greater than the benefit compliance to treatment is compromised, regardless of what the medical practitioner or research indicated. Therefore, if an individual believes that he/she would benefit from the treatment instituted by the health care professionals regarding medication adherence in hypertension control, then the person will adhere to the regimen as oppose to the individuals who believe otherwise. Personality variables such as knowledge, attitude, age, education, culture, hardiness, gender, influence one's interpretation of one's environment and the belief that one holds (Ajzen & Fishbein, 1980). Some of the mentioned variables play significant roles in the management of hypertension among Nigerian immigrant heath care workers, members of ASA USA residing within Washington, DC, metropolitan area.

The theory of reasoned action was utilized as a framework in a study that employed both qualitative and quantitative research methods to study the relationship of chronic illness similar to hypertension, diabetes, arthritis, sickle-cell disease, and effects on

attitudes and patients' self-reported adherence to treatment modalities (n=1202) to various self-management practices by Anderson, Fitzgerald, Gorenflo and Oh (1993). The study data analysis indicated positive relationship between attitude and self-care adherence. Pender and Pender (1986) used the TRA as a framework in a quantitative correlation research to study the relationships among attitudes, subjective norms and intentions to exercise regularly, maintain or attain recommended weight and avoid highly stressful situations, all variables that could influence hypertension treatment. Since attitude and hardiness are learnt behavior, the Nigerian culture has a profound effect on the indigenes which will be answered by this study, in determining if such impact is supportive or detrimental to health of Nigerian immigrant health care workers participating in this study.

Since hardiness and self-care agency have similarities, and hardiness as a personality trait could be an external variable that could influence attitude, which in this research is a concept integrated to explain the relationship of both the theory of reasoned action and Orem's self-care theory in guiding this study. Hardiness could influence self-care behavior and stress response as well as through its influence as a personality trait on the belief an individual reacts and behave in a certain way, the notion of which will be ascertained at towards the end of this study (Pollock, 1984).

Tables Summarizing Related Studies on the Effects of Hardiness and Attitude on Health

1	Becker et al. 2001	Effect of culture on self-care among chronically ill African Americans. The root of African culture is deeply rooted in the values and cultures of their ancestors. This study found that self-care practices are more evident with individuals of low-socioeconomic status without health insurance compared with those with health insurance.
2	Brower, 1992	Cultural practices and influence on health perceptions. Cultural elements according to the study, if well addressed could be advantageous in addressing health variances like HIV prevention awareness.
3	Llacer et al. 2007	The relationship between African American culture, economic status and poverty, and the influence of these factors on health perceptions of African-Americans. As noted in the study, in poverty is related to increase in death rate among women but even more increase among men
4	Poulter et al. 1990	Migration from rural area to urban cities predisposes to health-related illness and variances like high blood pressure, increase in body weight, electrolyte imbalance increase in heart rate and increase in autonomic nervous system.
5	Kaufman et al. 1996	Impact of hypertension on mortality in African Americans population. According to the study, for every increase in the systolic blood pressure of 20mmHg in diastolic blood pressure in rural Nigeria, the risk of death increases by 60%.
6	Pollock et al. 1990	Effects of hardiness on self-care health behavior and relationship to psychological and physiological adaptation. In the study, it is indicated that hardiness characteristics has direct negative effect to participation in health promotion activities and engagement in patient education.
7	Tang & Hammontree, 1992	Effects of hardiness, job stress and life stress in relation to illness and absenteeism among Police officers. This study revealed that police officer with hardiness and high levels of stress tend to have high level of absenteeism than hardy officers with low level of job related stress.

8	Martin, Engle & Gravey, 1999	Determinants of health-related hardiness among urban African American women. This study question the validity of health-related hardiness scale based on the findings in the study, which found that years of education and function accounts for only 20% of the variance in health-related hardiness.
9	Narsavage & Weaver, 1994	Physiological status, coping and hardiness as predictors of outcomes in chronic obstructive pulmonary disease. This study indicated a significant relationship between components of hardiness and the individual's ability to walk 12 minutes in the functional status of COPD patient as measured by PFSS.
10	Menon, Morris, Chui & Hong, 1991	Effects of culture on self-care choices. According to this study, personal choices may hold as much choices for individuals from interdependent cultures as it does for those from dependent cultures, the difference lies in the perception of what constitute choice.
11	Kim & Droplet, 2003	Cultural differences in variety-seeking tendency during choice making. In studying the differences in variety-seeking tendency during choice making, the researchers revealed that when confronted with choice problem, people tend to rely on various rules to help them in the decision making process.
12	Kim & Markus, 1999	Culture and decision-making behavior. In studying the differences in variety-seeking tendency during choice making, the researchers revealed that when confronted with choice problem, people tend to rely on various rules to help them in the decision making process.
13	Harris, 2004	Association between health-value and hardiness-health behavior meditational effect for health value among African Americans. A qualitative study that revealed significant association between the variables
14	Orfali & Gordon, 2004	Association between culture and coping mechanism. An individual's culture according to the study may positively or negatively influence one's ability to take control of situations.
15	Higgins et al. 1999	Culture and ineffective coping mechanism. The relationship between these variables could be positive or negative as revealed in the study, and could impact health.

Summary

This chapter examined the current literature pertaining to effects of culture, perception, values, attitudes, hardiness and self-efficacy practices on health and wellness maintenance. Information presented in this chapter includes a historical overview of Nigerian cultural health perception and practices, the role of migration and acculturation on health, the effects of exposure to a foreign culture, and theories supporting personality development and social learning. Related literature reviewed in this chapter revealed a close relationship between hardiness and attitude and adherence to health management. Effects of choice-making decisions on self-efficacy behavior as well as cultural effects on individuals' attitude towards self-management behaviors that impact health are some of the areas of review that shaped the research questions. Other issues of importance to this study revealed in the literature review include the role of choice in decision-making and the influence of self-control and adherence to treatment modalities. In addition, self-efficacy practices that directly relate to health maintenance and illness prevention were reviewed in this chapter.

Chapter 3 of the study depicts the analysis and presented the methodology and research design, which includes the type of study and data collection procedure employed.

Chapter 3: Research Design

Introduction

This dissertation study employed a mixed-method methodology approach (Creswell, 1998) was employed in this study in an effort to ascertain the relationship between hardiness and attitude on hypertension treatment adherence among Nigerian health care workers. The implementation of a mixed method design best represents the nature of this study. Emphasis was placed on culture and role of choice in the choice-making decision of Nigerians with hypertension. A mixed-method approach was suitable to investigate the context in which African American minority health care workers who are Nigeria nationals embrace attitudes, values, beliefs, and lifestyles that may influence health outcomes in the self-care practices and adherence to hypertension treatment. Therefore, the aim of this descriptive study is to gain adequate knowledge as to the influence and impact of hardiness and attitude on hypertension treatment adherence among minority health care workers, particularly the minority immigrant health care workers of Nigerian descent.

Research Design

In this descriptive ethnographic study, the researcher employed both quantitative and qualitative design (Creswell, 2002). Two survey questionnaires were distributed during the focus group sessions held. The intent of the study was to explore the phenomena that influence the attitude and behavior of Nigerian health care workers, in their perception about self-care adherence towards hypertension medications/treatment.

Previous related research conducted by various heath care practitioners and social scientists over years support the use of different methodological approaches in collecting the data. Navuluri (2006) utilized quantitative data analysis in a study of patients at a local hospital in southeastern, New Mexico. Navuluri used the Health-Related Hardiness Scale (HRHS) (Pollock & Duffy, 1990), a subscale of diabetic attitude scale (DAS), and a subscale of diabetic compliance profile (DCP) to examine and assess the relationships between hardiness and attitude towards compliance to physical activity, Type 1 and Type 2 diabetic patients. Health-related hardiness (HRH) and self-care adherence to physical activity (SCA) were positively correlated, and the relationship between the two variables was statistically significant, accounting for 5.2% of the variance alone. In an article that critically analyzed the effects of appraisal, coping, hardiness, and self-perceived health in community-dwelling spouse taking care of their loved ones with dementia, researchers found a positive correlation based on the presence of main and moderating effects of hardiness on dementia caregivers reported by 72 participants. Using multiple regressions with composite hardiness scores, the variance attributed to hardiness ranged from 4% to 36% (Jennings & Straggers, 1994).

Population and Sample

The population comprised Nigerian nationals, male and female Nigerian health care workers, who immigrated to the United States and at the time of the study resided in the Washington, DC, metropolitan area. All participants had been diagnosed with hypertension for longer than 6 months, and were members of the former Nigerian Heath Care Association.

As part of the ASA-USA admission process, new members were asked to indicate of any history of chronic illness such as diabetes, asthma, hypertension, HIV, obesity, arthritis, and others. This information is utilized by the association to organize health education and health-fairs for member services. Based on the response from the questionnaires, more than 1,600 members out of the more than 2,500 members indicated history of hypertension formed the potential or eligible population for the study, based on their history of hypertension that fit the criteria for this study.

A random non-probability criterion sampling procedure was employed in other to select participants for this study (Creswell, 2002). Participants were recruited from former Nigerian Heath Care Association who completed the initial questionnaire.

Quantitative Data Collection Procedure

Specific instruments related to the research field were used to justify the quantitative portion of this study: (1) Medication Adherence Self-Efficacy Scale (MASES), (Ogudegbe et al., 2003) and (2) Health-Related Hardiness Scale (HRHS), (Pollock & Duffy, 1990). The Medication Adherence Self-Efficacy Scale (MASES) (Ogudegbe et al., 2003) was designed specifically to measure medication adherence in minority patients with hypertension. It had been used with African American patients who are hypertensive, while the Health-Related Hardiness Scale (HRHS) (Pollock & Duffy, 1990) was developed to identify among individuals afflicted with chronic illness, the presence rather than the absence of hardiness, including patients with hypertension. The items in HRHS were generated to measure the presence, rather than the absence, of the hardiness dimensions based on theoretical definitions of health-related control, commitment and challenge.

Selection of Participants

A non-probability criterion sampling procedure (Creswell, 1998) was employed in order for the researcher to effectively select participants for this study. Based on Creswell's (1998) recommendation of utilizing narrow range of sampling in ethnographic studies, 30 Nigerian health care workers (11 males and 19 females) residing in the Washington metropolitan area participated in the study. In view of the required meticulous and comprehensively reproduction of participants' feelings retrieved through multiple interviews on the part of the researcher, Creswell recommended a limitation of selected sampling (p. 117). Creswell articulated placing high importance to in "gathering individuals located at a single site, have experienced the phenomenon being explored and able to articulate conscious experiences" (p. 111). Therefore, this study fully complied with all the recommended requirements.

For recruitment of potential subjects and in order to maintain patient confidentiality, only the research investigator for this study engaged with the solicitation and recruitment of potential participants. The bulk of the recruitment took place over the phone and at social gatherings known to be annually organized by the Nigerian Health Care Association. The Nigerian Health Care Association president emailed the researcher a roster of names. At the social gatherings informed consent was secured from individuals who were interested in the study and who qualified for the study, based on the criteria set for the study. The researcher recruited samples for this study through phone presentations and face-to-face presentations conducted in other to recruit participants, during which time a detailed explanation of the study was provided, in addition to answering any questions and concerns present by the potential participants. After making

a formal presentation regarding the purpose and the scope of the study, potential participants were identified and confirmed through regular mail and e-mail reply from each participant to the researcher. During the phone and the face-to-face presentation, participants were warned about the possibility of medical and personal disclosure content that the instruments could extrapolate. The subjects were given the opportunity to either participate or decline to be part of the study, in an event they found the content of the instruments offensive or contrary to their beliefs. Participants were asked to confirm their address and e-mails in order to communicate reminder notices about the study. Subjects who were interested to participate but do not have e-mail addresses were asked to confirm their mailing address for same purpose of receiving information solely for the study.

Following selection of the participants, regular correspondences were maintained by the researcher in other to communicate the date, time, and venue for the collection of the study data. Subjects voluntarily participated in the study, and no compensation was promised nor offered for the time or involvement in the study. The sample size was expected to be relatively moderate considering cultural barriers with the population of interest in the availability of the sampling pool and the sensitivity of disclosure of medical history, willingness of potential participants to volunteer, and the timeframe needed for data collection, in order to complete the study timely. From the 1,600 enrollment applications indicating history of hypertension received by former Nigerian Heath Care Association executives, 150 study questionnaires were randomly sent out among the 1,600 persons and the first 30 Nigerian health care workers who voluntarily completed the questionnaire and who met the study criteria, were invited to participate in

the study. All subjects voluntarily participated in the study, and no compensation provided or anticipated by the participants.

Before the initial questionnaire was administered, a short specific statement was sent through regular mail and e-mailed as an attachment and participants asked to read the attached statement prior to filling out the initial questionnaire for the study. The statement contained information regarding the research aim, scope, and benefit to the participants. Initial information was sent to every tenth member of the former Nigerian Health Care Association listed in the association roaster, in other to give equal opportunity to all individuals with hypertension who are members of the association, to become a participant in the study. Therefore, the aim of the study was to adequately include a representation of the population of Nigerians with hypertension that best represent a generalized sample of the minority indigenes that work in health care system, who are afflicted with hypertension. The research investigator was solely responsible for recruiting and maintaining contact with the potential subjects, as well as maintained the stream of e-mails, phone calls, and mailing correspondence involve in conducting the affairs of this study. Instruments for the study were administered in a secure location, which also became the venue for the focus group. The estimated time required for completion of the two instruments for the study was approximately 40 minutes and efforts were made to accommodate the participants work and family schedule by setting aside extra time as required, for the prompt completion of the instruments, as needed for the data collection.

Materials

In other to provide a friendly environment, participants were provided with the followings: (a) paper and pencils, (b) a comfortable, well-lighted classroom with the appropriate number of seats, and (c) the survey instruments.

Instruments for the Study

Survey Instruments

Survey instruments for this study involved (a) the Medication Adherence self-Efficacy Scale (MASES), (Ogudegbe et al., 2003) and (b) the Health-Related Hardiness Scale (HRHS), (Pollock & Duffy, 1990). Each of these instruments is designed specifically to measure responses concerning medical issues with patients suffering from chronic health conditions like hypertension, but never used with similar population as seen in this study.

The Medication Adherence Self Efficacy Scale/Questionnaire

The MASE Scale is designed to enable medical practitioners as well as researchers with medical inclinations to be able to nonmedical reasons that impede patients' ability to adhere to prescribed medication regimen, leading to decreased patient medication self-efficacy (Ogudegbe et al., 2003). The initial 43-item self-efficacy questionnaire that represents the concept behind MASES were loaded on a 4-point and 5-point Likert-scale (for the last five questions) and administered to 74 subject populations, consisting of hypertensive African American, for the item analysis phase. Out of the 43 items of MASES, a total of 21 met the selection criteria in addition to 5 items retained because of their clinical relevance or significance. Because of the medication adherence

health-related significance of the five items retained, which represent medication cost, potential and known medication side-effects and the number of times the medication is taken on a 24-hour period, these items were inclusive of the MASE scale.

The Health-Related Hardiness Scale/Questionnaire

The Health Related Hardiness Tool was designed to measures an individual social attributes to (a) adhere to an agreed commitment and ability to effectively utilize positive coping mechanisms needed in adaptation to conditions as seen with chronic illness; (b) ability the control ego reward which is necessary for cognitively analyze and effectively institute positive health habits and interventional modalities, known as the control dimension; and (c) individuals assessment of the conditions that impact their health as either potentially positive or negative, based on cognitive assessment referred to as challenge domain (Pollock, 1986). The HRHS (Pollock, 1986) was initially formulated to ascertain the presence and affects of hardiness characteristic in patients with chronic ill conditions as is the case with hypertension and diabetic patients. The tool consisted of 48 items on a 6-point Likert scale. Following much needed reconstruction of the tool, the 34-item HRHS was developed (Pollock & Duffy, 1990). These items are represented on a 6-point Likert scale with 2 subscales, indicating control, and commitment/challenge. Based on Dr. Pollock analysis of the scale, higher scores on the HRHS were said to be synonymous with increase presence of hardiness. In this study, a subscale of the HRH scale comprising of 14-items will be used. The subscale is divided into two sections: “Hardiness 1,” which comprise of the total number of the first 7 positive items and “Hardiness 2” made up of the second 7 negative items.

The Demographic Questionnaire

The questionnaire was designed to collect individual's personal data such as age range which ensured that minors were excluded from participating in the study, by indicating yes or no to the age question. Therefore, the youngest participant was older than 21 years in accordance to the District of Columbia teenage age limit. Gender was equally documented in other to ensure maximum variation and diversity among males and females and aided the comparison among the groups. The data on health education on the management of hypertension by a practitioner was necessary and ensured that all participants acquired the basic knowledge adequate to understand the importance of hypertension management and the need for hypertension medication self-efficacy. Other critical data included response of 'yes' or 'no' to areas such as employment in health, occupation, if diagnosed with hypertension, nationality and ethnicity, all of which ensured that the participants met the criteria set for the study.

Reliability and Validity

In MASES 43 items, 21 met the required minimum item-to-item correlation coefficient while the remaining 22 items failed to qualify based on the selected criteria and as a result were disqualified. Nevertheless due to the clinical significance of five of the inclusive items, medication cost, dosing frequency and side-effects, which are important critical components, were retained as medication adherence predictors. The Cronbach's alpha for the entire 26-item scale was 0.95. Internal reliability was said to be excellent, however, the tool failed to map relationship between the scores external validation with medication compliance or control of hypertension (Ogedegbe et al., 2003). The reliability of the Cronbach's alpha coefficients in the Health-Related

Hardiness Scale (HRHS) was 0.91 for the total scale and 0.87 for each subscale. The reliability coefficients ranged from 0.74 to 0.78 for the test-retest. Out of the three dimensions of the health-related hardiness scale, the final scale retained two of the original conceptualized construct. In terms of validity, the HRHS items were generated to measure the presence rather than absence of the hardiness dimensions based on theoretical definitions of health-related control, commitment, and challenge. Two factors were isolated using principal components analysis *(n*=389). In the psychometric analysis of the tool, both challenge/commitment and control accounted for 32.1% of variance. In this study which utilized a14-item subscale of HRHS, the Cronbach's alpha for the items loading most strongly on the "hardiness 1" factors is fairly high at 0.825, while for items loading strongly on the "hardiness 2" factors, the Cronbach's alpha was moderate but acceptable at 0.677. High internal reliability was maintained when individual items were deleted from both factors. Item-total correlations were moderate, exceeding 0.5 on items loading highly on the "hardiness1" factor, while they were a little lower for items on the "hardiness 2" factor, ranging from 0.28 to 0.47 (Pollock & Duffy, 1990).

Procedure

To obtain the study responses from the desired number of participants needed for the study, screening pre-study questionnaires were distributed via regular mail to the first 150 of the 1,600 Nigerian subjects identified with hypertension, based on the association's admission questionnaires, all written in English. First 30 members of the association who returned completed pre-study questionnaires when requested and who met the criteria took part in this study. Mailed questionnaires consisted of a cover letter and demographic questionnaires. The selected proposed participants were later contacted

through phone, mail and e-mail, to acknowledge the receipt of the questionnaires and to inform the participants of their acceptance to the study. Several correspondences were maintained especially regarding the proposed data collection venue.

The application of the MASE and HRH tools was conducted by the researcher on several occasions in Virginia, Maryland, and the District of the Columbia venues for the monthly scheduled meetings organize by ASA USA, Washington, DC, chapter between April and May 2010. After arriving at the venue reserved for the study survey instrument administration and collection, which was part of the main ball-room reserved for the association scheduled-event, the participants who were previously contacted by the researcher via e-mail and phone calls prior to the days for the administration of the tools, were greeted as a group. A reiteration and clear explanation about the study was provided to the participants, including the study purpose and expectations of the requirement for the study. All participants were once again reminded by the researcher that the study in which they are about to participate was designed to examine the impact that hardiness and attitude may have on hypertension medication treatment adherence among Nigerian health care workers in the United States. The subjects were then given the opportunity to decide if they would like to continue participation in the study. If any subject found it uncomfortable to proceed with the study, he or she would have been excused from the study. All participants deemed it necessary to continue with the study and were given two informed consent forms to read and sign, first consent was for the participant and the other was retained by the researcher for the study. Those who signed the consent forms were ready and therefore completed the survey.

The first survey instrument administered was the demographic questionnaire followed by a subscale of the Health Related Hardiness Scale (HRHS). Prior to filling out the survey and after time given to read the tool elapsed, the researcher gave a brief overview about the instrument and answered questions and clarified any concerns. The directions were read out to the participants and each participant reminded to re-read the instructions clearly. An average of 5 to 7 minutes was allocated for participants to carefully review the instrument and ask questions or voice concerns. The participants had no additional questions; therefore, they were instructed to proceed with the completion of the instruments, which took between 15 to 20 minutes each to complete. Following the completion of the survey, the participants' questionnaires were randomly assigned identification codes, which were solely used for the study. The codes include sequence of numbers which did not bear any identifier that will link the participants either to their names, place of residence, hospital, or heath care institutions the participants are employed in. Examples of the number coding are 001, 002, 003, 004, 005, etc. All participants were randomly assigned codes and instructed to write the code on the completed instruments and demographic survey, which were later placed in an empty secured metal safe-box, only accessible by the research investigator. The research investigator was solely responsible for the collection and storage of all of the instruments and data. Following the completion of the first instrument, a 5-minute break time was allocated to the participants, in other to attend to the rest room and stretch out, and subsequently a second quantitative instrument was administered.

The second instrument, the Medication Adherence Self-Efficacy Scale (MASES), was used to capture and assess the participant's most accurate perception of their

adherence to hypertension medications. Prior to the administration of the instruments, efforts were made to ensure that the environment and settings was comfortable and free from distractions. Again, a brief statement about the instrument was made and a brief time devoted to answering of questions and concern. Directions on how to complete the survey were read to the participants by the researcher and in addition, each participant instructed to read the instructions over again.

Following the completion of the instrument, the participants were instructed to place the completed survey in a large white 10 x 12 envelope labeled with the study title, instrument #2, date, and time the data is collected. At the completion of the instrument, the participants were instructed to write the randomly assigned four-digit code along on their demographic survey and the study instruments. All the completed data were finally secured in a locked safe. The researcher was solely responsible for the collection and storage of all of the instrument and data.

The inverse relationship between blood pressure and self-efficacy was revealed by the questionnaire answered by the participants. Based on the situations listed in the survey, subjects were instructed to evaluate their commitment to taking their blood pressure medications as prescribed. The responses from the participants were rated on a 4-point Likert-scale, on a range of 1 (Not at all sure) to 4 (Very sure). Participants were required to respond to all 26 items on the survey instrument. The participants' score from each of the items were combined and analyzed.

Role of Researcher in the Study

The researcher collected data from members of the former Nigerian Heath Care Association, a subsidiary of ASA USA, using the roster of the association to secure

potential subjects names. Following initial contact of the investigator with the association executive president and secretary, and after securing the authorization to proceed with the study, the researcher randomly mailed 150 questionnaires to every tenth person on the list of approximately 1,500 potential candidates who expressed history of hypertension. Only the researcher maintained contacts with the participants in other to maintain confidentiality, especially, in a culture like Nigerian, with very conservative cultural and belief system. Final appraisal and selection of the participants that met the study criteria was solely conducted by the researcher to determine individuals that meet the criteria for the study.

Data Analysis

Following the successful administration and collection of the survey instruments, the researcher reviewed and coded each item for identification, by using the assigned codes. The survey forms utilized by the researcher were carefully perused to ensure that there were no errors in the data collection. Data analysis of the raw data collected from the instrument was conducted by the researcher utilizing the Statistical Package for Social Science (SPSS) 14.0. According to Leedy and Ormrod (2005), descriptive analysis are best suited to describe the data and provide a detailed account of frequency, percent valid cent, cumulative percent, central tendency variability, and relationship of the data sets and scores. In this study, descriptive statistics was utilized to ascertain profile of the participants while statistical data generated by SPSS will aid to compare groups and subgroups, and to answer questions. Cross tabulations were utilized to measure the frequency and percentage data of the study. The rationale for using statistics in this study is to (a) measure the specific percentage of units, (b) provide a

comparison of group and sub-group data, and (c) to determine whether or not the data analysis meets the assumption of the statistics.

The following quantitative and qualitative research questions were tested;

Question 1: What is the relationship between hardiness and attitude, on hypertension treatment adherence among Nigerian health care workers?

Question 2: What changes have occurred in the self-efficacy behaviors of Nigerian health care workers that influence the choices they make towards hypertension treatment?

Question 3: To what extent has culture been a factor in the change in Nigerian health care workers' attitudes towards self-management health behavior?

Question 4: When given the choice for health coverage versus no health insurance for higher wages, does Nigerian health care workers' perceptions about health impact self-control and adherence to hypertension treatment?

Statistical data generated by SPSS 14.0 were grouped into subgroups of frequency, percentages, cumulative percentages, and valid percentages. The rationale for utilizing statistics in this study was to measure specific percentages and frequencies for each research question and provide a comparison subgroup data analysis.

Qualitative Data Collection

The study interviews were conducted in a standardized manner during the months of March and April 2010 and the interview construction followed the four process stages stipulated by Creswell (1998). Each study participant signed the informed consent and agreed to participate in both survey instrument and the focus group data collection sessions, and no compensation promised or distributed. The interviews took place at the

designated venue where the participants attended health awareness events and all participants that completed the quantitative survey participated in the focus group sessions.

The field notations and thematic tendencies were chronicled and identified themes resulting from the reduction were later compared with those of the researcher and those of the external reviewer for identification of emerging themes. Following identification of the merging themes through combined work by the researcher and the external reviewer, the themes were verified against the study's database and consolidated using the SPSS software Package, with each interview response thoroughly analyzed to identify words and phrases worthy to provide clarity regarding the responses. Due to the crucial need to extrapolate the participants' cultural experiences, all relevant statements augmenting the readers understanding of the problem were highlighted and documented for the number of occurrences noted. The findings derived from the participant's responses have been grouped into a set of quality textual data files. Qualitative observation was used to determine specific themes and perception of the focus groups participants believed to be associated with self-care adherence and capabilities to influence health behaviors associated with life-style change. These recorded observational interview notes formed the bases for the specific study themes, form the participants' responses and perception regarding self-care management and behaviors practices. The reliability of the focus group questions were measured through repeatedly and consistently asking the participants at the completion of the session to deliberate as to whether or not the questions were comprehensive and representative of Nigerian heath care workers cultural influence and self-efficacy and self-management of hypertension management. Also, the

reliability of the focus group as well as the consistency of the participants' personal account of self-management cultural practices was primarily utilized to validate the consistency of the questioning and responses. In addition, multiple modalities of data collection including group interviews, group observation, and group analysis were utilized to argument both reliability and internal validity of the study.

While exploring an individual's emotions, feelings, and subjective interpretations, these experiences could not effectively be reduced to numbers. In this qualitative methodology section of the study, the researcher utilized open-ended questions, and the population of interest and under study was enabled to share its more personal or subjective views about a situation (Creswell, 1998). The qualitative observation provided a detail observatory description of the focus groups interview data, and revealed the followings concepts: (a) identifies and describes meaningful themes and events, (b) aggregation of themes, phases and words into categories, and (c) comparison of group data that explains the patterns and themes identified. The original questions designed for Focus group interview was slightly re-worded to allow study participants to better articulate the questions and to extrapolate cultural-influenced self-efficacy behavior towards hypertension management.

Qualitative Data Collection Procedures

In a mixed method research, qualitative data are often used in conjunction with quantitative data. The study findings from the qualitative data analysis were presented using a descriptive analysis method in which words, phrases, and themes are utilized (Peshkin, 1993 In this study, focus group sessions were used to augment the quantitative data in other to examine the influence and impact of hardiness and attitude on

hypertension treatment adherence among minority health care workers. Utilizing the focus group in this study aided in helping the researcher to collect data in one setting as well as to enhance the researcher's efforts in probing and gathering of critical information needed, from individuals with similar life experiences, in other to objectively conclude the findings of the study (Morgan, 1998).

Selection of Focus Group Participants

Selection and recruitment of participants for the focus group started with the larger quantitative sample strata of potential participants who are members of the Nigerian Heath Care Association as indicted on the questionnaires sent by the association executive branch. Everyone who participated in the qualitative survey instrument data collection also participated in the focus group data collection. This ensured that the focus group participants as members of former Nigerian Heath Care Association were given equal opportunity of participating in the study. Although the sample technique is purposeful, a random nonprobability criterion sampling was employed and started with quantitative data collection. This process of participant selection ensured and stated that every individual who is a member of former Nigerian Heath Care Association and participates in the quantitative data collection is qualified and expected to participate in the focus group study. Prior to the beginning of the study, a letter asking potential subjects to participate in the study was sent to participants who received the random mailing and therefore offered the opportunity to willingly participate in the study, including the focus group session. Potential participants who are interested in participating in the study and met the criteria were randomly selected from the pool and returned the completed forms mailed out, including the initial questionnaire, were

included in the study sessions, as well as participated in the qualitative focus group participation. Prior to holding the focus groups, three e-mails reminders, phone calls were initiated few days prior to the session, and regular mails sent out to potential study participants who did not provide an e-mail, two weeks prior to the sessions, regarding the focus group process.

Materials

In other to objectively collect the data from the focus group interview sessions, the following materials were used: (a) voice recorder, mini DVD recorder, a conference room with excellent lighting and sound; (b) comfortable seating and spacing large enough to accommodate the participants in a circular or similar sitting for easy recording; (c) flip charts, traditional classroom blackboard or adhesive notes, chalk, color makers, pens, pencils, and pencil erasers.

Qualitative Design Validity, Reliability, and Relevance

Research Validity

The concept of validity and the various aspects of specific threats provided a useful scheme for the assessment of the quality of research conclusions. Validity points to the credibility criteria involve establishing that the results of qualitative research are believable from the perspective of the participants in the research. In order to ascertain internal validity of the data, a certain amount of time needs to be dedicated to the interview stage. Also, peers should be involved to provide some degree of inter-rater reliability by initiating questions to clarify the interview responses collected if needed (Lincoln & Guba, 2000). The sample instrument or tool should contain various examples

of probes to illicit information at greater depth significant to the study's purpose (Kirk & Miller, 1986).

Trochim (2001) indicated that one of the major rationales for conducting a study is for one to become more experienced in the phenomenon of interest. In an area such management of hypertension with extensive research already conducted, approach of existing literate with fresh perspective resulting from direct experience of the participants in addition to formulation of one's own ideas about what cause what to happen, may originate development of more interesting and valuable new theories and hypothesis. According to the author, well developed research is integral to sound theory which is the framework of the research (Trochim, 2001).

Instrument Relevance and Reliability

Another important area of concern in qualitative research is the reliability of the instrument use in data collection. Depending on the philosophical perspective, the assumption that there is an external reality is solely based on the perception of it. Reliability in qualitative studies are difficult to ascertain due to the volatility and variance synonymous with peoples' attitudes, beliefs, lifestyle actions, which makes it difficult to accurately quantify (Gillis & Jackson, 2002).

Equally significant component of reliability for the study is the concept of relevance. The respondents were knowledgeable about the disease condition, including medication management and factors that may impede management efficacy. Therefore, as permitted, the participants were consulted by the investigator to verify the reliability of the narratives by reviewing their transcribed narratives findings and conclusions for

accuracy and by reviewing the conclusions of the research prior to submission of the findings, to satisfy that the study is of relevance to the target population.

Data Review and Theme Identification by the External Reviewer

Because the role of the external reviewer in this study was crucial, the researcher chose someone who superseded the required qualification and therefore conducted the ethnographic research component of the study. As instructed by the researcher prior to receiving the transcript, the external reviewer was mandated to siphon commonalities and differences in study participants' interview responses, and identify overall themes that best narrated the experiences of the Nigerian health care workers, residing in Washington, DC. In addition, the external reviewer was mandated to count the frequencies of similarities or dissimilarities due to influence of participants cultural experiences on self-efficacy and self-management, based on each response, by all the study subjects. Exhibiting a high degree of inter-rater reliability that stood at greater than 90%, the external reviewer identified study themes that supported shared phenomenon by a number of participants, which were equally identified by the primary researcher.

Impeded by disciplinary and epistemological boundaries, the technique shared between the researcher and the external reviewer during the writing phase of the project justified the following techniques for discovering the study themes quick word counts, in-depth, line-by-line scrutiny and identification, and discovering of abstracts and constructs which the researcher identified before, during, and after focus group data collection. During the review and thematic identification by the researcher and external reviewer, some of the characteristics of the phenomena being studied were easily agreed upon. However, some professional definitions and local commonsense constructs that may be

influenced by the researchers' values, theoretical orientation, and personal experiences with the subject matter presented moments of disagreement between the researcher and the external reviewer. Finally, schematic organization in naturalistic discourse involving repetition of associative linkages was analyzed formally and informal until commonalities of constructs were agreed upon between the researcher and the external reviewer. In reviewing the final work, the correlation between the researcher work and external reviewer work were highly significant on all counts.

Research Questions

For the purpose of this research, the researcher conducted in-depth group interview, using combination of experience, behavior, opinion, and feeling questions, intended to discover descriptions of the respondents experiences, behaviors, actions, activities, and answers that reflect a decision-making process and may reveal goals, opinions, norms, intentions, desires, and values consider to be factual information. The development of the exploratory questions designed to address the research questions originated through analysis and reviews of various qualitative research questions and interviewing techniques, and in addition with review and analysis of advisors and concerns raised at various health-fairs conducted in the past to address disparities in minority health.

Similar questions and rationales are depicted in the health-related hardiness scale. Therefore, in other to ascertain if these concerns are culturally related and the extent to which they influence self-efficacy and self-practice, the interviewing questions utilized as part of the focus group survey were designed to accord the respondent ability to tell their own story without bias and interference from the researcher. Qualitative questions

allowed the participants' freedom to structure their answers as they wish. The questions were designed to capture information about perception and health lifestyles of the participants (Ulin et al., 2005). The questions that were designed for use in this study focus group are partly developed based on input from medical practitioners practicing in the Washington metropolitan area, who had been privileged to treat Nigerians with hypertension and who expressed concern regarding cultural influence of Nigerians on hypertension treatment adherence.

Instrumentation

Probing experience and behavior interviewing questions designed in form of open-ended questions were thoughtfully constructed for use in the Nigerian health care workers research. Initial sets of variable questions were crafted to gather the respondents' unique demographic information. As indicated in Babbie (2007), demographic questions are designed to solicit information appropriate for analysis in helping the researcher distinguish the participants from the population strata. Information sort out with demographic data was unique and often specific to the population of interest. Within the context of this research, such demographic information includes Nationality, ethnicity, area of employment, and length of employment. The demographic questions formulated for use in this study focus group were as follows:

Demographic Questionnaire

1 Are older than 21 years? Yes___ No___

2 Are you younger than 66yrs? Yes____ No_____

3 What is your gender? Male_____ Female _____

4. Where you born in Nigeria? Yes_____ No _____

5. Are you currently employment in health care? Yes _____ No _____
6. Is your hypertension diagnosed longer than six month? Yes_____ No _____

The second part of the focus group interview comprised of exploratory open-ended research questions carefully designed by the researcher which allowed clarity in interviewee responses, in gaining some perspective on time in the group and the contexts that lead to different forms of health behaviors. According to Babbie (2007), open-ended questions afford the respondents leverage to provide greater responses in his or her own answers, which foster data collection without imposing the views of the researcher. Such selected questions must offer the respondents an opportunity to provide their own views to the questions (p. 246). The selected questions intended for this study focus group included the following,

Theme 1: Perceptions about African American cultural practices and self-care adherence.

1. Based on your cultural perception and experiences, do you belief that health prevention is important? If so, why?
2. What aspects of your cultural self-care practices affect the treatment of your hypertension and to what extent have that affected the outcome of your hypertension management?

Theme 2: Behavioral influences, attitudes and values.

1. What aspects of your culture influence the way you attain to your health and describe the effects on the outcome of your hypertension management?

Theme 3: Perception about medical uncertainty.

1. How do you feel regarding the medication(s) you are currently taking for managing your hypertension and are you confident on the effectiveness of the medication(s) in controlling the condition? Please describe why you agree or disagree with your current hypertension treatment. When given the choice for health coverage, does Nigerian health care workers perceptions about health impact self-control and adherence to hypertension treatment?

Qualitative questions and focus group discussions involved a pattern that comprised three kinds of questions. As indicated by the authors, this pattern of questions includes the main questions, follow-up questions and probes (Rubin & Rubin, 1995; Patton, 1990). The author warns that although the pattern is flexible in other to facilitate the interviewer to cover the topics in sufficient depth and to make the most of the rich information that respondents can offer, it is advisable to avoid dichotomous wording and emphasize open-ended questions that encourage participations to interpret questions themselves.

Focus group discussion according to the author may be introduced in the form of questions from the themes and subthemes of the research problems (Ulin, et al., 2005). The selected questions the authors indicated should aim at evaluating the participants' perception of beliefs, attitudes, cultural practices and self-care practices that relates to the research problems. "Main questions are aimed to be open enough to encourage spontaneous response but specific enough to keep the dialogue focused" (Ulin, et al., 2005). Effort must be made by the interviewer to ensure that the discussion does not move too far from the theme topic. Whenever the interviewer senses that the discussion have derailed from the topic theme, the author encourage the researcher to repeat the main question, probably rephrasing the question and utilizing detail questioning

technique that will provide details on the topic (Ulin et al., 2005, p. 82). The main questions should reflect the logical anticipated by the researcher in the conversation, moving from easy and least threatening questions to more complex and interesting issues as the researcher builds rapport with the participants. In the other hand, a follow- up question moves the interview or discussion to deeper level by asking for more detail that will provide answers to the questions. The follow-up questions could be further clarified by introducing a probe question which is a kind of follow-up question that drives the discussion into deeper areas, with or without specific reference to the topic but still within the context of the research theme (Ulin et al., 2005, p. 82). The interview instrument designed for this study will include four demographic questions, four open-ended main and follow-up questions, and related probe questions. Selected questions designed for the focus session of this study are specifically developed, reviewed, and approved by six Nigerian medical practitioners in Washington metropolitan area who as medical experts were used as consultants for the formulation of questions that will elicit narratives of social experiences interwoven into ideas and themes, aim at answering the research questions for the study.

Procedure

On arrival to the conference hall reserved for the administration of the survey instrument, which will later become the venue for the ASA USA annual gala venue, the participants were greeted and welcomed as a group by the researcher or moderator. The researcher reiterated the study purpose, expectations and requirements of each participant prior the beginning of the session. Participants were then reminded to seat where they deemed comfortable and then each presented with a consent form. Every participant was

reminded that their participation was voluntary and each given the opportunity to decline or accept to be part of the study. Subjects who were ambivalent or declined to participate in the study were given the opportunity to exit the hall while the rest of the participants were given two copies of the informed consent form. The research investigator went over the consent form in detail and ensured that the contents were well comprehended and any ambiguity clarified. Time was allowed for the participants to read the consent and if they desired, to continue with the study and were instructed to sign the consent forms. All signed consents were signed and collected by the researcher prior to starting the focus group. The participants were instructed to write their randomly assigned four-digit numbers written on the sign-in sheet which were secured in a locked metal box and accessible only to the researcher.

Following diligent collection of the necessary consent forms from the study participants, the research investigator commenced the process for the focus group interview. The focus group session involved an open dialogue with the participants, regarding their culture, perceptions, attitudes, beliefs, and behaviors commonly associated with self health care practices on hypertension treatment adherence.

Specific steps and format were adopted by the researcher in other to collect the required data for the part of the study. Prior to selection of study participants, the four phases (conceptualization, interview, analysis, and reporting) were outlined (Krueger, 1988). Specific instructions for the focus group were read to the participants prior to the start of the sessions. Those instructions include (a) ensuring confidentiality for comments made during the group sessions and ground rules for talking while the group is in session; (b) being respectful, need not to criticize other participants comments; and (3) need to

encourage each participant to speak up. An overview of the research topic and focus group rules were briefly discussed by the research moderator at the inception of the session, following the heart-felt welcome of the study participants. The participants previously picked a number from 1 to 3 and therefore, grouped into three rooms based on the selected numbers, in a group of 8-10 participants. A total of three focus groups were formed for the purpose of qualitative data collection for this study. As the focus group session interview concluded, the researcher individually thanks the participants for their participation and input in the study.

Utilizing the pause and probe approach, a pre-arranged set of focus group questions were administered to the group by the researcher (Krueger, 1988). The moderator or researcher adopted this approach in other to allow for the probing of information, in a consistent systematic manner. Based on Krueger (1988) philosophical view, a 5-second rule is recommended which allows the participants the opportunity to join on the discussion. In the other hand, the rule provided the moderator/researcher the opportunity to redirect the questioning and further probing as needed, within the scope of the study. The focus group comprised of both male and female participants which allowed the researcher to collect a non-gender specific data in one setting. To ensure equal gender participation and balance within the group discussion, the moderator or researcher controlled the discussion and encouraged equal gender participation in other to prevent situations of one participant or one gender dominating the discussion, from the inception of the session to the end, politely encouraging active participation of all the subjects.

Data Analysis

Following the successful administration and collection of the survey instruments, the researcher created file-folders of all interviews, questionnaires and audiotapes recorded during interviews, participant observations, and personal notes gathered throughout the research process. All interviews and observational notes were professionally transcribed. Subsequently, narrative summaries were complied and produced. The purpose of "narrative summaries" was to condense the interview materials into shorter manageable narratives that capture the essence of the stories being told by the study participants (Creswell, 2002). The researcher had re-read the materials generated in the questionnaire in order to create different categories, each representing facts about the study participants' values, beliefs, attitudes, self-efficacy, self-care practices and problem-solving ability and how that influence health behaviors associated with medication self-adherence. The interview items were reviewed and coded for identification by the researcher using the assigned codes. Every survey forms utilized were carefully perused to ensure that there were no errors in the data collection. The researcher's role in the data collection was to transcribe all interviews generated from the study participants and compared those with the review by the external reviewer, comparing notes, with differences clarified before proceeding to the next step of the research (Creswell, 2002).

Aided by an external reviewer and utilizing analysis process with the aid of Atlas. Ti 5.0 computer software, all transcribed texts were analyzed to identify specific keywords common to all interviews, in other analyze and classify the participants responses into thematic data sets. The Atlas. Ti 5.0, qualitative evaluation computer

software was utilized to determine specific thymes and perception of the focus group participants, in view of their lifestyle trends, behaviors, attitudes, values, and self-care efficacy and management, believed to be associated with the Nigerian health care workers culture. As a result of utilizing the Atlas Ti 5.0 computer software, meaningful data was identified and grouped accordingly. Atlas Ti 5.0 data analysis software was used to process and organize the focus group data into specific themes and comparison groups and subgroup. The following three qualitative questions were therefore tested.

Question 1: What changes have occurred in the self-efficacy behaviors of Nigerian health care workers that influence the choices they make towards hypertension treatment?

Question 2: To what extent has culture been a factor in the change in Nigerian health care workers' attitudes towards self-management health behavior?

Question 3: When given the choice for health coverage rather than no health insurance for higher wages, does Nigerian health care workers' perceptions about health impact self-control and adherence to hypertension treatment?

Preparation of collected data for presentation and discussion were conducted at the residence of the researcher in order to maintain confidentiality. The researcher most important task was to ascertain that the themes and the relationship between the themes captured as succinctly as possible Nigerian health care workers' experiences in self-efficacy and self-management of hypertension.

The primary form of representing and reporting findings adopted by the researcher in this study was a narrative discussion. According to Creswell (2002, p. 274), a narrative discussion is a "written passage in a qualitative study in which authors summarized, in

detail, the findings from their data analysis". Creswell challenged researchers conducting qualitative research to be inquisitive, challenging and reflective about every statement expressed by research participants and paying attention to their emotional reactions during the research process.

The transcription processes enable integration of the researcher in the data and help her think through what the interviewers were saying and how they articulated their experiences (Creswell, 1998). While listening to the audiotape, the researcher and the external reviewer read and re-read each corresponding questionnaires to ensure accuracy of the transcribed tape and to better articulate each participant's experiences. Questions that appeared revealing about the phenomenon were underlined and highlighted. Each relevant theme was identified by highlighted information gathered through observation or material in the interview text that was relevant to each participant's experiences. Then, the researcher and external reviewer selected each of the highlighted themes or phrases and tried to capture as fully as possible the meaning of the highlighted material documented.

Following the completion of the initial readings and preliminary identification of the themes in each of the interviews, the primary researcher consulted with the external researcher to discuss the themes and other areas that required clarification or more investigation. The researcher then compared the themes in each interviews to indentify commonalities and differences, and identified the overall themes that best described the self-efficacy and self-management modalities of Nigerian health care workers residing in the United States. All themes were affected by cultural experiences, individual values, beliefs, attitudes and life-styles. The researcher then began the process of explicating the

themes, associating each theme with the narrative examples culled from the database, and describing how the themes interrelated. For this ethnographic research, data transformation was conducted through descriptive, interpretive, and analysis of the culture-sharing groups. The researcher assumed the role of a storyteller and describing the setting and events, laying out the facts, carefully presenting and interestingly relating an appropriate level of details. Following the conclusion of the focus group session, a thorough review of the sampled questions and themes were pursued in order to ascertain if all the critical questions necessary were asked and satisfactorily answered. Data collected from the focus group were coded accordingly followed by a thorough analysis of the raw data in addition to the notes taken during the focus group session, in order to check for consistency in themes and events (Creswell, 1998). Following the conclusion of the recorded focus group interviews, the raw data were reviewed and subsequently classified into several thematic areas. Also, the raw data were then reviewed five times for consistency and for coding purposes in order to maintain that data analysis process was accurate and consistent in identifying, describing themes and patterns presented by the participants (Creswell, 1998).

The main form of representing and reporting findings gathered in this study was a narrative discussion. Narrative discussion implies “written passage in a qualitative study in which the author summarize in detail, the findings from their data analysis” (Creswell, 1998). According to Creswell (1998), researchers conducting qualitative studies should be inquisitive, challenging, daring, and reflective regarding any statement or comment expressed by the research participants in addition to paying close attention to their emotional reactions throughout the research session.

Utilizing this qualitative analysis, the approach facilitated themes to emerge from data rather than merely basing the analysis of the data on the researcher's ideas about the topic. Furthermore, a content analysis approach was employed to further organize themes into categories. The researcher grouped repeated themes into larger, related categories in other to identify higher-order themes. These findings were then aggregated into more substantive themes to capture underlying factors discussed by the participants or subjects. This step is accomplished by the researcher through data transformation where the researcher probed what was to be made of the themes, drew inferences from the collected data and by personalized the interpretation through expression. Other forms of analysis this researcher employed included comparison of the cultural group to others, evaluating the groups in terms of standards, and ascertained connections between the culture-sharing groups and other larger theoretical frameworks. Preparation of the data collected for presentation and discussion were conducted at the researcher's residence in order to secure confidentiality of the data. The researcher assumed the most important rule of ensuring that the themes and the relationship between the themes represented as accurately as possible Nigerian health care workers experiences in self-efficacy and self-management of hypertension. All written questionnaires where read by the researcher several times while listening to the corresponding audiotape to ascertain accuracy of the transcribed tape and to fully understand each participant's experiences and cultural perceptions and influence on hypertension management. Statements that eluded to the phenomenon were highlighted and noted by the researcher who also identified recurrent relevant themes by highlighting such information gathered through observation and from materials in the interview text that testified to the participants' lifestyle experiences. In

order to ascertain the full meaning of the highlighted phrases, the researcher selected each of the highlighted phrases and sentences and endeavored to capture the participants' experiences in their own words (Creswell, 2002).

Following the initial identification and grouping of the study themes from the focus group, the primary researcher interacted with the external researcher to agree and discuss commonalities and to clarify any areas of ambiguity that required further clarifications. Later, the primary researcher consulted with the external reviewer to compare each theme with each related interview. Significantly, all themes were affected by cultural differences, individuals' perceptions, and life experiences. At the completion of the focus groups, the researcher searched for commonalities and differences and identified the emerging themes that best described the experiences and perceptions of the participants. With a total of four major themes and eighteen sub-thymes identifies, the researcher started the process of grouping and explicating the themes, merging each theme with the associated narrative culled from the database, and carefully describing the relationship of the themes to one another. Data analyses also involved the transcription process which helped immersed the researcher in the data and encouraged her to imagine the experiences of the participants and in bringing her closer in thinking about the participants' responses and how they were narrating their experiences (Creswell, 1998).

Role of the External Reviewer

The external reviewer was selected from group of medical researchers that conduct medical research in a teaching hospital in Washington, DC, and a medical practitioner with vast experience in medical and social research. In addition to having a medical degree and a doctorate degree in health care administration, the external reviewer also has

an advanced degree in statistics and currently a Principal Investigator (PI) in a medical research. Dr. P. had more than two dozen publications to his credit. As a principal investigator and a researcher, Dr. P. had previously been involved in data review in medical and social science research studies for a well-known and respected government research medical center in Washington, DC.

Within the context of the study, Dr. P. as the external reviewer analyzed the transcription of each interview response to identify emerging themes that best reflect the experiences and perceptions of the participants and compares his findings with the study researcher, in other to ascertain emerging themes. The role of the external reviewer was not to validate the interview data responses but to validate that the study's database accurately reflects the perceptions and experiences, which depict the meaning the study participants attributed to their reporting of their experiences. As indicated by Lincoln and Guba (2000), qualitative credibility is validated when the external reviewer conforms to such requirements thereby supporting the internal validity of the study.

Inter-Rater Reliability

It is important that the researcher ensures inter-rater reliability, and to achieve that, the researcher utilized a methodological triangulation that validates the accuracy of findings (Creswell, 2002). Triangulation is the "process of collaborate evidence from different individuals, types of data, or methods of data collection in description of themes in qualitative research" (Creswell, 1998). In this study, methodological triangulation was achieved through team approach between the researcher, the independent coder or external reviewer, which is designed to offset the subjective bias of any one researcher, and ensuring that the focus group interviews show consistency in all the participants'

responses. In an effort to ascertain reliability of the study, the researcher instituted steps to verify that the study responses truly reflect the views of the study participants. One such crucial step in this study involved a process whereby the researcher following the decoding of the transcripts, compared notes with the external reviewer and areas of disagreement clarified until both arrived at the same conclusion.

Ethical Protection of the Participants

Each participants of this study was not exposed to any personal risk, danger, or humiliation. In other to ensure confidentiality of the participants, the following safeguards were instituted: (a) Every participant's name remained anonymous, (b) prior to collecting the data the goals and objectives of the study were articulated both orally and in writing to the participants, (c) the participants were clearly assured that the data collected for this study would be used only for the benefit of the study, (d) each participants was informed that the research data collected would remain confidential and stored in a locked file cabinet for a minimum of five calendar years, (e) the right of each participant was upheld as subjects were informed of their right to withdraw from participating in this study at any time dimmed necessary, and (f) each participant was required to read, understand, and sign a consent form before proceeding with the study.

Summary

Hicks et al., (2003) indicated in the third National Health and Nutritional Examination study high incidence of hypertension, renal failure, cardiovascular diseases and stroke among immigrant African Americans in the United States. As described in previous chapters, Nigerian health care workers infuse directly into the system workforce with limited or no time to acquaint themselves with issue related to cultural adaptation or

cultural adjustment relating to uncertainty in their status and acculturation. It is therefore critical for health management organizations and health care providers to be aware of health issues like hypertension with direct relationship to attitudes and hardiness often associated with acculturation.

In chapter 3, a description of the research design was presented. This chapter also featured discussion on the data collection methods and the procedures adopted for the data analysis. In addition, information regarding data analysis, selection of participants and ethical issues/considerations were presented. Sequels to chapter 3 will feature data analysis in chapter 4, followed by discussions, findings, and recommendations in chapter 5.

Chapter 4: Results and Analysis

Introduction

Hypertension among minorities, especially African Americans continues to ravage this vulnerable community with increasing morbidity and mortality rates, and disability related to stroke. However, research focusing on Nigerian health care workers on hypertension treatment adherence remains sketchy if not rare. This mixed-method design sought out to explore the relationship between attitude and hardiness among hypertensive members of the association and their ability to comply with medication prescribed to control their hypertension. For the purpose of this research, a mixed-model design was utilized (Creswell, 1998). The mixed-method design included the use of two health assessment tools designed to identify the effect of attitude and hardiness in hypertensive patients' ability to adhere to treatment modalities, in addition to focus group sessions. The qualitative aspect of this study relied on emerging themes and emerging understandings as source of data, which the researcher thoroughly recorded on a reflective journal until no new themes or ideas emerged.

The two quantitative instruments employed in this study were the Health-Related Hardiness Scale (HRH) and the Medication Adherence Self Efficacy Scale (MASE), likert-scale, while the qualitative data collection instrument utilized the focus group interviews. Findings of the quantitative data are based on the results of 14-item subscale of the Health-Related Hardiness Scale, 26-item Medication Adherence Self Efficacy Scale and the following four questions: What is the relationship between hardiness and attitude on hypertension treatment adherence among Nigerian health care workers? The

second question was intended to determine: How do the behaviors of Nigerian health care workers influence the choices they make towards hypertension treatment? The third question sought to determine: How do Nigerian health workers' perceptions, attitudes, belief and values towards health and wellness influence self-management health behavior? The fourth question focused on: Which specific aspect of personality, environment and thought process of Nigerian health care workers impact adherence to hypertension treatment?

Quantitative analysis of collected data enabled the researcher to quantify informational data about the population being studied, particularly information about cultural influence of the perception, values, and attitudinal patterns that influence self-care practices of the participants. The statistical package for the Social Sciences (SPSS) 18 was used to analyze the collected data. Operations performed included analyzing and formulating the results of the data into a set of unified tables, flat file, charts and descriptive statistics that describes the data and provide a detail account of what the instruments measured. Statistical data generated by SPSS software was used to compare groups and subgroup and to answer the specific research questions. The rationale for using statistics in this study was to (a) measure specific percentage of units, (b) provide a comparison of group and sub-group data, and (c) to determine whether or not the data statistical analysis meets the assumption of the study.

Participant Profile

This study comprised of 30 Nigerian immigrant health care workers with hypertension who are employed in the United States health care system. The participants of this study were recruited from the Washington, DC, metropolitan area chapter of

former Nigerian Heath Care Association. The sample population included male and female hypertensive health care workers who originally emigrated from Nigeria. All participants were expected to speak and understand English and the consent forms, questionnaires, and interviews were presented in English. This study did not take into consideration whether they were single, married, or living with relatives. Such criteria would neutrally affect their health care self-efficacy. Whether participants were diagnosed with hypertension longer than 6 months at the time of study was noted because time factor may have made a difference in the participants' ability to learn and practice health management self-care management and self-efficacy practices, as it relates to hypertension medication adherence.

Demographic Findings

The socio-demographic information generated from the demographic survey instrument yielded data pertaining to the participants' nationality of birth, age range, gender, area of employment, and length of hypertension treatment. Table 1 and Table 2 show the age and gender of participants.

Table 1

Breakdown of Nigerian Health Care Workers by Age

Participants Age between 24-66		Frequency	Percent	Percent Mean	Cumulative Percent
Grouped Age	Younger than 40	13	43.0	43.0	43.0
	Older than 40	17	57.0	57.0	100.0
Total		30	100.0	100.0	

Note. The age range of the participants was not measured but grouped.

Table 2

Gender Breakdown

Overall Gender		Frequency	Percent	Percent Mean	Cumulative Percent
Gender	Males	11	37.0	37.0	37.0
	Females	19	67.0	67.0	100.0
Total		30	100.0	100.0	

As indicated in the literature review, this population is at risk for cardiovascular diseases and related complications (Llacer et al., 2007).

Findings Related to Research Question 1

1. What is the relationship between hardiness and attitude, on hypertension treatment adherence among Nigerian health care workers?

All study participants ($N = 30$) responded to every question on the study and that they had been diagnosed with hypertension for more than six months, in other to ascertain their adherence to self-care efficacy. Participants who responded positively to the questions indicated taking their hypertensive medications, while the other respondents are noncompliant with their prescribed antihypertensive medications.

Factor Analysis

Item distribution of responses to the 14 items from HRHS were distributed across the entire scale, with a slight skewed towards the left for the most positive items and a more right skew for most of the negative items. Table 3 shows a distribution of the HRHS.

Control domain or the individuals' ability to adapt to new changes as a component of HRH scale suggests that participants' utilization of ego resources which is needed for to analyze, interpret, and integrate responses to health stressors as seen with hypertension (Pollock, 1989). According to Pollock (1989), commitment and challenge, attributes of HRH, suggest the evaluation and constant reevaluation of health-related activities instituted for adequately dealing with healthy stressors. As evident in this study, it could be likely that individuals with higher commitment and challenge abilities than control tend to aggressively defend their self-care management philosophies and strategies.

In this study, higher scores on patients' attitude towards compliance suggested positive views of the workers in utilizing necessary adaptation in the self-care management of their hypertension condition.

Pollock (1998) in a similar study indicated that out of the 56% of variances that predict physiological adaptation in insulin-dependent diabetics, HRH accounted for 11% of the total variance. In this present study, HRH contributed to 10.1% of the variance in self-care adherence while MASES accounted to 8.3% of the variance in self-care adherence. The findings of this supports study findings of Pollock (1998) that hardiness may not be an isolated or unilateral construct but rather an important variance in predicting physiological adaptation in individuals with chronic conditions such as hypertension.

Since MASE22 and MASE23 are considered as numerical values they are interpreted as follows:

MASE22: For every unit increase in agreement with statement MASE22, the odds of being compliant increases by a factor of 3.56 as opposed to not being compliant, controlling for the other variables in the model.

MASE23: For every unit increase in agreement with statement MASE23, the odds of being compliant increases by a factor of 3.15 as opposed to not being compliant, controlling for the other variables in the model.

The items on the two instruments, the 14-item subscale of the Health-Related Hardiness Scale (HRH) and the 26-item Medication Adherence Self Efficacy Scale (MASE), were entered into a factor analysis. Maximum likelihood analysis method was used with both varimax and promax rotations. Both had nearly the same results. The convention of extracting factors as long as the eigenvalues remain greater than or equal to one, was followed. The scree plot did not show any clear leveling out which might indicate fewer factors. In this factor analysis there were 15 factors selected for a cumulative variance explained of 87.7%. The minimum factor loading value was less than 0.40, which is less than the minimum loading that is generally considered acceptable in social science studies. The communalities are all less than 0.70, which is an acceptable level and means that greater than 70% of the variance of each measure is explained by all of the other measures together. The factor groups are shown in bold-face on the Rotated Component Matrix table. Note that the determinant for this matrix = 0, meaning that the matrix is singular and cannot be inverted, indicating a high degree of multicollinearity in the data. Multicollinearity means that there is a lot of inter-correlation among the independent measures. This can make the factor loadings unreliable, due to an increase in the standard error. Additionally, it is recommended that there should be at least 5 subjects

for every survey item. That means that for this study with 30 subjects, surveys with more than six items cannot be reliably evaluated (Bryant and Yarnold, 1995). Therefore, both HRH and MASE scales are not suitable for this study population due to Cronbach's Alpha of less than 0.7 acceptable for social studies.

Table 3

HRH Scale factor Loading

			Rotated Factor Matrix(a)			
			Factor			
	1	2	3	4	5	6
HRH12b	**1.98**	-0.018	0.173	-0.085	-0.032	0.024
HRH13b	**0.673**	0.059	-0.103	0.259	-0.193	0.017
HRH3a	-0.064	**0.972**	-0.068	-0.11	0.122	0.138
HRH2a	0.144	**0.679**	0.125	0.262	-0.189	-0.13
HRH10b	0.183	-0.005	**0.935**	0.069	-0.012	0.005
HRH11b	-0.121	-0.287	**0.629**	0.276	0.157	-0.335
HRH9b	-0.01	0.104	**0.408**	-0.044	-0.135	-0.028
HRH5a	0.057	0.246	0.05	**0.775**	0.09	0.078
HRH8b	0.055	-0.105	0.043	**0.687**	0.087	-0.002
HRH6a	0.138	0.108	-0.03	-0.363	**-0.879**	0.069
HRH4a	-0.005	0.114	-0.275	-0.165	**0.565**	0.156
HRH7a	-0.071	-0.043	0.016	0.089	**0.401**	-0.252
HRH1a	0.151	0.1	-0.042	0.066	-0.004	**0.911**
HRH14b	0.328	0.137	0.144	-0.045	0.102	**-0.489**

Extraction Method: Maximum Likelihood

Rotation Method: Varimax with Kaiser

Table 4 presents Cronbach's alpha calculated by entering all of the HRH survey items together into the calculation. The result was that Cronbach's alpha = 0.413. Cronbach's alpha is used to determine if a group of survey items measures the same construct. The larger Cronbach's alpha is, the stronger the relationship of the group of items or the

greater their reliability is as a group. When Cronbach's alpha is less than 0.6 as it is in this case, it means that the items are not from the same construct. Since all of the HRH items were entered into the Cronbach's alpha calculation, it means that the HRH survey does not measure one single construct. That is further confirmed by the factor analysis which resulted in 6 separate factors.

Table 4

Cronbach's Alpha for HRH Scale

Reliability Statistics	
Cronbach's Alpha	# of Items
0.413	14

Table 5

MASE Total Variance Explained

Initial Eigenvalues			
Factor	Total	% of Variance	Cumulative %
1	3.403	13.08	13.089
2	3.179	12.22	25.315
3	2.096	10.36	35.684
4	2.096	8.061	43.746
5	2.003	**7.702**	51.448
6	1.727	6.641	58.089
7	1.697	6.527	64.616
8	1.532	5.893	70.509
9	1.431	5.504	76.012
10	1.152	4.432	80.445
11	.931	3.580	84.024
12	.863	3.321	87.345
13	.671	2.582	89.927
14	.593	2.280	92.207
15	.464	1.785	93.991
16	.448	1.722	95.714
17	.292	1.124	96.838
18	.232	.891	97.729
19	.217	.834	98.563
20	.122	.469	99.036
21	.097	.347	99.406
22	.084	.322	99.728
23	.034	.130	99.858
24	.019	.074	99.933
25	.019	.059	99.992
26	.002	.008	100.000

In Table 5, the 26 items of the Medication Adherence Self-Efficacy entered into a factor, showing that MASE scale did not measure one

Table 6

Cronbach's Alpha for MASE Scale

Reliability Statistics	
Cronbach's Alpha	# of Items
$ 0.21	26.00

Figure 1. Scree Plot of HRH Scale showing multiple factors.

Figure 1 showed scree plot of more than one factor. The 14 items of the Health-Related Hardiness Scale (HRH) were entered into a factor analysis using the maximum likelihood method to extract the factors. The convention of extracting factors, as long as the eigenvalues remain greater than or equal to one, was followed. In this factor analysis there were 6 factors selected for a cumulative variance explained of 64.9%. The

minimum factor loading value was over 0.40, which is greater than the minimum loading that is generally considered acceptable in social science studies. The factor groups are shown in bold-face on the factor loadings table. The bold-face loadings in a single column in table 7 mean that the items in the corresponding rows belong to one factor. For example, the first two entries in column one is in bold type, 0.98 and 0.673.They correspond to the row items HRH12b and HRH13b, respectively. That means that HRH12b and HRH13b make up factor 1. When items comprise a factor it means that those items conceptually measure the same thing. In this case the factor analysis has identified six underlying measures or latent constructs within the HRH survey.

Table 7

HRH Scale Factor Analysis

HRH Survey Items	Factor Loadings					
	1	2	3	4	5	6
HRH12b	**0.98**	-0.018	0.173	-0.085	-0.032	0.024
HRH13b	**0.673**	0.059	-0.103	0.259	-0.193	0.017
HRH3a	-0.064	**0.972**	-0.068	-0.11	0.122	0.138
HRH2a	0.144	**0.679**	0.125	0.262	-0.189	-0.13
HRH10b	0.183	-0.005	**0.935**	0.069	-0.012	0.005
HRH11b	-0.121	-0.287	**0.629**	0.276	0.157	-0.335
HRH9b	-0.01	0.104	**0.408**	-0.044	-0.135	-0.028
HRH5a	0.057	0.246	0.05	**0.775**	0.09	0.078
HRH8b	0.055	-0.105	0.043	**0.687**	0.087	-0.002
HRH6a	0.138	0.108	-0.03	-0.363	**-0.879**	0.069
HRH4a	-0.005	0.114	-0.275	-0.165	**0.565**	0.156
HRH7a	-0.071	-0.043	0.016	0.089	**0.401**	-0.252
HRH1a	0.151	0.1	-0.042	0.066	-0.004	**0.911**
HRH14b	0.328	0.137	0.144	-0.045	0.102	**-0.489**

HRH-Health Related Hardiness Scale represents one of the tools used in the quantitative data collection in the study.

Table 7 indicated that Cronbach's alpha was calculated by entering all of the HRH survey items together into the calculation. The result was that Cronbach's alpha = 0.413. Cronbach's alpha is used to determine if a group of survey items measures the same construct. The larger Cronbach's alpha is, the stronger the relationship of the group of items or the greater their reliability is as a group. When Cronbach's alpha is less than 0.6 as it is in this case, it means that the items are not from the same construct, indicating that HRHS failed to measure the presence of hardiness in this study. Since all of the HRH items were entered into the Cronbach's alpha calculation, it means that the HRH survey does not measure one single construct. That is further confirmed by the factor analysis which resulted in 6 separate factors.

The 26 items of the Medication Adherence Self-Efficacy (MASE) scale were entered into a factor analysis using the maximum likelihood method to extract the factors. The convention of extracting factors, as long as the eigenvalues remain greater than or equal to one, was attempted. However, in this case the factor analysis did not converge in 9,999 iterations, the maximum number of iterations allowed by SPSS. If there is no convergence, the program is terminated. Different numbers of factors were forced in an attempt to obtain a result that converged and would then output a factor loading matrix. A three-factor model converged and the factor loading matrix can be found below. The factor groups are shown in bold-face on the factor loadings table. The bold-face loadings in a single column mean that the items in the corresponding rows belong to one factor. For example, the first five entries in column one, are in bold type. They correspond to the row items se6, se22, se7, se18 and se24. That means that those items make up factor

1. When items comprise a factor it means that those items conceptually measure the same thing.

Cronbach's alpha was calculated by entering all of the MASE survey items together. The result was that Cronbach's alpha = 0.209. Cronbach's alpha is used to determine if a group of survey items measures the same construct. The larger Cronbach's alpha is, the stronger the relationship of the group of items. When Cronbach's alpha is less than 0.6 as it is in this case, it means that the items are not from the same construct. Since all of the MASE items were entered into the Cronbach's alpha calculation, it means that the MASE survey does not measure one single construct. That is further confirmed by the factor analysis which resulted in 3 separate factors.

Table 8

MASE Scale Factor Analysis

MASE Survey Items	Factor Loadings		
	1	2	3
se6	**1**	0	0
se22	**-0.345**	0.287	0.147
se7	**0.337**	-0.159	0.204
se18	**-0.334**	0.283	-0.12
se24	**0.286**	0.214	-0.193
se5	-0.129	**-0.779**	0.116
se3	-0.12	**0.472**	0.043
se9	0.291	**-0.454**	0.363
se14	0.417	**0.454**	0.034
se16	-0.204	**-0.317**	0.039
se23	0.178	**-0.31**	-0.019
se19	0.159	**0.258**	-0.018
se17	0.111	**0.23**	-0.058
se25	-0.385	0.221	**-0.582**
se8	0.006	0.25	**0.581**
se10	-0.295	0.309	**0.546**
se2	-0.079	0.518	**0.529**
se11	0.05	0.295	**-0.512**
se13	0.168	0.16	**0.496**
se4	0.161	-0.267	**0.424**
se1	0.306	-0.017	**-0.414**
se26	0.036	0.207	**-0.347**
se20	-0.146	0.111	**0.273**
se21	0.001	-0.021	**-0.193**
se12	0.04	0.042	**-0.095**
se15	-0.014	-0.058	**-0.065**

In Table 8, the factor loadings are presented in bold on the rotated component matrix table. Factor analysis was unsuccessful in confirming that the above items are from the same construct. Also, the scales used in this study were not internally consistent and construct valid for the target population and as a result qualitative data analysis and

interpretation will not be done in this study. Also important to mention that Table 8 showed that in MASE factor loading, one or more commonality estimates greater than 1 encountered during iterations

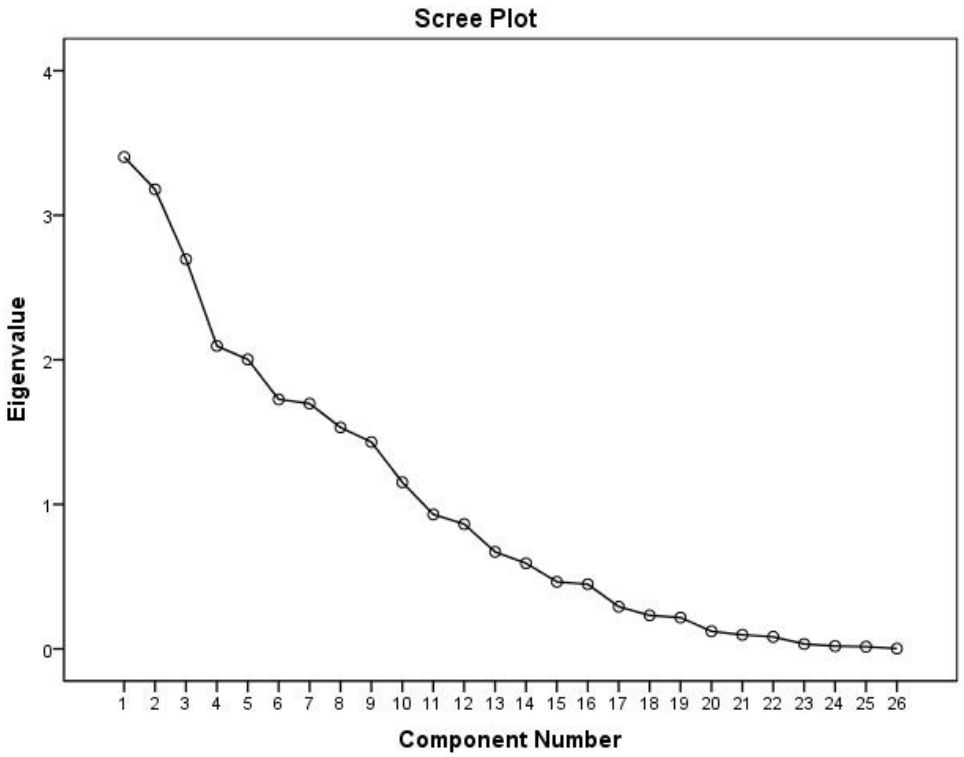

Figure 2. Scree Plot of MASE Scale showing multiple factors

It is equally important to note that Figure 2 presented multiple factors, therefore measuring more than one construct.

Analysis of Focus Group Findings

Focus group sessions provided the researcher an avenue to obtain unadulterated and direct feedback of the participants' experiences and each individual difference in self-adherence towards hypertension management. Emphasis was placed in dissecting the social and health behaviors associated with life-style change and the psychosocial

implications that hardiness and attitude has on Nigerian health care workers' ability to manage their health conditions. Nigerian health care workers residing in the Washington, D.C metropolitan area formed the four focus groups. Questions from the focus groups were grouped into four themes: (1) perceptions regarding Nigerian self-efficacy associated with health practices, (2) health knowledge, beliefs, attitudes and values, (3) cultural influence, and (4) the role migration to another culture plays.

Study Themes

This study's results are presented as four major common themes as identifies and narrated by the study participants. The key words or phrases used to identify the study major themes originating from commonalities of phrases that frequently support the focus group participants' values, experiences, cultural, and lifestyle, chosen due to the frequency in prevalence of the themes in the survey and during the focus group discussion. In a study that involves exploration of an individual's emotions, feelings, and subjective interpretations, these experiences is not effectively reduced to numbers. Therefore, the researcher combined quantitative with qualitative methodology which utilized open-ended questions and enabled the study participants to share its more personal or subjective views about an experience or a situation (Creswell, 1998). In this study the participants were given the opportunity to present unique personal accounts of cultural influence on hardiness and attitude and how that influence both self-efficacy and self-care management of hypertension among Nigerian health care workers in Washington, DC. Their experiences and perceptions is priceless and cannot be is quantified. Each participant's experience was indeed unique and exhumed a commonality of realities and experiences that goes beyond captivating the reader's understanding of

the journeys of the participants. According to Becker et al. (2001), the root of African-American culture is deeply rooted in the values and cultures of their ancestors. Those cultural experiences underline the common themes presented in this study. The participants' interviews are presented and explicated in themes culled from their own words and experiences. Common phrases and words that culminated to identifiable themes for this study were derived from the participants own accounts and experiences as it related to self-efficacy and self management of hypertension medication adherence. The study theme included but not limited to cultural remedies, faith and spirituality, medication concerns, global economy and economic concerns, extended family relationship and role of health insurance.

Findings Related to Question 2, 3, and 4

Question 2: What changes have occurred in the self-efficacy behaviors of Nigerian health care workers, members of ASA USA that influence the choices they make towards hypertension treatment?

Question 3: To what extent has culture been a factor in the change in Nigerian health care workers' attitudes towards self-management health behavior?

Question 4: When given the choice for health coverage rather than no health insurance for higher wages, does Nigerian health care workers perceptions about health impact self-control and adherence to hypertension treatment?

The study's results are presented as first two themes are directly related to research questions 2, 3, and 4 since participants clearly indicated choice, perception, values, and culture and how these variables influence self-efficacy and self-management of Nigerian heath care workers with history of hypertension, residing in Washington, DC.

The focus group participants were asked to assess the extent to which the African culture, specifically, the Nigerian culture influences the perceptions, attitudes, beliefs, and values of the participants. Findings based on the responses obtained from the participants supported the prediction that there is a significant correlation between perceptions, attitudes, beliefs, and values of Nigerian health care immigrant workers, who strongly identify with and practice the Nigerian culture in the United States. Outlined below is a detail narrative description of the themes that emerged from the focus group participants' discussion.

Theme 1: Perceptions regarding Nigerian health care workers self-efficacy associated with health practices, cultural practices and use of remedies.

Nine male and 15 females (80% of the focus group participants) indicated a sincere connection with their cultural self-care practices and skepticism over Western treatment. The following are some of the responses from the focus group interview to support the view. Mr. D. said, "Culturally, our people here are obligated to take care of family back home which is making it hard to take care of the individual's health needs. As a result, I find myself using cultural remedies which are cheaper alternatives to buying BP medication, even when you have health insurance. My BP medicine one Pharmacist said will cost me at least $86 a month, I can't afford that. In place of that, I can take about two to three generic BP medicines and each with chance of causing ED."

Twenty-four (24) focus group subjects reported that they grew up with elders of their cultures who exert significant influence over self-care practices and attendance to health need. Equally significant is that 26, or 88% of the participants, voiced the opinion indicating that they would have more confident in the Western or modern medicine if

health care providers take time to explain to them about the treatment modality and known efficacy, with their population or similar racial or ethnic group studied. Considering that most medical research findings are based on result with Caucasian subjects or groups, 23 or 75% of the Nigerian heath care providers that participated in the focus group expressed their concern about having cultural-tailored health education intervention, relevant to their culture.

The following highlighted remarks and quotes were exact from the focus group participants. Mr. Do said, “They say you need to walk out daily which I do at work, walking up and down the hall and in the patients’ room. By the time you pull 16 hours a day, 6 days a week, what time do you have to walk out again? It is tough to practice health prevention when you have so many things competing for your interest. Health prevention yes, saves life, but there is place for cultural practices in every one of us, whether we recognize it or not. One thing is true, cultural remedies rather than affect men’s reproductive may help to increase performances and reproduction”.

More than 27 subjects or 92% of the participants responded with the opinion that their nuclear culture is responsible in shaping some of the core values among Nigerian immigrants and that such values are necessary in maintaining positive attitude, so as to withstand infection and for optimal health and wellness care. All 30 participants indicated awareness of the influence of their culture on hypertension self-care management and efficacy. When asked about what aspects of the cultural self-care practices affect the treatment of their hypertension and to what extent has that affected the outcome of your hypertension Treatment, the participants provided the following responses for question 2.

Theme 2: Cultural Influences, Behavioral Influences, Attitudes, and Values.

When the participants were asked describe the aspect of their culture that influence the way they attain to their health and to describe the effects of the outcome has on the ability to manage their hypertension, 10 males and 16 females or 93% of the study participants confessed to being noncompliant to medication due to cultural belief. The remaining 7%, which represented two out of the 30 participants, stated that they take their medications as prescribed and do not use cultural practices to maintain health. The following conversations represent the participants' experiences, in the participants' own words:

A8 said, "Do you know that there is a chewing-stick they sell around Nsukka area that help to prevent illness? People have been using it for years and it works. Don't get me wrong, health prevention is important but there is power in native medicines too. All the BP medicines have bad effects, especially on men and that is a scary feeling."

A9 added, "You know, when you do not have health insurance it is important to do what is necessary to prevent illness. But most of us without health insurance use local herbs to help our health. It is tough. And like other people before me said, side-effects of the BP medications, especially on men, affect peoples' attitudes towards health."

B4 voiced, "Well said. It will be good to go to the doctor before the problem starts, but that is not so. If only one can afford the Gym membership fee, because of the need to take care of other financial obligations, there is no time to go to the Gym. You have folks back home who are dependent on you and the bills, there is just not dollar enough to go around. So, local remedies come handy. I strongly agreed that one of the things that affect our attitudes on BP medication is the effects on men's reproductive organs which is related to trust on the medication."

Participants' Responses in Relation to Study Themes

In addition to the indigenous themes, themes that characterized the experiences and cultural practices of the participants illuminate questions of the study. The researcher and the external reviewer searched the interviews for evidence of social conflict, cultural contradictions, informal methods of social control, and different techniques implored by the participants to address and manage interpersonal social relationships and self-efficacy modalities.

In concluding this project, the study's results are presented as four main common themes identified by the study participants. The qualitative portion of this study was investigated and narrated qualitatively, exploring the participants' values, emotions, attitudes, feelings, and cultural values, and subjective interpretations, which are impossible to reduce to numbers (Creswell, 2002). By imploring qualitative methodology, the researcher asked open-ended, exploratory questions, affording the study participants the opportunity to render personal accounts of their struggles concerning self-efficacy experiencing in managing their hypertension condition in the United States. Every participant's cultural experience was different and unique, still yet enriched a commonality of realities that cannot escape the reader's understanding of the situation. Based on the study analysis by Llacer et al. (2007), post migration, immigrants' and nationals' health patterns coverage and some health conditions, such as self-rated health seen with hypertension, immigrants' far worse when compared with the indigenes. Those cultural experiences and differences underlined the common themes narrated in this study. Utilizing the word-bases technique, word repetition, key-indigenous terms and key-words-in-contexts were drawn on a simple

observation and common themes like erectile dysfunction, faith in God, and use of cultural remedies were identified.

Theme 1: In response to Research Questions 2, 3, and 4, majority of the study participants among the Nigerian health care workers held the following perceptions:

- The elders of their cultures and ancestors were not opportune to practice Western medicine and lived until succumbing to death in old age. Therefore, the cultural heath care practices must have proven health efficacy and needed to be passed on to future generations.
- Ten out of the 11 male participants in the study and two females expressed concern regarding hypertension medications alleged association with erectile dysfunction, which affects compliance and self-efficacy. The females concern was indirect, based on their spouse concern with erectile dysfunction.
- Ambiguity over Western medicines among minority groups stems from research such as the case with Tuskegee syphilis trial, involving vulnerable ethnic population.
- The urinary symptoms associated with some of the hypertension medications are thought to lead to prostate cancer and long-term urinary incontinence among men.
- That the personal views about health and wellness maintenance among this group of participants varies. One focus group respondent indicated that “health is wealth, you maintain health, and you live longer.”

Theme 2: Health knowledge, beliefs, attitudes and values associated with the Nigerian culture.

In responding to this question, 10 males and 16 females, more than half of the participants, responded with the opinion that the nuclear culture is responsibly in shaping some of the core values among Nigerian immigrants and that such values are necessary in maintaining positive attitude, in other for their system to fight infection and for optimal health and wellness care.

- Based on the respondents, that the values acquired by most of the Nigerian immigrants are more likely derived from their parents and elders of the culture with little or no acculturation of the country of residency. According to one respondent, that there are positive influence of the Western culture when it come to health and wellness care. However, the core value of self-care practices among the Nigerian immigrants has the ability to shape and influence the values already acquired from their nuclear culture, therefore superseding the western cultural influence.
- According to one focus group respondent, the individual nuclear culture has the ability to facilitate and define attitudes and values among the young, which is carried over to adulthood. Another respondent indicated that attitudes and values acquired in early childhood are very difficult to change, regardless of education, socioeconomic status, or place of residency. One participant pointed out that when people thrive to adulthood without a visit to the hospital or dentist even with a very high fever, and survives the attack over and over again, they believe that the elders of the culture are protecting them and guiding their self-care practices and self-care adherence.

- Another focus group respondent indicated that lack of education and poverty as seen prior to Western influence in Nigeria and other developing countries are important factors that helped to seal the faith of the people in cultural health perceptions and practices.
- The common theme from all of the respondents was that "what you do not know will not hurt you, and if it is not broken, do not fix it." One respondent reported that illnesses, especially hypertension, known for exhibiting minimal symptoms should be addressed or the disparity associated with the disease will not be adequately addressed.
- Women more than men mentioned faith as self-efficacy practice for the management of the hypertension. Eleven out of 19 females and 3 out of 11 males that participated in the study used the word "faith" as a self-management modality.
- Study participants younger than 40 years of age, both males and females, indicated they are likely to take their medication than those older than 40 years of age. Out of the 13 study participants younger than 40 years, 9 said they are somewhat compliant with their medication compared to only 5 out of 17 participants older than 40 years.

Question 2, 3, and 4 generated overwhelming responses, indicating that the Nigerian cultural health perceptions have the greatest impact on the indigenes self-care adherence to medical treatment. Focus group participants strongly believe that varieties of cultural practices support health which include but not limited to herbal mixtures, charms, body cream and adorations, drinks, and food extracts and

additives, all of which have medicinal potency and may influence the peoples' perceptions, attitudes, beliefs, health behavior practices, values and overall lifestyle.

Theme 3: Cultural Influence of extended family need on hypertension treatment adherence.

A majority of the focus group respondents felt strongly that individual ethnic culture influence the indigence lifestyles and behavioral patterns concerning extended family need which directly influence health and wellness.

- Nine males and 11 females of the study participants are of the opinion that regardless of the influence of religion and western civilization, health care in the rural areas of Nigeria is managed by traditional healers, who also attend to multiple health problems, including childbirth, in an effort to maintain health and wellness.
- Some of the respondents expressed faith on the culture, indicating recognition of the roles and influence of the traditional healers on the indigenes who are training cultural health practitioners in utilization of concepts such as aseptic techniques and the use of simple medical devises, in caring for the sick.
- One respondent reported that certain rivers and trees in the culture have healing power and that bathing, drinking and praying to those objects have tremendous healing powers and huge influence on the indigenes health perception and self-efficacy practices.
- According to one respondent, their fore-fathers who have passed on are guiding their journey miles away across the Atlantic Ocean and continue to protect them

from harm, intrusion of the evil spirit, and illness such as hypertension, and are invisibly surrounding and protecting their health.

Theme 4: The role migration to another culture plays. Lack of Health insurance

- Eight out 11 male participants and 12 of 19 female study participants responded regarding health perception, practices and self-care efficacy on the Nigerian indigenes due to the immigration status and laws of the adopted cultures. In the United States, only immigrants who are legally assimilated into the culture have the potential to gain employments that provide work merits such as health insurance. Unfortunately, majority of the Nigerian populace as is the case with immigrants from many other developing countries could not boast of legal status in the United States. As a result indicated the respondents, individuals with college degrees are forced to settle for jobs with less than optimal pay and no provision of health insurance coverage, thereby encouraging self-efficacy and self-care practices.
- According to many other respondents from the focus groups, the extended family relationship that is the premise of the Nigerian culture exerts financial demand to the few residing in the developed countries like the United States. Therefore, the focus of the Nigerian worker is to obtain enough wages to fulfill his or her nuclear family needs and the need of the extended family in Nigeria. This practice according to the respondents leaves little or no room for health care support.
- Another respondent reported that even when the choice is given to obtain health care coverage through employer shared-health cost, most Nigerians decline the

offer and health conditions like hypertension and high cholesterol ravage the population.

- One respondent indicated that he opted for higher pay against position with benefit such as health insurance, since such increase over his base pay provides additional income highly needed to alleviate economic needs of his extended family in Nigeria.
- Another respondent mentioned that enculturation to a new culture may influence health. That plays out with high calorie, high fat local diets, and the luxury of affording transportation in the adopted culture. These hamper the only cultural mode of exercise, walking, thereby predisposing one to health variances like hypertension, high cholesterol and diabetes, all of which pose significant risks to the participants' health status.

Focus Group Analysis Narrative

The analysis of the focus group findings revealed that members of the focus group presented difference health perceptions and cultural self-care practices and adherence; nonetheless, the overwhelming group response indicated that the Nigerian culture, especially as it relates to health perception and self-care practices is an important factor in their health and wellness maintenance. Significantly, an interesting finding reported by group members is the fact that Nigerian cultural influence is embedded in the indigenes and defines their innermost personal habits, beliefs, and values. These findings were consistent throughout the focus group study theme, which revealed that more female then men identified faith and prayers as cultural practices and ways to attend to their health.

Despite residing in a foreign culture, acculturation of the said culture, advancement in education, and improvement in socioeconomic status of the study participants, the group members still demonstrated strong attachment and connection to their nuclear culture, especially as it relates to health maintenance and self-care perception and adherence, as exhibited in their knowledge about cultural health practices and developments. It is equally important to note that the participants' cultural habits is connected to yet another specific set of elements that influence not only their health but their choice of food and employment decision making capabilities. As a result, many of these experiences synonymous with the culture have provided this population with array of lifestyle experiences that they have grown accustom to and with significant influence to their health perception, maintenance, self-care practices, and treatment adherence. Out of the 11 males and 19 females who participated in the study, 8 males and 12 females cited lack of health insurance as having significant effects in the ability to manage their hypertension condition.

In view of the common themes that emerged most frequently throughout the focus group discussion, Nigerian cultural influence on health is centered around the following themes

1. Lifestyle practices (i.e., cultural health perceptions and practices, choice for no health care coverage, emphasis on higher paying job, and self-efficacy associated with health practices).

2. Health knowledge, beliefs, attitudes and values (i.e., beliefs in unrealistic but reassuring health concepts, charms and forefathers possession of supernatural protecting powers

3. Cultural influences (i.e., cultural herbs, medical body charms, adorations, faith in traditional healers and native doctors, faith in healing waters/rivers and trees).

4. Migration to another culture (i.e., immigration status and employment decision, lack of health insurance coverage, decline for health insurance coverage for higher pay, due to economic reasons).

Other themes include both negative and positive experiences associated with the individuals' Nigerian culture, especially as it relates to health care practices influence and model attracted experiences in the form of self-control, self-efficacy, and outcome expectations, from the elder statesmen and individuals' parents. The effects of globalization that peaked in the 20th century ushered influx of immigrants from countries like Nigeria, majority of who are illegal and working multiple and less than optimal jobs, in other to survive in a system where only the fittest thrive, thereby compromising health.

Non-Conforming Data/Miscellaneous Responses of Participants

Some of the responses that emerged from the focus group interview were grouped as miscellaneous but included in the findings as they provided valuable insight to the participants' perceptions, beliefs, attitudes, values, and overall lifestyles and self-care practices that may impede health. Researcher's questions that aroused both positive and negative themes and responses that influence health self-efficacy were included in the study's interview sequence with the expectation of uncovering how such self-control and perceptions could influence health practices. Sixteen participants indicated that attendance to health needs were paramount when they perceive less stress in their lives, which offers spare time to think about self-efficacy practices. Poor health support

according to the participants becomes inevitable when there are many competing interest and demands attributed to work, academics, family life, and considering the demands from their extended families in Nigeria. These maladaptive situations are associated with decline in self-efficacy and self-management of health conditions. Some of the positive responses from the participants are very significant and such miscellaneous data could be interpreted differently in a quantitative study.

Understanding the modus operandi of Nigerian health care workers' attitudes and hardiness influence on health will be productive in designing programs that will support stress relief and control. Eleven out of the thirty study participants indicated that they feel uncomfortable discussing their health, as a result, they avoid health care practitioners and activate self-efficacy and self-practices, often influenced by cultural perceptions and beliefs. When the participants were asked to identify positive health values adopted from interacting with their adopted culture, six of the participants expressed being privileged to be in the United States known for cutting edge medical technology. However, 14 of the participants indicated not taken advantage of the services for reasons they found difficult to articulate. From listening to the participants and based on the responses to the questions directed to them, it become evident that they feel motivated to approach health self-efficacy and self-management differently but to understand why it is taking so long to effect health change, despite their knowledge of health and wellness.

Summary of Findings

The analysis of the core research questions and the two data collection instruments involved assessment of the measurement properties. Also, the themes and comparisons were constructed in such way that they matched the theoretical paradigm for

which this study was developed. All four questions tested predicted that the study participants overwhelmingly agreed with the questions.

Data from the quantitative section of this study was inconclusive due to inability of the HRH scale and MASE scales to adequately measure self-efficacy of Nigerian health care workers on hypertension management, as evidenced by the tools measuring more than one construct. Therefore, the findings associated with this study came from the qualitative aspect of the research, since the researcher was unable to determine if attitude and hardiness have direct effect on medication adherence among Nigerian health care workers and the participants' health practices and self-care adherence to hypertension. Furthermore, the findings suggest that the tool designed to measure the construct of self-care efficacy cannot be applied to a generalized population with hypertension management and, as such, is not a valid tool. Also, the findings suggested that the majority of the modeling and images that are part of the Nigerian cultural health practices hass the ability to influence the individuals' perceptions, attitudes, values, belief pattern, and self-care practices of those that grow up in the Nigerian culture. One important qualitative finding was that the Nigerian culture is more likely to influence the attitude and values of Nigerian indigenes who were predisposed to a good set of values or positive attitude prior to being exposed to repeated forms of cultural health practices. Participants who belong to this group indicated that they were born and raised in the urban cities and lived in middle socioeconomic neighborhoods with some degree of Western influence.

This chapter presented the results of the research questions. The data collected from the medication adherence Self-Efficacy Scale and the Health-Related Hardiness

Scale were inconclusive. Analysis of the qualitative data supported the study questions in revealing significant relationship between culture, attitude, hardiness and self-efficacy health practices. The focus group findings were delineated and presented in a narrative format. The common realities from all 30 study participants made it possible for the researcher and the external reviewer to arrive at undisputable consensus with regards to thematic identifications. Those themes and their implications will be reviewed further in Chapter 5.

Chapter 5: Summary, Conclusions, and Recommendations

Introduction

Prior to this study, there was limited empirical research data directed towards Nigerian immigrants' health status in the United States and the influence of Nigerian culture on hardiness and attitudes towards self-care practices, and health treatment adherence on hypertension among this ethnic subgroup. Since the late 20th century, the population of Nigerians in the United States has steadily grown. However, as indicated by some theorists, post migration, immigrants' and nationals' health patterns coverage and some health conditions, such as self-rated health seen with hypertension, immigrants fare worse when compared with the indigenes (Llacer et al., 2007).

Two variables contributed immensely to the decline in the Nigerian immigrants' health following successful entry into the host county: their quest to make money by seeking multiple employments, and hardiness and attitudes influence on cultural perception towards health and wellness care. This is especially true among the male indigenes of this culture due to the erroneous perception of hypertension medication as a cause of erectile dysfunction, a perception so strong as to deflect variables like education and income. Even with the recent spike in the number of sudden deaths among this vulnerable population, culture continues to exert tremendous influence on hardiness and attitudes of the members of this ethnic group towards health and wellness maintenance. According to health statistics records, racial and ethnic minorities, including Nigerian immigrants, have higher rates of hypertension, tend to develop hypertension at an earlier age and are less inclined to

seek for treatment to control the effects of high blood pressure (Chobanian et al., 2001). African Americans have higher rates of Stage 3 hypertension than European Americans, a condition that is a catalyst to the estimated 80% higher stroke mortality rate seen among African Americans, including Nigerians (NCHS, 2007), prompting a need for a study of this capacity. This study was conducted as a mixed-method methodology approach to examine the impact and influence that culture has on the perceptions, attitudes, beliefs, and values of communities like the Nigerian immigrant health care workers, towards health self-care practices (Creswell, 2007).

During the period of this study, this researcher found no studies in the literature that address health effects of Nigerian migrant workers and the cultural experiences or the influence on self-efficacy and self-care management of chronic illness such as hypertension. This researcher therefore sought to address this void in the literature by conducting a study, during which, in their own words, Nigerian health care workers members could share unique experiences and cultural influence on their health with the hope that health care managers may develop cultural-tailored health intervention programs that will address the health of these migrant workers.

The study presented the testimonies of 30 Nigerian health care workers who were asked to discuss their cultural health practices and experiences and the influence on self-care and self-efficacy in health management. Prior to developing this study, assumptions were formulated which permitted a more directional framing of the study's research questions. Considering that this researcher is originally from Nigeria and shares the same cultural experiences with the study participants, obvious hindering factors were identified and instituted in the construction of the study

assumptions. The identification of the assumptions allowed for the development of research questions that enable the participant responses to confirm the problems of Nigerian health care workers and at the same time acquire possible solutions.

The study attempted to examine the extent to which Nigerian health care workers residing in the United States manage their hypertension based on their nuclear culture. In particular, the study examined if the culture exerts negative attitude on the workers' attitude and behaviors.

In an attempt to answer the research questions, the MASE and HRH study scales were administered to validate the construct of medications self-efficacy, and as a result were not reliable tools for the target population.

Researcher Bias

The study researcher is Nigerian, raised in the same culture with similar cultural influence as the participants of the study, and interacts often with members of the participants' organization and many other Nigerians and minority immigrants at the professional arena and social gatherings. In view of the fact that the researcher related to the participants' cultural experiences and dilemma, efforts were instituted to reduce the data using data reduction technique on all collected data. This effort minimized any chance of bias that may influence data analysis. Research questions utilized in the study enabled participants to elaborate and articulate their experiences in a way that it reflected their perceptions on health self-efficacy and management.

Study Conclusion

Assumptions

Prior to the beginning of this project, this researcher had assumed that the participants of this study would truthfully and without bias voice their opinion regarding the health challenge in adjusting to the American health care system and the effects their culture exerts on their ability to attend to health. This study therefore provided the necessary modus-operandi for that to happen. Assumptions were indeed confirmed and established through participants past and present experiences.

Assumption 1: Health perceptions of African Americans, specifically Nigerians, negatively influence adherence to treatment.

Assumption 1: *Confirmation.* Although this assumption was not supported quantitatively, evidence from thematic data indicated that Nigerians health care workers perceive health different from their American counterparts. To many of the Nigerian health care workers that participated in the study, health perception is influence and propagated by cultural experiences, values, self-care practices, and situational conditions such as choice-making abilities. This assumption is validated by Theme 2, which affords the participants an opportunity to elaborate on the effects of their culture on health practices. Also, the scores of each individual are independent of the scores of any other participant in the study as the procedure for the data collection ensured independency of scores.

Assumption 2: Economic disadvantages of Nigerians and other African Americans overshadow the perception of health and wellness need.

Assumption 2: *Confirmed*. The economic situation in Nigeria started with devaluation of their currency and subsequent removal of the oil subsidies, as conditions to qualify for IMF loan. In addition to the spiraling effect of the housing market, which triggered global recession, countries like Nigeria are faced with harsh economic uncertainties. As a result, a mass influx of professionals left the country in search of the American dream and faced not only adapting and acculturating to a new culture but working harder to take care of the extended family structure left behind in Nigerian. This assumption was also validated qualitatively through the emergence of Theme 4, which gave the participants a voice indicative that the declining global economy is affecting the migrant workers worse than their American counterparts and the situation is further compounded by the extended family practices synonymous with the Nigerian culture. In fulfilling this assumption, each score of the dependent variable formed a normal distribution for all the possible combination in the relationship between the dependent variables.

Assumption 3: African American culture endorses materialistic values and less concern about positive health change.

Assumption 3: *Unconfirmed*. Throughout the discussion, there was no inclination, either through verbal cues or body language, from the participants suggesting that their health perception and maintenance were influenced by material acquisitions. This assumption was not validated or supported by any emerging theme and therefore nullified. Quantitatively, this assumption was met by ensuring that in this study population, the dependent variables exerted equal effect on each of the participants.

Assumption 4: When confronted with health issues Nigerian health care workers will adequately report their feelings, beliefs, and perceptions about adherence to health regimen.

Assumption 4: *Confirmed*. Every study participant spoke freely during the focus group session and without any reservation, both males and females made as many positive and negative views. Majority of the study participants candidly aired their views even when it may not be to their best interests. This assumption has been validated by the emergence of Theme 4, which allowed the Nigerian health care workers to discuss their views regarding the medications given to them for hypertension and to clarify the reason as to why they take or not take prescribed hypertension medication(s). Linearity was met as evidenced by horizontal scatter of the residuals.

Discussion

For an in-depth discussion of the potential relationship between cultural health-related hardiness (HRH), patient attitude toward compliance (PAC, and self-care adherence to hypertension treatment (SCA) among Nigerian immigrant health care workers *(N*=30) with hypertension, it is important to consider Bandura's (1997, 2001) philosophical views on social learning theory and the social cognitive theory. In view of the close interaction with one's culture and societal norms and values, the time spent by the participants observing specific elements of their individual culture is found to present both psychological and physical attributes. The varieties of cultural lifestyle and health practices modeling predispose the participants for potential social learning to occur (Bandura, 1971). According to Bandura (1971), with

presence of extensive exposure to stimuli, the process of sensory conditioning takes place, especially if such stimulus is attractive to the learner, as seen with Nigerian cultural health practices. The Nigerian culture like any other culture is consistently projecting an array of societal lifestyle modeling experiences, especially to the young generations, who are often attracted to new concepts, as part of childhood developmental process. The themes and images found in such cultural practices have the ability to influence the observer's to learn and depict new skills, including skills needed for self-care adherence to treatment modalities.

Several variables such as attitudes, values, beliefs, and cultural practices influence self-efficacy associated hypertension management. Participants in this study demonstrated characteristics that suggest that they have some degree of influence over their native culture that affect their perception about self-care adherence to treatment intervention. Additionally, participants of this study differ in their perception of what constitutes self-management and self-efficacy, which may be responsible for the differences in the individuals' perception of health and wellness as well as how that individual cope with stressful situation like management of hypertension condition. The culture-specific behavior such as hardiness over Western treatment, use of herbal preparations, incantations, unrealistic health beliefs, and unrealistic health expectations as seen with perception about erectile dysfunction appear to be linked to the Nigerian culture. Various literature reviewed suggest that hardiness and attitude both have detrimental effect on self-care adherence to treatment.

Interpretation of the Findings

This study examined Nigerian immigrant health care workers' noncompliance to hypertension treatment. Specifically, it was designed to examine the relationship between cultural influence on hardiness and attitudes of the participants toward health, particularly, self-care adherence to hypertension treatment, and the inability to maintain blood pressure of normal values and unprecedented increase in the number of sudden death seen in this group. The assumption was that the participants of this study actually adopted any or the entire specific cultural behavioral experiences in accordance with the social cognitive and social learning theories respectively. It was equally significant for this study to assess whether or not Nigerian immigrant health care workers hardiness and attitude negatively or positively affected self-care adherence to hypertension treatment.

Findings from the qualitative data analysis revealed that an most of the Nigerian health care workers surveyed indulge in cultural practices on the self-efficacy and practices of hypertension management. Participants reported embracing other cultural practices in the self-efficacy of hypertension management. Characteristics such as race, attitudes, values, and health practices differ significantly among races and subcultural groups, with significant influence in self-efficacy practices towards hypertension management (Williams & Collins, 1995).

The findings by Williams and Collins (1995) are supported by the focus group participants' views with regard to cultural perceptions and practices. The notion "if not broken, does not fix it" is commonly practice among this culture as reflected in their responses. Understanding and addressing racial disparity in health care includes

reviewing mal-adaptive behaviors of at risk sub-groups with behavior practices that when addressed will translate to effective modalities (Williams & Rucker, 2000).

Qualitative findings suggest that Nigerian health care workers with hypertension continue to exhibit attitudes and holding unto the belief that may influence hypertension management self-efficacy and self-practices, despite enculturation to the adopted culture. This was evident in the responses received in both the survey and the focus group. As observed by other researchers and social science theorists, in an effort to achieve the American dreams, immigrants such as Nigerian health care workers like many other minority subgroups struggle to balance education, income, and occupation, often to the detriment of chronic health illnesses, notably cardiovascular diseases, like hypertension. These vulnerable ethnic groups tend to ignore subtle health variances until the condition deteriorates to irreparable states (Winkleby, Jatulis, Frank, & Fortman, 1992).

Findings from the focus group responses suggest that Nigerians transfer knowledge of health practices and self-efficacy from generation to generation, through acquisition of knowledge obtained by observing self-care practices of the elders of the community. The intellectual aspect of the culture has infused critical social health practices to the younger generation regarding important and relevant health practices. As a result, the offspring of the culture are less likely to accept and integrate health information from other cultures (Torke, Corbie-Smith, & Branch, 2004). There are varieties of research and social theories alluding to behavioral components of ethnic and racial health disparities as the leading force widening the disparity gaps between minorities and European Americans (Williams, 2005). The participants believed that some forms of the Nigerian culture support well-being, especially considering that many of the elder statesmen lived to their

old age before succumbing to death with no known visit to the doctor. However, many of the participants agreed that diseases have changed and microorganisms morphologically adapt as the society adapts to newer innovations and lifestyles, requiring change in approach to self-efficacy practices.

The focus group interview sought out to evaluate "How is exposure to African culture correlated with the minority heath care workers' perceptions, attitudes, beliefs and values towards individual self-management behavior?" Due to limited cultural-tailored intervention addressing minority health, Nigerian health care workers with chronic illnesses like hypertension continue to rely on cultural practices in conjunction with western treatment, in addressing ill-health. These types of ineffective self-efficacy practices further widen the racial and ethnic disparities in heath care, further compounding heath care problems of this minority ethnic group (Rose, Kim, Dennison & Hill, 2000).

- 94% (28 of 30) of the surveyed participants believed that what affects their health is what they indulge in.
- 90% (27 of 30) of the participants surveyed indicated that their good health is based on destiny.
- 79% (24 of 30) of the participants surveyed are of the opinion that most things affecting their health happen by accident.

Further interpretation focus group findings revealed that both environment and heredity play significant role in illness conditions, but the environment affects behavior and lifestyle which influence self-practices and adherence to treatment. In a book titled

describing the social origin of health and wellness, the authors described how the environment and heredity interwove in influencing ones' self-perception, self-practices, self-management modalities and the factors help to influence ones' perception and lifestyle (Eckersley, Dixon, & Douglas, 2002).

Several factors contribute to ethnic and racial disparity and must be taken into account when assessing racial and ethnic health disparities. The conditions are multi-factorial, each playing a significant role that must be considered in designing programs to effectively address racial and ethnic health disparities among high-risk population such as the Nigerian health care workers (DHHS 2004). According to Dressler (1990), lifestyle is a major factor to consider in health disparity and one to target in designing programs that aim at bridging the disparity gaps.

Focus group interviews led to answers to this question: "Which specific aspect of Nigerian cultural health perceptions will have the greatest impact on the minority health care worker health self-care adherence to hypertension treatment?"

- 98% (28 of 30) of the participants surveyed indicated that setting goals for health goals is realistic.
- 81% (24 of 30) of the study participants are of the opinion that luck plays an important role in determining how soon one recovers from an illness.

Clearly, the response is similar in both the survey result and the focus group interview result. The findings suggest culture plays an important role in the health perception of the participants. The importance of values in the study of culturally diverse ethnic groups is well documented in previous studies and the impact on health disparities

significantly robust (Dilworth-Anderson, Burton, & Turner, 1993). The individual's culture has enormous influence on self-efficacy practices and a huge influence on the cognitive processes. A common theme throughout the study is the concept that attitudes, values, and behaviors were being influenced not only by the enculturation in the adopted culture but also from the residual effect of the culture of birth. The attitudes and perception about health self-efficacy and practices alluded to by the participants represent some of the same attitudes and values that many Nigerians with chronic illnesses, such as hypertension, share.

Out of the 30 study participants, 16 indicated that health management is paramount but difficult to maintain due to other competing interest that often present as stressors. Eleven of the 30 participants indicated feeling uncomfortable discussing their health with their health practitioners, which normally paves the way to increased self-efficacy practices influenced by cultural perceptions and beliefs practices. Also, six participants indicated superior medical care in the adopted culture, while 14 participants mentioned that despite excellent health care system in their adopted culture, they failed to take advantage of the medical services for no obvious reason than cultural influence.

Women more than men identified prayers and faith as cultural practices and self-efficacy modalities, while participants younger than 40 years indicated the need to take hypertension medication in addition to cultural practices. However, study participants older than 40 years were more inclined to use cultural remedies and belief practices and less chance of taking prescribed hypertension medication. Pseudonyms were used to protect the identity of the study participants.

The trustworthiness of qualitative data is significantly related to the fundamental logic of qualitative theory and therefore must be evaluated (Ulin et al., 2005). In evaluating the credibility of the qualitative data collected, the researcher rephrased the questions in different forms with similar themes and responses emerging, consistently showing a logical relationship to each other. The responses from the participants led to more data probing and new areas of research interest that could be explored in future research. Efforts were made to recapitulate the responses, and the participants were asked to validate the accuracy of the emerging themes and responses. The researcher maintained an appreciable distance between her personal values and those of the participants and refrained from influencing the responses with her own values and bias. The participants' perspectives and experiences were considered and documented.

Researchers and social theorists support the concept that factors attributed to racial and ethnic health disparities are multifaceted. Efforts and programs designed to positively impact the outcome of health disparities must address all facets. According to Dressler (1990), lifestyle, which includes attitude, values, and perception, if well addressed will significantly affect outcome self-efficacy and management of chronic illness such as hypertension, among minority ethnic groups. Health care administrators and providers have the ability to produce programs and treatment modalities that will induce psychological arousal capable of influencing at risk behavior and lifestyle towards increasing health awareness self-efficacy practices (DuBois, 1906).

There are similarities in the results and findings from this study when compared with prior studies. Findings from this study support a similar study suggesting that African culture is deeply rooted in the values and cultures of their ancestors and that self-

care practice are more evident with individuals of low-socioeconomic status without health insurance (Becker et al., 2001). Significant findings also revealed that when cultural elements are positively addressed, they could be advantageous in addressing health variances like hypertension (Brower, 1992). According to Llacer et al. (2007), there is strong relationship between culture, economic status, and poverty, and health perception, among African Americans. Poverty has a direct effect on death rate among men and women of this vulnerable population.

Pollock et al. (1990) found that hardiness negatively affects self-care health behavior and the psychological and physiological adaptation of the patient. The attitudes of Nigerian health care workers toward health were obviously different than their counterparts in the United States. When confronted with choice problems as seen with health self-efficacy, minorities tend to rely on various rules to help them in the decision making, thereby compromising health (Kim & Markus, 1999). An individual's culture may positively or negatively affect health. While the positive attributes of the culture on health is supported, negative influence of the culture should be controlled to limit the compromise on health, which often has detrimental consequences (Orfali & Gordon, 2004). Minor study themes like choice, hardiness, and attitudes are similar to the hardiness survey with both results revealing similar responses, supporting strong relationships between culture and perception.

Application

The application for designing and implementing cultural-tailored health awareness programs is endless. Some aspect of the Nigerian cultural health practices can be utilized in the designing of cultural-tailored health support programs with the intent of

fostering learning and improving self-efficacy and health management of this vulnerable ethnic subgroup. Nigerian culture and the social learning theory adopt similar concepts. Learning is a process of acquisition of knowledge, with the individual acquiring new health behaviors through observation and enculturation. An individual's culture is a medium that affords unique opportunities to learn varieties of new behaviors and lifestyle changes through observation. Sometimes such acquired behaviors pose detrimental consequences to health, indicating the need for meaningful health awareness interventions. Menon et al. (1991) found that personal choices may hold as much choices for individuals from interdependent cultures as it does for those from dependent cultures The difference according to the researchers lies on the individual perception of what constitute choice. Bandura (1971) theorized that negative or positive behaviors are learned through observation. The Nigerian culture because of the multi-ethnic practices and languages associated with the culture, can pose complexities in health self-efficacy and management. Therefore, the acquired self-care could influence critical thinking resulting in negative or positive attitudinal and behavioral changes. Other applications for cultural-tailored health management program utilization include but are not limited to heath care policy, health education, disease prevention, and health care budget allocation.

Recommendation for Further Study

There is an urgent and overwhelming need for additional research to better understand the impact of culture on health of minorities, such as the Nigerian health care workers. Nigerian health care workers surveyed in the study indicated that their nuclear culture exerted great influence on their self-efficacy and health management approach.

There appear to be both quantitative and qualitative evidence supporting the correlation between Nigerian heath care workers' attitude and hardiness towards health management

The link between culture and individuals' attitudes towards health suggests that social disengagement is an important barrier to health maintenance, and addressing health variances should start by encouraging vulnerable sub-ethnic groups like the Nigerian health care workers to speak up about their negative experiences and the influence on health care perceptions. Therefore, the following recommendations are in order:

- More empirical research is needed in the area of minorities' culture and the impact on vulnerable ethnic subgroups. There are virtually no data or only a limited amount of research l that specifically addresses the relationship between Nigerian culture and health self-efficacy and self-health management.
- More quantitative and qualitative research is needed to adequately assess and measure the impact of hardiness and attitude on health practices and habits of minority subcultures like the Nigerian health care workers surveyed in this study, using valid and reliable tools.
- Longitudinal quantitative study to evaluate, track, assess, and measure themes and trends of minority ethnic subgroups and health maintenance and support.
- More research should be generated to examine characteristics of Nigerian health care workers by exploring their cognitive ability to deconstruct and meaningfully interpret the messages and themes. Understanding how minority cultures interpret Western health and how that affects self-efficacy and health

care practices may hold the key to unlocking how best to design and implement health intervention to effectively impact health outcome of the ethnic subgroups.

- Limited research exists pertaining to Nigerian females' attitudes and health outcomes. Therefore, more empirical research evaluating the gender differences of attitudes and effects on health is warranted.
- To better understand why the disparity in chronic health conditions continue to widen among minorities despite better health initiatives, advances in health care research and increase in health care funding, more scholarly research is recommended.
- To evaluate and integrate the positive aspect of minority as a resource for fostering a new climate for social change in health care, it is recommended that researchers explore what impact positive cultural practices are having on the minority health self-efficacy and disease management outcomes.
- Involving minorities and initiating ethnic and subcultural research activities that focus on specific vulnerable groups known to have higher prevalence to specific illnesses, especially with environmental influences.
- More research and findings are needed to ascertain the health economic and social impact of Nigerian culture on the minority community.

The researcher intends to discuss the results of this study first with the executives of the organization who gave the authorization for the study. If the ASA-USA executives agreed on a date, the researcher intends to organize health awareness and screening

session for the organization, as annually held every September, during which the results of the study will be disclosed with members of the organization in attendance. Efforts will also be made to produce a health information booklet containing the findings, which will be disseminated to all members of the association. Shared knowledge is the key to alleviating behavior-related health deviation, as seen with hypertension among Nigerian health care workers. One fact that needs to be discussed relates to the perception of not only the male participants of this study but, surprisingly, as it relates to the females participants regarding concerns about erectile dysfunction and hypertension treatment. Since this perception, thought to be gender related, was perceived by majority of the study participants, the researcher intends to develop a presentation on the pharmacodynamics and pharmacotherapeutics of antihypertensives and their relationships to erectile dysfunction.

Social Change Implication

Ethnic and minority subgroups in the United States continue to exhibit higher rates of chronic illnesses such as hypertension, diabetes, renal diseases, asthma, and obesity partly as a result of cultural health perception and self-efficacy practices. Notably among Nigerians immigrants in the United States, the cultural barriers have directly challenged preventive health and wellness, which have evolutional impact on social change among members of this community. Cultural evolution is known to impact perception, values, lifestyle, and health practices of members of the community with significant social concerns. However, the most significant social implication could be the assessment and implementation of a cultural-tailored health intervention that incorporates positive cultural practices, with known effective health concepts, in reducing the health disparity

gap among this ethnic group. Another social implication is the potential use of the positive cultural health practices to promote positive social health practices, which can transcend into positive social change. Researchers and social theorists have recognized the need to use culturally tailored and evidence-based health interventions to reduce the increasing rate of racial and ethnic health disparities in addressing social issues including but not limited to HIV/AIDS, obesity, hypertension, diabetes, substance abuse and addiction, violence prevention, asthma, and welfare dependency.

Summary

The influence of culture on minority health pertaining specifically to Nigerian health care workers' attitude and hardiness on their health continues to be understudied by the scholars in the social and health care research. Harris (2004) indicated than more research is needed to fully ascertain and address how the health-value and hardiness-health behavior of ethnic minorities is influenced by the themes found in this study. Culture affects physiological status, coping strategies, hardiness, attitude, self-care choices, decision-making behaviors, and choice making, which directly affect health of vulnerable population as seen with Nigerian health care workers surveyed in this study. Hardiness has been described as having negative effects on self-care health behavior and with direct relationship to psychological and physiological adaptation (Pollock et al., 1990). According Pollock et al. (1990), hardiness characteristics have direct negative effects on participation in health promotion activities and engagement in patient education.

Immigrants are more prone to effects of chronic illnesses due to economic reasons and cultural influence on self-efficacy health practices (Becker et al., 2001). As indicated by the researchers, the root of African culture is deeply embedded in the values and cultures of their ancestors. This study alluded and supported previous research indicating that self-care practices are more evident with individuals of low-socioeconomic status without health insurance when compared with those with health insurance. The impact of hypertension on mortality in African American population is overwhelming (Kaufman et al., 1996). Kaufman et al. (1996) stated that for every increase in the systolic blood pressure of 20mmHg in rural Nigeria, the death rate increases by 60%.

In conclusion, the result of this study revealed a number of important findings. However, in order to scientifically validate the findings, a longitudinal study or a quasi-experimental study is recommended. Also, researchers should explore other commonly associated factors interconnected to Nigerian culture and with direct effect to the health of the community. Additional research is needed to examine other the role of poverty, a lack of health insurance, enculturation, and the role of choice in racial and ethnic health disparities among Nigerian health care workers.

Significantly, this study explored many important health indexes and research questions in addressing the health of Nigerian health care workers. One such research question set out to investigate the impact hardiness and attitudes have on Nigerian health care workers' ability to adhere to hypertension treatment, particularly, the influence of decision-making behavior such as choice, options, and the decision-making process. Most importantly, this study was able to ascertain how perceptions, attitudes, beliefs, and values towards health and will influence self-management health behavior.

Considering President Obama's health care reform signed into law in the United States, efforts should be made to address racial and ethnic health disparities of minorities through urgent implementation of proven efficacious, culturally tailored, and evidence-based health education and treatment programs. Immigrants such as the Nigerian healthcare workers are an integral part of the American system. Therefore, designing and implementing a new culturally tailored, social change agenda is paramount. It should focus on awareness of public health and health policies that will improve the health of this and other vulnerable ethnic subgroups. This agenda would positively influence racial and ethnic health disparities in the United States.

Some of the constructs to consider in designing culturally tailored intervention include but not limited to: a) role of cultural charms and cultural edibles in hypertension management, b) effects of perception and beliefs on self-management of hypertension, c) effect and role of choice-making in hypertension management, d) hypertension medications effectiveness and side-effects, e) health effects of uncontrolled hypertension.

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Appendix A: Consent Forms

Hardiness and Attitude on Hypertension Treatment Adherence
among Nigerian Health Care Workers.

As part of an effort to find solution to heath care disparities, you are invited to participate in a research study investigating the relationship between hypertension treatment decision and the prevailing hardiness and attitudes of minority health care workers. You are selected as potential participant to the study because of your race, ethnicity, age, occupation, medical history, knowledge and shared experiences related to the social and biological make-up of Nigerian immigrants in health care industry. Kindly read this form in its entirety and clarify any questions or concerns you may have before acting on the invitation to be included in the study.

This study in being conducted by Chinwe Ndubisi, a doctoral candidate within the Professional Health Services Program at Walden University, located in Minneapolis, Minnesota.

Background Information:

The purpose of this study is to investigate the relationship between hypertension treatment decision and the prevailing hardiness and attitudes of minority health care workers. The study will aim at exploring and examining the psychological perception of minority health care workers who emigrated from Nigeria and diagnosed with hypertension. Particularly, this study will examine the perceptions of specific behavior trends such as beliefs, values, attitudes, cultural practices, problem-solving capabilities and self-care practices. Most importantly, the study will explore the impact that specific behaviors have on hypertension medication compliance among minority heath care workers.

Procedure:

Should you agree to be in this study, you will participate and complete two different survey/questionnaire and make written responses about your perception and how that influence your compliance to hypertensive medication/treatment. By agreeing to participate in this study, you will also be required to complete demographic data, a sign-in sheet and participate in focus group sessions. All the procedures are harmless and an enjoyable exercise. The length of time required to complete the exercise will vary depending on the activities.

Voluntary Nature of the Study:

Your participation in the study is strictly voluntary. Your decision whether or not to participate in the study will not affect your current or feature relations with the study

investigation. At any time following your initial decision to participate in the study, you can withdraw from participating in the study for any reason or situation.

Risk and Benefits of Being in the Study:

Your participation in the study will not involve or expose you to any personal or medical risks. The likelihood of any psychological risk by participating in this study is unlikely. By participating in this study, you will benefit by adding value knowledge about the influence of attitude and behavior trends on hypertension medication compliance. Furthermore, this study may also enhance your understanding of how attitude and hardiness influence hypertension medication compliance and may play a role in heath care disparities among African-Americans.

Confidentiality:

You participation in this study will remain anonymous. Your identity will remain completely private. Specific coding will be used to match the participant's responses. All research data collected will be kept in locked file carbonate and only the research investigator will gain access to the files.

Contact and Questions:

The researcher conducting this study is Chinwe Ndubisi; her contact number is (301) 237-7383, e-mail address is chinwe.ndubisi@waldenu.edu. The Walden University Faculty to Mrs. Ndubisi is Dr. Manoj Sharma; his contact number is (800) 925-3368. Should you have additional questions or concerns regarding your participation in this study, please do not fail to contact Walden University Director of Research, Dr. Leilani Endicott, at (800) 925-3368, ext 1210.

You will be provided with a copy of this consent form to keep for your records.

Statement of Consent:

I have read and understand the above information. I have asked questions and received answers. I consent to participate in this study.

Signature of Respondent _____

Date _____

Signature of Investigator _____

Date _____

Hardiness and Attitude on Hypertension Treatment Adherence
among Nigerian Health Care Workers

As part of an effort to find solution to heath care disparities, you are invited to participate in a research study investigating the relationship between hypertension treatment decision and the prevailing hardiness and attitudes of minority health care workers. You are selected as potential participant to the study because of your race, ethnicity, age, occupation, medical history, knowledge and shared experiences related to the social and biological make-up of African-Americans. Kindly read this form in its entirety and clarify any questions or concerns you may have before acting on the invitation to be included in the study. This study in being conducted by Chinwe Ndubisi, a doctoral candidate within the Professional Health Services Program at Walden University, located in Minneapolis, Minnesota.

Background Information:

The purpose of this study is to investigate the relationship between hypertension treatment decision and the prevailing hardiness and attitudes of minority health care workers. The study will aim at exploring and examining the psychological perception of minority health care workers who emigrated from Nigeria and diagnosed with hypertension. Particularly, this study will examine the perceptions of specific behavior trends such as beliefs, values, attitudes, cultural practices, problem-solving capabilities and self-care practices. Most importantly, the study will explore the impact that specific behaviors have on hypertension medication compliance among minority heath care workers.

Procedure:

Should you agree to be in this study, you will participate and complete two different survey/questionnaire and make written responses about your perception and how that influence your compliance to hypertensive medication/treatment. By agreeing to participate in this study, you will also be required to complete demographic data, a sign-in sheet and participate in focus group sessions. All the procedures are harmless and an enjoyable exercise. The length of time required to complete the exercise will vary depending on the activities. The focus group interviews will place emphasis on the following three themes: conceptualization, interview and analysis. The focus group interview will be given to the participants prior to the start of the focus group sessions. The instructions include the following: a) ground rules for talking and confidentiality for comments made during the group sessions, b) to be respectful, not to criticize comments made by others, and c) encouraging each individual to participate in airing their views. The information secured from the focus group sessions will be used to collect and analyze information and personal experiences of the participants.

Voluntary Nature of the Study:

Your participation in the study is strictly voluntary. Your decision whether or not to participate in the study will not affect your current or feature relations with the study investigation. At any time following your initial decision to participate in the study, you can withdraw from participating in the study for any reason or situation.

Risk and Benefits of Being in the Study:

Your participation in the study will not involve or expose you to any personal or medical risks. The likelihood of any psychological risk by participating in this study is unlikely. By participating in this study, you will benefit by adding value knowledge about the influence of attitude and behavior trends on hypertension medication compliance. Furthermore, this study may also enhance your understanding of how attitude and hardiness influence hypertension medication compliance and may play a role in heath care disparities among African-Americans.

Confidentiality:

You participation in this study will remain anonymous. All research data collected will be kept in locked file carbonate and only the research investigator will gain access to the files. The following safety measures will be instituted to secure the confidentiality of participants: a) the goals and objectives of the study was articulated both orally and in writing to the participants, b) the participants were informed that the research data collected would be solely used for the purpose of the study, c) each of the participants were informed of their right to withdraw from participating in the study at any time, d) each participant was given a copy of this consent form to keep for their records.

Contact and Questions:

The researcher conducting this study is Chinwe Ndubisi; her contact number is (301) 237-7383. The Walden University Faculty to Mrs. Ndubisi is Dr. Manoj Sharma; his contact number is (800) 925-3368. Should you have additional questions or concerns regarding your participation in this study, please do not fail to contact Walden University Director of Research, Dr. Leilani Endicott, at (800) 925-3368, ext 1210.

Statement of Consent:

I have read and understand the above information. I have asked questions and received answers. I acknowledge that I am 18 years of age or older and that I willingly give my consent to participate in this study.

Signature of Respondent _____ Date _____

Signature of Investigator _____ Date _____

Appendix B: Lifestyle Issues Survey

DEMOGRAHPIC QUESTIONNAIRE

2 Are older than 21 years? Yes___ No___

2 Are you younger than 66yrs? Yes____ No_____

3 What is your gender? Male_____ Female _____

4. Where you born in Nigeria? Yes_____ No _____

5. Are you currently employment in health care? Yes _____ No _____

6. Is your hypertension diagnosed longer than six month? Yes_____ No_____

Appendix C: Focus Group Questions

The purpose of conducting the focus group session was to obtain direct feedback from Nigerian health care workers diagnosed with hypertension and how hardiness and attitude affect their hypertension medication compliance. Emphasis is placed on examining the lifestyle trends and the personality implications effects on vital decision making ability. Focus group questions are grouped into thematic formations: (A) perceptions about African-American cultural practices and self-care adherence to chronic illness (B) behavioral influences, attitudes and values (C) perception about medical uncertainty.

Theme 1: Perceptions about African-American cultural practices and self-care adherence.

1. Based on your cultural perception and experiences, do you belief that health prevention is important? If so, why?
2. What aspects of your cultural self-care practices affect the treatment of your hypertension and to what extent have that affected the outcome of your hypertension management?

Theme 2: Behavioral influences, attitudes and values.

1. What aspects of your culture influence the way you attain to your health and describe the effects on the outcome of your hypertension management?

Theme 3: Perception about medical uncertainty.

1. How do you feel regarding the medication(s) you are currently taking for managing your hypertension and are you confident on the effectiveness of the medication(s) in controlling the condition? Please describe why you agree or disagree with your current hypertension treatment.

Concluding Legal Part of Disclaimer

By providing my initials_____, I acknowledge that I have received a copy of the consent form with my signature that used for the purposes of the research study.

Appendix D: Quantitative and Qualitative Sign-In Sheet

STUDY TITLE: The Effect s of Hardiness and Attitude on Hypertension Treatment Adherence among Nigerian Health Care Workers in Washington, D.C.

Participants' Name E-mail Address

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Appendix E: Survey Instruments Instructions

Survey Instrument Instructions

Medication Adherence Self-Efficacy Scale (MASE)

The objective of the survey scale to aid clinicians and researcher in gathering information to identify situations in which patients have low self-efficacy in adhering to prescribed medications. The survey will be made available to all participants who are willing to participate in this study.

INSTRUCTIONS: After reading each question carefully, please select the appropriate response that rate how sure you are that you can take your blood pressure medication(s):

1= Not at all sure
2= A little sure
3= Somewhat sure
4= Extremely Sure

The Health-Related Hardiness Scale (HRH)

The objective of the scale is to measure the effects of hardiness in individuals with actual health problems. Items were generated to test the presence, rather than the absence of the hardiness in individuals with hypertension.

INSTRUCTIONS: After reading each question carefully, please select the appropriate response that rate how strongly you agree or disagree with each of the statements associated with HRH scale. Indicate your choice by circling the most appropriate answer. For instance, you can rate each item on a 1-5 response scale where:

5= Agree
4= Strongly Agree
3= Neutral
2= Disagree
1= Strongly Disagree

Focus Group

INSTRUCTIONS: An overview of the research topic and focus group ground rules will be discussed. Focus group instructions will be given to the participants prior to the start of the focus group sessions. The instruction given will include: A) ground rules for talking, B) being respectful, no criticizing comments of others, and C) encouraging each group participant to actively have a voice.

Appendix F: Participants' Letters

Dear Potential Study Participants:

This mail is to invite you to participate in a research study investigating the relationship between hypertension treatment decision and the prevailing hardiness and attitudes of Nigerian health care workers. If you are interested in participating in this study, kindly indicate by signing the Qualitative and Quantitative Survey Participants Sign-In Sheet.

The research investigator for this study is Chinwe Ndubisi, a doctoral candidate within the Professional Health Services Program at Walden University, located in Minneapolis, Minnesota.

In other to participate in this study, you must be a minority immigrant from Nigeria and diagnosed with hypertension. You must sign the appropriate sign-in sheet and available to complete the survey instruments during the assign time and place.

I sincerely thank you in advance for your potential cooperation. Your participation and time in this study will make this research possible and therefore highly appreciated. If you have any questions or concerns about this research study or any related proceeding, please fill free to contact me at (301) 237-7383.

Respectfully,

Chinwe Ndubisi

Dear Potential Focus Group Participants:

This mail is to invite you to participate in a research study investigating the relationship between hypertension treatment decision and the prevailing hardiness and attitudes of Nigerian health care workers. If you are interested in participating in this study, kindly indicate by signing the Focus Group Participation Sign-In Sheet.

The research investigator for this study is Chinwe Ndubisi, a doctoral candidate within the Professional Health Services Program at Walden University, located in Minneapolis, Minnesota.

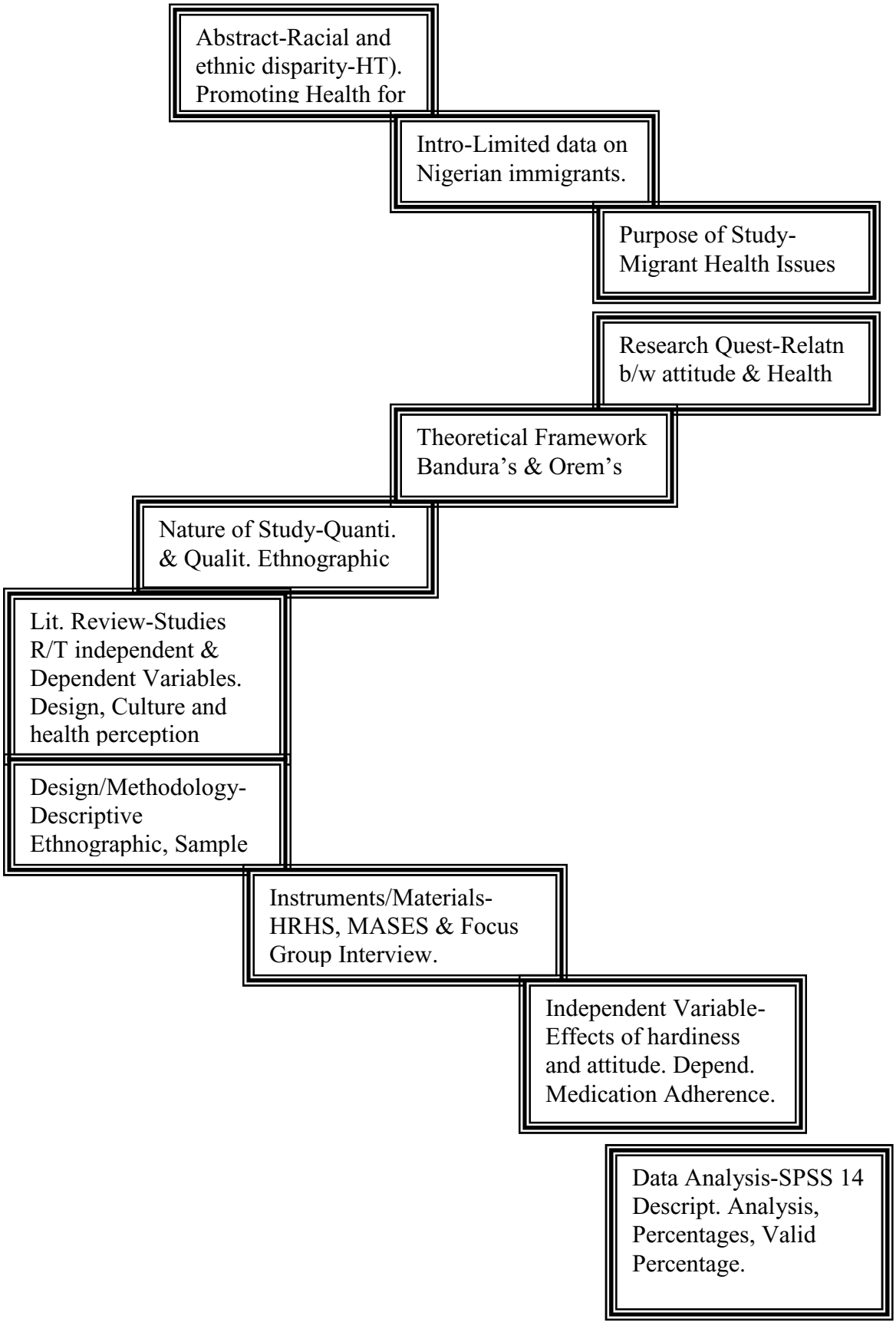
In other to participate in this study, you must be a minority immigrant from Nigeria and diagnosed with hypertension. You must sign the appropriate sign-in sheet and available to complete the survey instruments during the assign time and place.

I sincerely thank you in advance for your potential cooperation. Your participation and time in this study will make this research possible and therefore highly appreciated. If you have any questions or concerns about this research study or any related proceeding, please free to contact me at (301) 237-7383.

Respectfully,

Chinwe Ndubisi

Appendix G: Diagram of the Model of Racial & Ethnic Disparity Research Study



Appendix H: Focus Group Raw Data

Transcript of the focus Group Interview obtained on April 10th, 2010

Good evening ladies and gentleman. As indicated in my correspondence to you over the past months, this gathering is scheduled to enable meaningful interactions regarding your experiences in managing your high blood pressure condition. May I begin by saying that participation in this session is strictly voluntary and that at any stage you feel uncomfortable with the discussion you are excused to leave without any penalty. Also, in other to give everyone equal opportunity to speak, I will moderate this session. There are three questions to discuss and now I will introduce question number one and encourage everyone to weigh in one person at time, please.

Date of Interview: April 10th, 2010

Question1: W*hat part of the cultural practices has changed your behaviors towards hypertension treatment?*

Responses from Group A:

A1 an LPN, in responding to the question stated "In Igbo culture, because of inability of the people to afford medical care I grew up with the understanding that medical care is for the terminally ill and the wealthy who sought heath care overseas. I come from polygamous family of 16 with financial difficulties they such families face and so heath care practices was based on the elders' perceptions and what they determined to be health prevention methods. As a result, my idea of self-management is as a result of my cultural practices towards health prevention."

For me here in America replied A2 an RN with many years of experience, "I rely on cultural remedies which readily available in African stores, to support my health and the health of my family. Therefore, my culture has a big influence on my practice of health prevention which also depends on the type of illness your are trying to protect. Some of the disease conditions are never heard off before in my place, especially when the medications given for the prevention is new or not well known. In that case, it is

difficult to practice health protection. Many of us foreigners due to lack of health insurance, use local remedies as they do not affect your manhood like the BP medicines we are taking." (*Let's hear other thoughts on this number one question*).

A3 also an RN replied, "The same for me, my culture have big effect on how I view health prevention and management illness. I am one of those that combine both cultural practices and western heath care. I believe in the culture regarding thinking positive, for what you do not know will not hurt you, they say. Unfortunately, I take my medication but not every day because of fear of ED. (*Any more thoughts? Next person please*).

Yet another participant A4 a Nursing Assistant voiced, "I believe there is power in native herbs. Native herbs are part of who we are as a culture with root to our ancestors and dependent on native practices and herbs, whether we believe it or not. I use cultural herbs all the time to prevent and treat minor health issues. Our fore fathers and elders used it and died in old age and the practices passed on from generation to generation, with addition and deletion as the culture evolves. This problem with ED that some people spoke about is a big reason why many of us refuse to take BP medications. Who knows what other side effects these medications cause that we do not know now" (*Some of the people nodded their heads in agreement*).

A5 a new RN replied, "You are right. When you are not sure about the medication given to you, chances is that you will not take it. ED among men is a huge serious problem and we all know it. As part of my cultural practice I indulge in herbal drink, cultural herbs, and taking my medication which have helped my health."

A6 an RN said, “Cultural influence is very powerful and certainly I believe there are some benefits that natural herbs and roots offer, however, I do not take native herbs from home but I take herbs I buy here to take care of my health. Because of that, I take my medicine when I feel like it, especially considering the case of ED that may occur.” (*Any more thoughts*?).

Another female RN A7, intercepted, “As long as you are raised in Igbo culture, there are cultural influences on your life, whether it is the way you dress or how you practice self-heath care. In my family my mother raised us on practice of taking warm lime juice among other cultural practices which have medicinal effects whenever any one of my family members showed sign of illness, therefore, I have since believed and practice taking of warm lime as a form of self-health practices which is helping my health. For my medications I tried to take them when I remember. (*More participants nodded their head in agreement while few showed signs of disagreement*)

A8 voiced, “Have culture affected the way I attend to my health? Yes, however, in my family we were raised with faith in God and together with exercise, staying positive, and taking my medication, although not every day, my health is ok. ED is one thing that scares me a lot just like many of us here.” (*More thoughts please*)

In his opinion A9 indicated, “For me cultural influence on my health could be the eating of “low salt” food which helps me to be healthy and I am hardly sick except for my blood pressure medication which I know when to take. Where my mother come from the people have special soups the make with no salt at all and they believe that people from that community live long due to the low salt diet and now we know that salt affects

blood pressure. I have no concern about the so called ED due to BP medicines because I refused to take the medicines until they convince me otherwise." (*Next comment please*).

A10 indicated, "Cultural effect on my health is in form of strong believe in God. My family is big in the church, therefore I believe in the power of prayers which I practice to protect my health in addition to taking my medication."

Yet A11 an LPN with a firm voice said, "I share a similar view with the last speaker in that it is cultural practice for me to pray very often as I believe in the power of prayers and that works for me. My blood pressure medication I take as ordered. We should not because of side-effects not take BP medicines. The truth is that when you die from hypertension there will be no discussion about ED and that is silly."

Responses from Group B:

Another male LPN B1 softly said, "For me, I believe in the cultural believe that "what you don't know will not kill you", "if not broken, do not fix it." I don't believe I have high BP and do not take any medication for it, mostly because of issue with reproduction. I have a young family, I do not want to go through artificial ways to bring children to this world which could be very expensive to begin with."

Yet another female softly indicated B2 said, "I agree with the previous views regarding cultural influence on faith, roots, and herbs and the effects on health. Therefore I pray a lot, drink herbs and my BP medication when I remember. You need to understand that it is difficult to remember to take medication every single day of your life and dealing with the fear of the side-effects , so combing faith, roots, herbs and whatever would help one to protect health is good." (*Any more comments?*)

Another female B3 added, “Indeed, Prayer and detox herbal tea for me represent cultural practices, but I believe in taking the prescribed medication too. There is always the fear of trusting what your doctor is giving you for the BP.” (*More views*?)

B4 indicated, “I do not believe in taking herbs so for me, cultural influence on my health is in form of my faith in God and taking my medicine when I remember. With every other thing going on and trying hard not to mess with our job, it is difficult to take medicine every day without forgetting, especially with the issue about ED as discussed by others.” (*Any more comments or next person?*).

B5 warned, “Culture is very powerful in shaping who we are I know, however so many of us had died here due to stubbornness. I do not have any issues in taking my medicines. Fixing problem with hypertension and other health problems will definitely requiring more than cultural believe and practices.” (*More comments please*).

B6 supported saying, “From cultural believe, we are all destined to follow one way or another, therefore I do not take any herbs. I do use Holy Water to wash my face and sprinkle on my body for healing and I take my medicine, although not every day. (*More views please*).

Yet another female B7 said, “Culturally, I believe my grandparents and elders who had passed are keeping eyes and watching me, together with prayers and taking my medication I feel fine.”

B8, said, “Culturally, it is my believe that there is power in prayer, so my family offer prayer services with Father Elele and I use the Holy Water they send to me as healing powers. But I take my medicine most of the time still having the thought of ED at the back of my head and hoping it will not affect me.”

B9 said, “In my family, we have the habit of regular colon cleansing which had been a cultural practice for my people, therefore, I use herbal cleansers regularly to cleanse my body and take my medicine, but I will admit, not every day.” (*More thoughts?*)

Yet another female B7 again indicated, “Culturally, my family relies on faith in our ancestors and faith in God for protection. For my blood pressure medicine, I believe I have no need for it so I did not fill it. The thought of having Ed is still a concern with my husband.”

Responses from Group C:

Another female, C1 said, “For me despite the culture I grew up with, I do not believe in herbs so my faith in God and taking my medicine when I remember is all I do. With every other thing going on and trying hard not to mess with our job, it is difficult to take medicine every day without forgetting.” (*More views please*).

C2 added, “Culturally, our people here are obligated to take care of family back home which is making it hard to take care of ones health here. As a result, I find myself using cultural remedies which are cheaper alternatives to buying BP medication, even when you have health insurance. My BP medicine one Pharmacist said will cost me at least $86 a month, I can’t afford that. In place of that, I can take about two to three generic BP medicines and each with chance of causing ED.”

C3 added, “For me cultural effect on my BP is the commitment to extended family relationship which I think puts demand on most of us and that makes it hard to care for medical needs, especially when you’re not feeling sick.”

C4 said, “The same with me, I have financial needs back home because of that I only go to the doctor only when it is very necessary. I am not taking medicine because of

lack of health insurance, therefore I use native herbs, teas, and wear cultural health beads."

C5 supported, "It is the same case with me and I'm sure with many other immigrants, the obligation to folks that send us here and other relatives, which it is difficult to take care of everything. So I go to see doctor when I need one and try to take my medicine which is hard to do and I also use cultural remedies they are cheaper and available in African stores and they do not cause ED."

C6 said, "Culturally people back home walk a lot and that help to keep them in shape and healthy. Walking is a good exercise, so I listened to my mother and walk to places that I can walk to since I cannot afford the cost or the time for the gym, that way I will not need my BP medicine."

C7 added, "Culturally we do not exercise. Wished I was introduced to exercise as a child because lack of exercise is part of the obesity problem why some of us with HBP are taking medicines today. Every day I will say I will start exercise and it never happens, and I'm still not taking the medicine. It is crazy. So, I use local remedies here and there to take care of my health and don't have to worry about ED problem."

Another female, C8 indicated, "You are right, obesity is the root of all health problems and some of us from other countries are using exercise to control illness. Culturally, I was raised with strong faith in God and together with exercise, staying positive, and taking my medication, although not every day, I have managed to control my BP and other health problems ok."

C9 in her view supported, "It is the same case with me and I'm sure with many other immigrants, the obligation to folks that send us here and other relatives that it is

difficult to take care of everything. So I go to see doctor when I need one and try to take my medicine which is hard to do when you do not trust the medication because of the side-effects."

C10 concluded, "Let me quickly say that regardless of our education, age economic status, or health state, most Africans are influenced by their cultural one way or another, especially when it comes to health, I know I am one of those. The side-effects of the BP medicines is one of the reasons why many people are not taking them. The other reason is due to lack of trust in the medication since most doctors do not tell you much about the medications, they just give you the paper to fill the prescription." (*Any more thoughts on the effects of culture on our attitudes towards health management behavior, if not let's move to the next question*).

Question 2: *Do you think your perceptions, attitudes, belief and values towards health and wellness influence the way you manage your health*?

Response from Group A:

A4 added, "Listen, you know that some of the food that is good for hypertension, obesity and diabetic control like organic foods, are very expensive to afford. With the economy the way it is, it will be difficult for people to practice health prevention, especially immigrants. Yes, health prevention is very important for everyone but comes with a price and that is where the cultural remedies come in. The remedies are cheaper and they work."

A8 said, "Do you know that there is a chewing-stick they sell around Nsukka area that help to prevent illness? People have been using it for years and it works. Don't

get me wrong, health prevention is important but there is power in native medicines too. All the BP medicines have bad effects, especially on men and that is a scary feeling."

A9 added, "You know, when you do not have health insurance it is important to do what is necessary to prevent illness. But most of us without health insurance use local herbs to help our health. It is tough. And like other people before me said, side-effects of the BP medications, especially on men, affect peoples' attitudes towards health."

A5 voiced, "My problem is this, I drove Cab for eight years before becoming a nurse and was never sick, never saw any doctor. Our fore fathers must be busy praying for us miles away from home. Yes I use cultural remedies for health protection because they work and there are proofs to back it up, it may not be written somewhere but the idea is transferred from generation to generation."

A6 indicated, "Faith without work the Bible tells us is hopeless. Everyone should have access to preventative heath care but that is not the case. Therefore, people practice their own cultural thing to support their health. Sometimes it works other times it don't. However, regardless of the effects of BP medication on men, health insurance comes hardy for those health conditions you do not see coming."

A7 supported, "Yes, we all know that health prevention costs money but the cost of admission or back and forth the Doctor's office, not discussing the cost of medication and sometimes equipments is far greater. You maintain health, you live much longer for a health is wealth. The argument about BP medicines side-effects should not prevent people from taking the medicines. After all, there are medications out there to treat ED, even simple vitamins have side-effects and people are still taking them."

A1 said, “Yes you protect your health you live longer. The problem is what the other people had all touched upon, which is that health prevention requires money. When you have limited resources and running twenty-four seven to make ends meet, health prevention suffers. Our people therefore use cultural remedies to support healthy because it is cheaper than going to the doctor.”

A2 voiced, “You see, I am not worried about me, I am more concerned about my wife and children I left behind in Nigeria, their welfare is more important to me than my own health. Therefore, I am constantly pushing that 24 hour is not enough in a day, and at the end of the day I do remember where the medications were. I can then see why many people are in favor of cultural herbs, especially with the fair of ED in men.”

A10 added, “For me, culturally I believe in my faith in God and the healing waters of “Father Elele.” Once I drink the holy water, health prevention is taken care off.”

A11 added, “Well, for me, I have health insurance which covers the whole family. I use it a lot for the children immunization but hardly for my husband or myself. The reason being that we have no need to use it. We are never sick. The last time I used the insurance was for six-week check-up after my last delivery, three years ago. We were raised to be tough and act tough as sickness is seen as weakness and it works. It’s all in the mind and your attitude towards health.”

(*A3 your comments please!*)

A3 reluctantly added, “Most of the issues are already discussed. Things like medication effects on men and the fact that our cultures have big influence on who we are. I do take my medication sometimes.”

Responses from Group B:

B1 voiced, “In many diseases like in hypertension and diabetes, the prevention is food restriction and exercise none of which comes easy. The same foods they are telling us in seminars not to eat are the same ones our grandparents ate and still lived a long time. Every culture has unique things they use to maintain health and the same goes for the Igbos. We are very strong people but one thing that have shaken our men with blood pressure issue is the effect of the medicines on men’s reproductive system. This is the main reason why we do not take the medicine well. It scares me to death and I am sure it is the case with many of us men participating in the interview.”

B7 warned, “My advice to you other Locozade drinkers is, be careful drinking Locozade before you end up with diabetes. Anyway, my problem is not having health insurance to prevent health. Right now, I am taking two medications for hypertension instead of one good because I cannot afford the brand. Because of that I use other cultural remedies to support my health.”

B4 voiced, “Well said. It will be good to go to the doctor before the problem starts, but that is not so. If only one can afford the Gym membership fee, because of the need to take care of other financial obligations, there is no time to go to the Gym. You have folks back home who are dependent on you and the bills, there is just not dollar enough to go around. So, local remedies come handy. I strongly agreed that one of the things that effects our attitudes on BP medication is the effects on men’s reproductive organs which is related to trust on the medication.”

B8 added, “Yes, health prevention is very important. People like me that do not get sick easily must have somebody somewhere watching over us, may be our ancestors.

I believe so much in them and of course a positive attitude. For BP medication, I take them when I remember as the effect on men is a big concern. Who knows what they do to women that we do not know now but may know in the future"

B9 added, "You see, in my family, there is a small pot in a secluded area of the "Obi" and the elders gather periodically for a small ceremony during which things are dropped inside of the clay pot, including water. Sometimes the content of the pot is strained and given to people to drink while others bath with the solution, and it prevents and cures any type of illness. There is power in native medicine and I believe it. When you have no faith on the medicines given to you by your doctor, especially learning that they all cause ED is tough. I refused to take them for a while now."

B5 voiced, "Let me tell you the reality, when you are facing foreclosure, your Dollar only goes but so far. Things are hard these days that unless I am really sick, health prevention is what I learnt as a child, wash your hands often and drink lots of water, and take cultural herbs."

B6 added, "Let's be honest, if our fore fathers lived till old age before answering the Lord and not one day did they practice health prevention, there must be things that they did that protected their health. Things like working hard, using herbs, eating right, drinking plenty of water and believing in yourself helped to keep them healthy and in shape and we should be doing all that and more. For the effects of BP medicine on men, it is true and many peoples' attitude is "do not take it."

B2 supported. "I agree, native medicine, charms, and incantation all works to prevent illness in their own unique ways. My grandfather died after living more than 100

years, even when he sustained burns the only treatment was the local cooking oil "Palm oil" with no deformity or scar. There is power in cultural remedies."

B3 supported, "Yes you are right. Father "Elele" is recognized by the late Pope as one with healing powers, I always request for his Holy Water whenever I travel home."

Responses from Group C:

C10 stated, "This question is similar to the last question we just answered. With no doubt, yes, health prevention is important but remember that health prevention back home is different from here in America. In Nigeria, Elders use natural herbs and roots to prevent illness. Some of the herbs and roots they drink and some they rub on the skin to ward-off evil spirit and it works. Some of the elders lived and died of old age. These medications we take here we do not know the entire side effects and the one we know which affects men's reproductive organ is very bad and makes many people with high BP to think twice before taking the medicine.

We all know the importance of preventive health, most of us are in direct patient care, but the point of the matter is when you have other obligations to fulfill that leaves you with financial deficit every time, health can only be maintained and not prevented."

C2 said, "My view is that even when you lay almost dead at the hospital, your bills are still pilling up. Folks back home in Nigeria expect their share of the American dream, whether dead or alive. Therefore, we move from job to job to make ends meet with limited time to take care of our health. In that case, one look for quick fix that is cheap which is why many of us use the cultural remedies, especially like the first speaker said erectile dysfunction is a big setback why people like me struggle to take BP medicines."

C3 indicated, “You need to understand, health prevention depends on the type of illness your are trying to protect. Some of the disease conditions are never heard off before, especially when the medications given for the prevention is new or not well known. In that case, it is difficult to practice health protection. Many of us foreigners due to lack of health insurance, use local remedies as a form of health support and the side-effects of BP medicines especially on men is the main reason why many of us do not take the medicines as should be.”

C4 said, “I understand the importance of health especially being in health care, especially considering that my parents took us for vaccinations back home. So from that I understand the importance of health prevention even before working in a hospital. But when my employer gave the option of 12% higher pay without benefit most foreigners took advantage of the deal. So ones attitude towards health is sometimes based of the circumstances at the time. This is why many educated indigenes use local remedies to support health because of cultural belief and partly due to circumstances all of which affects once attitudes.”

C1 voiced, “Let me tell you the reality, when you are facing foreclosure, your Dollar only goes but so far. Things are hard these days that unless I am really sick, health prevention is what I learnt as a child, wash your hands often and drink lots of water, and take cultural herbs.”

C10, “Let’s be honest, if our fore fathers lived till old age before answering the Lord and not one day did they practice health prevention, there must be things that they did that protected their health. Things like working hard, using herbs, eating right, drinking plenty of water and believing in yourself helped to keep them healthy and in

shape and we should be doing all that and more. For the effects of BP medicine on men, it is true and many peoples' attitude is "do not take it."

C6 stated, "Well, some of the things you just mentioned are part of health prevention. The only problem being that here we are in global recession, houses up for foreclosure and no job security, you kind of live day by day and with no thought about the state of your health or that of your family members. It is tough. You get what you know works without breaking the bank, cultural practices."

C5 indicated, "Listen, between the global recession, bad housing market and financial obligations, not forgetting the families we left behind in Nigeria, it is difficult to engage in health prevention these days. Don't get me wrong, health prevention is very important especially if you can afford it, but there are still benefits in home remedies which do not cause impotency in men."

C9 voiced, "Some of us still working to secure papers for work, I'm not saying I do not have papers, but I know that not having papers is a problem when it comes to having jobs with health insurance. I see that as one of the reasons for not engaging in health prevention for our people, therefore home remedies have become popular among our people, even for people who did not use such remedies while back home."

C7 included, "They say you need to walk out daily which I do at work, walking up and down the hall and in the patients' room. By the time you pull sixteen hours a day, six days a week, what time do you have to walk out again? It is tough to practice health prevention when you have so many things competing for your interest. Health prevention yes, saves life, but there is place for cultural practices in every one of us, whether we

recognize it or not. One thing is true, cultural remedies rather than effect on men's reproductive may help to increase performances and reproduction."

C8 concluded, "My believe is that we are all destined to follow one way or another, therefore I do not take any herbs, I use my health insurance and take my medications. Our health is in God's hand. ED or no ED, we all need to change our attitude towards our health." (*Any more thoughts or shall we go to the final question*?)

Question 3: *If you have health insurance, how would that influence the way you take care of you health, what effect does health insurance have in your ability to self-control and adhere to hypertension treatment? Anyone could start the discussion? Responses from Group A*:

A2 added, "Yes I use home remedies my mom and some of my aunts send to me, to prevent illness. The truth is that I have not taken my BP medicine because I do not want to combine both. Health insurance is a luxury that people like me cannot afford. May the Lord protect us."

A11 indicated, "You know, I pray a lot and together with my family's special prayer offerings back home my health is taking care of. My grandmother told me that hot bath help to decrease blood pressure. So I practice that frequently but I still take my BP medication when I remember. I have health insurance but do not use it that much."

A8 added, "For one do not have any cultural practices but I believe that "what you do not know will not kill you." Therefore, I plan not to take my medicine for a long time and to engage in other forms of health protection, be it faith in God or taking of remedies. Health insurance even if I have it, is not worth the cost. Only the rich can afford to pay health insurance premium."

A5 added, “Since I was a child, I watched the elders of my community drink cultural remedies to maintain health. Living here in the states, I drink the detox herbal drink to help cleanse my body and that help my blood pressure from getting out of control. I do not have health insurance by choice, just cannot afford the cost.”

A6 added, “My dear, health insurance used to be free for the employees only at my job. Since the economy tumbled, everyone is now required to pay. I can’t afford it, so for me I drink Lucozade which you can get from local African stores. It helps to protect my body. I still take my blood pressure medicine but only when I need it”

A9 added, “Like I said earlier, the Nsukka chewing-stick helps to prevent illness, so I ask my family to send me some whenever someone travels home. Sometimes I also take some cultural herbs to take care of my health. For my BP medicine, I take it when I remember. Yes, health insurance is high but the effect of BP medicine on “man-hood” is even a bigger issue.”

A4 supported, “Men, you hit the nail square on. In my view that is indeed the bigger issue. I believe that God watches over me but I kind of take my medication as instructed.”

A9 added, “While I was back home, some of the things I use to take for health I stopped taking since being here in the States. However, I pray a lot for good health and try to take my BP medicine but with the problem of erectile dysfunction, I have to pray a lot before taking that medication.”

A10 added, “Yes for me, I pray every day for good health, I also take my BP medication as written. I have my faith in God. For health insurance, everyone knows the

situation with the economy, unless you are making six figures or very tight with your dollar, it is a luxury and no longer a necessity."

A7 voiced, "You are right, culturally we do not accept health insurance freely due to reasons other people said. Economy all over the world is bad and people are letting go their insurance coverage. For me, I pray for good health but I also take herbal tea and medicine but not all the time."

A3 indicated, "You see, back home people do not have cars or other transportation to move around, so they walk from place to place. But here in America we drive or catch the metro and that makes one lazy. I feel like I am caught at the middle of the two cultures with my health. I still take my BP medication and some herbal supplements to take of healthy but with no health insurance and side effects of medication, it is difficult to manage our health."

A1 added, "To be honest, I do not exercise which I know is not good but we were not raised to exercise or buy into health insurance by culture, we cultivate in the farms and that help people to live longer. Here in the States, the economy is so bad one has to decide which bill to pay and which to let go for that month. One bill I do not think about not paying is the insurance bill because I refused to take it. Things are hard."

A6 concluded, "Every one of us health is influenced by our culture directly or indirectly. We take some part of the culture that help our health and combine that with some of the cultures where we are living, with the hope of staying healthy and living longer. Health insurance although expensive is a must have for the rainy day."

A4 added, “Believe is that my ancestors are looking over me and with deep faith in God. I just don’t believe on taking medicine for the rest of my life and the other reason is the same others pointed out, the effect on male reproductive organ.”

Responses from Group B:

B1 added, “I was raised to save money for the raining day, especially in this kind of economy. The extended family back home is a cultural practice which makes it difficult to just go to the doctor when you know there is nothing wrong. I do not have health insurance because of the cost and moreover we only go to the doctor once a year for physical and every three months to refill my blood pressure medicine. Things are tough you have to stretch your hard earned dollar.”

B7 indicated, “We have no health insurance back home. People go to the doctor when they are sick and they are not dying of disease. “If is not broken, do not fix it”, that is my attitude.”

B8 said, “Listen, my believe is that “what you don’t know will not affect you”, therefore, I take my BP medication when I remember and belief in God to protect me. As for health insurance, I send that extra money home for the people to use to pay school for our last born. My dear, what came this period in the whole world economy will take a long time to settle. Everyone is holding on to the little cash they have.”

B9 voiced, “There is a cultural soup we cook back home without salt which I take, that way I can take my medicine only when I have headaches, the way of my body telling me my BP is high. I do not have health insurance by choice, the cost is crazy”

B4 said, “Here in the States, everyone is hurting because of the economy and health insurance is for the wealthy. Now the government is saying everyone must have

health insurance. I don't know how that will go, for now, I do not have insurance by choice and take herbal supplements in addition to cultural herbs. However, l take my two blood pressure medication, sometimes forgetting to take them"

B3 included, "Although I do not use herbs and other cultural drinks to support my health, I pray always for health. For my BP medicine, it is difficult to remember to take it every day and also due to the reasons mention by others regarding impotency. Regardless, the price of health insurance when you are not sure of the next meal is too much."

B5 included, "The truth is that most foreigners cannot afford health care cost in this gloomy economy. I will go to the doctor every day if I land the dream job. For now health prevention will have to wait. I pray to God every day for good health, meanwhile I drink Locozade for immunity. Nothing wrong with that"

B2 indicated, "Listen, I pray all the time and drink herbs from home. However, I still take my medication, although not every day due to fear of erectile dysfunction as mentioned by others that spoke earlier. One thing we will all agree on is the fact that not accepting health insurance is cultural for us foreigners. We grew up not going to the doctor for sickness but to go to the hospital when we are very sick and also because of the cost of health insurance people like me did not get that from my job."

B6 added, "For me, I am a believer in Father "Elele" Holy Water, therefore I sprinkle that every morning for health and protection. However, I take my BP medicine most of the time. I kept my health insurance due to my children for their immunization."

Responses from Group C:

C2 explained, “Like I said previously, there is power in native herbs, although I do not use them anymore, however I believe in destiny and that “what will be, will be.” I use Holy Water to clean my face often and take my BP medicine when I remember and I know that is not good. Health insurance you will agree with me. It is tough with every other thing going on for me to afford health insurance. So we use what we can find including local remedies to treat ourselves.”

C4 added, “You see, because I do not currently have health insurance, I drink warm lime juice often to cleanse my body. That helps my health and I do not need my BP medicine that much. Pay checks these days are stretched beyond reach. You have folks back home to take care of not considering the mortgage nightmares from the homes depreciating every day. How can you pay for health insurance? It is tough. I refused health insurance at work.”

C6 said, “I do not use any herbs or drinks for health support, however I pray a lot for good health and believe that my ancestor are watching over me. I currently do not take any blood pressure medicine because I do not need one. The same with health insurance, I accepted higher pay at work with no benefit, so I am able to send money home and deal with other bills.”

C8 supported. “There is power in native herbs, although I do not use them anymore, however I believe in destiny and that “what will be, will be”, “what you do not know will not kill you.” I use Holy Water to clean my face often and take my BP medicine when I remember. I cannot afford health insurance cost, so my doctor changed my BP medicine to generic which cost me less than $24 a month, compared to $125 every pay period for health insurance.”

C1 warned, “Least for forgot, we have lost very prominent and educated Nigerian people and will continue to lose them if we do not change the way we address health and wellness. Yes, there are cultural influence to the way we care for our health but we have lived here long enough to know that something has to change. My goal this year is to use my health insurance regularly whether for sick or wellness visit.”

C7 said, “To be honest, I do not exercise which I know is not good but we were not raised to exercise since by culture we cultivate in the farms and that help people to live longer. Health insurance is not for everyone we all know. When you cannot afford health insurance premium, the alternative is to use local herbs and do want you can to stay alive. This is a tough period.”

C9 indicated, “At my job, they give option to take insurance or higher pay. Most people, most of them foreigners chose higher pay for health insurance which I know is because of our culture to support extended family needs and due to upbringing. You see, I pray every day and rely on the prayers of my family back home. My monthly colon cleanser helps to take care of the gems in my body. However, I still take my BP medication but not every day. Sometimes I am too busy to remember to take my meds. But what you don’t know will not kill you.”

C10 included, “The truth is that most foreigners cannot afford health care cost in this gloomy economy. I will go to the doctor every day if I land the dream job. For now health prevention will have to wait. I pray to God every day for good health, meanwhile I drink Locozade for immunity. Nothing wrong with that.”

C5 indicated, “For me, I stay busy at work or around the house when I am home. Exercise comes and goes whenever. Daily vitamins sometimes, but it is my faith in

God that takes me through the day. For my BP medication, it is tough to believe I will have to take it for the rest of my life. I have health insurance only because it is mandatory at my job."

C3 added, "It is tough to take care of your health with limited paycheck, I do what I can to stretch my dollar, and therefore, I take remedies and herbal drinks for health. For BP medicines, I stopped taking it for a while. For the same reason, I do not carry health insurance, I can't afford it."

(*Any more views overall? If no one has any contributory thoughts or comments, this will mark the end of this focus group interview as I thank everyone for your participation and contributions to the interview*).

Appendix I: Curriculum Vitae

Chinwe N. Egwuagu-Ndubisi
Current Address:

Education: Howard University
Master of Science in Nursing/FNP-May 1998

The Catholic University of America
Bachelor of Science in Nursing-May 1996

Walden University
Doctor of Philosophy in Health Services-Expected Summer 2011

Professional Employment:

EnvisionCare Medical Associates, LLC Largo, Maryland
Medical Director/CEO June 2008-Date
Responsibilities include health assessment, diagnosing, treating, referral, and follow-up for medically ill patients. Other duties involve health education, disease prevention, immunization screening, wellness check-ups and health maintenance for children and adults. Involve in managing the day-to-day operations, planning, budgeting and directing the overall activities of the organization. Directly responsible for supervision and evaluation of professional/support personnel and staff, program development, public speaking and motivational support, organizing community health awareness seminars, community health screening and outreach immunization.

CNN Global Health Initiatives, Inc Largo, Maryland
Chairman/President September 2009-Date
Responsibilities include managing the day-to-day operations, planning, budgeting and directing the overall activities of the organization. Directly responsible for supervision and evaluation of professional/support staff, community involvement and fund raising activities, program development, grant writing and supervision, community health awareness seminars, and community health screening and immunization. Other duties include coordination with government and private organizations for community services, public speaking, marketing, developing, implementing, monitoring and evaluating of programs/projects.

Providence Hospital Washington, DC
Family Nurse Practitioner October 2005-2008
Responsibilities included health assessment, diagnosing, treating, referral, and follow-up for sick patients. Other duties involved health education, disease prevention, immunization screening, wellness check-ups and health maintenance for staff and medical personnel. Directly responsible and involved in health-fairs, community health

screening programs, community services with Ladies of Charity Organization, and public health information dissemination.

Prince George's County Health Department — Cheverly, Maryland
Family Nurse Practitioner — January 1999-2005
Responsibilities included health assessment, diagnosing, treating, referral, and follow-up for sick patients. Other duties involved health education, disease prevention, immunization screening, wellness check-ups and health maintenance for the community. Directly responsible and involved in health-fairs, community health screening programs, community services and partnership with government and private health and social service organizations for community health awareness, disease prevention and management.