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# Developing a Lifestyle Modification Toolkit to Prevent and Manage Hypertension Among African American Women

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*Walden University*

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# Walden University

College of Health Sciences

This is to certify that the doctoral study by

Julia Ugorji

has been found to be complete and satisfactory in all respects,  
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2014

Abstract

Developing a Lifestyle Modification Toolkit to Prevent and Manage  
Hypertension Among African American Women

by

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MSN, Grand Canyon University, 2012

BSN, University of the District of Columbia, 2008

Project Submitted in Partial Fulfillment  
of the Requirements for the Degree of  
Doctor of Nursing Practice

Walden University

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## Abstract

Hypertension is a global public health issue affecting many people in the United States. African American women remain the highest in percentage by race and ethnicity for developing hypertension with poor risk awareness. Hypertension has costly implications for the health care system. Through lifestyle modifications in the form of a nutrition plan called *Dietary Approach to Stop Hypertension* and increased physical activity, hypertension could be prevented. Among African Americans, the incidence of hypertension increases in their late thirties. The purpose of the project was to develop a toolkit of resources for African American women between the ages of 20 to 45 years as a reference guide to reduce the risk of developing hypertension through lifestyle modifications. The clinical question for the project examined the effectiveness of a lifestyle modification toolkit as an evidence-based strategy to prevent and manage hypertension among African American women. Pender's health promotion model guided the planning and development of the project. The readability of the toolkit was at a 5<sup>th</sup> grade level for easy comprehension. A 5-item survey was given to 2 content experts and 3 members from the target population to evaluate the toolkit. Data were analyzed using descriptive statistics to obtain a content validity index score of 1.00. Findings suggested universal agreement on the content of the toolkit which was developed as a resource tool to provide culturally-based educational materials from scholarly literature. This toolkit will promote positive social change by improving the outcomes of African American women with hypertension.

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## Dedication

The capstone project is dedicated to my late father Igwe Cyril O. Nwaorgu for his unconditional love, inspiration, and instilling the importance of education to a daughter. Without his love and guidance, I never would have made it this far. I missed you so much at this point in my life accomplishing your wishes without you present. May your soul rest in perfect peace AMEN!

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## Section 1: Nature of the Project

### **Introduction**

Hypertension is a chronic medical condition in which the blood pressure is elevated. A diagnosis of hypertension is made after two different readings of 140/90mmgh and above on two separate visits (American Heart Association [AHA], 2010). High blood pressure is considered a silent killer because it typically has no symptoms. Among Americans who have hypertension, an estimated 20% are still unaware of the condition (AHA, 2012). This is very risky because if left uncontrolled, hypertension can lead to serious health problems, including heart attack, stroke, kidney disease, and congestive heart failure. This is why the AHA (2010) stated that having high blood pressure can also shorten life expectancy by about 5 years, unless appropriately treated. In populations identified at risk for hypertension, education about the disease, its effects, and lifestyle modifications needs to begin at an early age.

Hypertension is a major public health problem affecting approximately 74 million Americans and over 1 billion people globally, contributing to excess morbidity, mortality, and direct and indirect health costs to the health care system (Centers for Disease Control and Prevention [CDC], 2012). It is also a major risk factor for heart disease, stroke, and kidney disease (AHA, 2012). Damage from hypertension begins before a diagnosis is made, but with early detection and treatment, its effects can be reduced if not eliminated. Hypertension is a modifiable as well as preventable disease. According to the AHA (2012) in the United States, one in three adults is diagnosed with hypertension. The

economic effects of high blood pressure in the United States coupled with those who are hypertensive is estimated at \$467 million (Flack, Nasser, & Levy, 2011).

African Americans have the highest rates of hypertension in the United States with 44% being African American women (Barnes & Kimbro, 2012). African Americans develop hypertension at younger ages, are prone to extremely high blood pressure greater than 180/110 mmHg, and experience significantly more organ damage than Caucasians (Staffileno, Minnick, Coke, & Hollenberg, 2007). Among African American women between the ages of 20 to 45 years, lifestyle modifications including weight control, limitation of alcohol consumption, increased physical activity, increased fruit and vegetable consumption, reduced total fat and saturated fat intake, and smoking cessation are critical and should be encouraged to prevent the risks and complications of hypertension (Hong, 2010). There is disparity in the adverse effect outcomes from maternal hypertension between African American women and other ethnic groups in the United States (Hong, 2010).

There is lack of knowledge on the benefits of life style modifications among African American women as evidenced by physical inactivity and sedentary work (Tussing-Humphreys, Fitzgibbon, Kong, & Odoms-Young, 2013). The target population also tends to be less educated, have higher incidence of obesity, and exercise infrequently (Staffileno et al., 2007). Reported barriers to physical activity identified by African American women include lack of a safe environment in which to be active or exercise and access to convenient facilities (Wilder, Schuessler, Hendricks, & Grandjean, 2010). Physical activity can have profound effects on decreasing cardiovascular disease risk as

well as hypertension, but the literature suggested that African American women have high rates of physical inactivity (Wilder et al., 2010).

African American food and dietary habits are complicated as its roots began with slavery when the foods available were of low nutritional value (Tussing-Humphrey et al., 2013). People who are economically disadvantaged often live in food deserts and may not have many options for food; instead, they often simply purchase what is available and what they are able to afford. These foods usually are higher in sodium, have lower nutritional value, and are higher in fat (AHA, 2012). The Toolkit provided information on the need for lifestyle modifications as a way of reducing the prevalence of hypertension among African American women. The Lifestyle Modification Toolkit was developed for African American women between the ages of 20 to 45 years because the literature suggested that African Americans develop hypertension in their late 30s (AHA, 2010).

Advanced practice nurses (APNs) can have an important impact on the incidence of hypertension among the target population through education and management of risk factors to improve outcomes (Terry, 2012). The Lifestyle Modification Toolkit would provide a resource and holistic approach to meeting the very diverse needs of the African American female population by bridging the gaps in knowledge of prevention and management of hypertension (Barnes & Kimbro, 2012). In this project, I developed a Lifestyle Modification Toolkit as a resource to provide information with educational materials to prevent and manage hypertension among African American women between the ages of 20 to 45 years.

### **Problem Statement**

Hypertension is described as a silent killer, and it is noted to be one of the most significant health problems in the United States (Webb & Gonzalez, 2006). The high prevalence of hypertension in African American women, as well as their lack of participation in traditional risk reduction programs, underscores the need for accessible health promotion and disease prevention programs that take into consideration the cultural perspective of the African American woman (Barnes & Kimbro, 2012). The seventh report of the Joint National Committee on Prevention, Evaluation, and Treatment of High Blood Pressure in 2003 cited a critical need for primary and secondary prevention strategies in African American women (Buchholz & Artinian, 2009).

Statistics have shown that African American women are more likely to be more overweight, obese, and have a higher prevalence of physical inactivity than White and Hispanic women (CDC, 2012). However, educational programs that address high blood pressure prevention and management specific to African American women have received limited investigation (Thompson, Berry, & Nasir, 2009). With the above information in mind, it was critical to develop a lifestyle modification Toolkit to help address the stated problems.

### **Purpose Statement**

The purpose of the DNP project was to develop a Lifestyle Modification Toolkit to prevent and manage hypertension among African American women between the ages of 20 to 45 years. The financial consequences of hypertension in the overall health care system continue to grow higher, and the quality of life from the complications remains a burden to the African American women (Webb & Gonzalez, 2006). It is critical to

develop a Lifestyle Modifications Toolkit to address this burden. The Toolkit contained information on a Dietary Approach to Stop Hypertension (DASH--eating plan) and increased physical activities focusing on African American females between the ages of 20 to 45 years who are at risk for developing hypertension.

### **Project Objectives**

The high prevalence of hypertension in African American women, as well as their lack of participation in traditional risk reduction programs, underscores the need for accessible health promotion and disease prevention programs that take into consideration the cultural perspective of the African American woman. The objectives of the project support the seventh report of the Joint National Committee on Prevention, Evaluation, and Treatment of High Blood Pressure in 2003 that cited the critical need for primary and secondary prevention strategies in African American women (Buchholz & Artinian, 2009).

The information in the Toolkit was culturally integrated to provide lifestyle modification strategies to the African American women through diet and increased physical activities. Cultural competency training is required to provide quality care (Terry, 2012). The Toolkit provided a resource to encourage African American women to participate in lifestyle modification strategies using a DASH eating plan as well as the need for increased physical activities.

The literature suggested that the DASH diet has the potential to significantly lower blood pressure among African American women (Spencer, Jablonski, & Loeb, 2012). For patients with hypertension, adequate physical activity is an important part of



the lifestyle modification plan because it helps to prevent health problems. Information contained in the Toolkit could be used as a resource to provide health promoting education to at risk individuals as well as hypertensive patients on the need for increased physical activities. Engaging in regular physical activity not only decreases the risk of heart disease, hypertension, obesity, and diabetes but it also helps to improve the burning of calories, which is beneficial to the musculoskeletal system, increases energy, and allows people to cope more easily with stress (CDC, 2012).

### **Relevance to Practice**

Lifestyle modification is an evidence-based strategy to prevent and manage hypertension among the African American women (Barnes & Kimbro, 2012). The evidence-based nursing practice guideline developed from this project will act as a template to prevent and manage hypertension in any setting, especially in the community and primary care setting. Literature reviewed for this scholarly project supported the evidence. The Lifestyle Modification Toolkit could be used in variety of settings by all nurses. Since this scholarly project is a community based project, nurses working in the community health setting can use the Toolkit as a framework to provide culturally tailored intervention to the African American women (Rigsby, 2011).

Evidence-based practice (EBP) integrates the best care with research evidence, the patient's individualized needs, preferences, and circumstances (Melnyk & Fineout-Overholt, 2011). It also allows for exceptions in a clinical setting and resource constraints. EBP can also be used as a problem solving clinical care by taking away decisions based on customs, authority, opinion, or ritual (Melnyk & Fineout-Overholt,

2011). The Lifestyle Modification Toolkit would encourage nurses to be aware of this population and be able to educate them on health promoting behaviors that can help to reduce their risk, especially on how to shop and plan their diet.

Cultural competency training is imperative to provide quality care to African American women (Barnes & Kimbro, 2012). Understanding their cultural beliefs would guide nurses to provide culturally based interventions. The Lifestyle Modification Toolkit helped to demonstrate a negative understanding and lack of representation of African American women. It is imperative for nurses to be self-aware of their attitudes towards African American women. As leaders in the health care system, DNP trained nurses can take the leadership role in confronting the effects of disparity on both consumers and health care providers by developing modules that can be used for EBP (Terry, 2012). This project helped to advance nursing practice through the information contained in the Toolkit.

### **Project Question**

Based on literature reviewed, lifestyle modification is an evidence-based strategy to prevent and manage hypertension among African American women in the community setting. With this in mind, the clinical question developed for this project is the following: What evidence-based literature can be used to develop a Lifestyle Modification Toolkit to prevent and manage hypertension among African American women between the ages of 20 to 45 years?

### **Evidence-Based Significance of the Project**

EBP is critical in providing quality care to patients, including African American women. The Lifestyle Modification Toolkit project has the potential to support EBP as well as advancing nursing practice. The information in the Toolkit was organized to include the cultural beliefs and values of the African American women, and I tailored the design of the Toolkit to suit them. As stated above, this project provided lifestyle modification strategies that will encourage the target population to make good food choices as well as good health decisions as evidenced in the literature (Rigsby, 2011). It does not take away the population's values and beliefs. The project demonstrated the importance of developing a resource Toolkit to modify lifestyle choices among African American women (Baruth, Wilcox, & Saunders, 2013). The literature suggested that lifestyle modifications are excellent strategies for assessing health promoting behaviors among the African American women (Baruth et al., 2013).

The Lifestyle Modification Toolkit project could reach more people and sustain effects longer through the continual reinforcement of community systems through the dissemination as an EBP. Lifestyle modifications have proved to reduce and or prevent hypertension and its complications among African American women (Rigsby, 2011). Since the literature supported this evidence, the information in the Toolkit was constructed using the health promotion model to acknowledge the cultural values and beliefs of the population. I tailored the content of the Toolkit with strategies to provide quality care to African American women. The Lifestyle Modification Toolkit could be used to disseminate evidence-based practice found in the literature. The information gained from the literature review provided a model to quality health care for the African

American women. The health promotion model guided in assessing the perception of hypertension and barriers to the desired healthy choices, and the information in the Toolkit was tailored to improve blood pressure control.

### **Implications for Social Change in Practice**

As an APN who functions as a leader and change agent, quality improvement is critical. The DNP trained nurse has a core role of influencing policies that could impact changes towards improvement of care at a system level in order to improve outcomes (Terry, 2012). The Lifestyle Modification Toolkit project was designed and developed for quality improvement using clinical skills, knowledge, and expertise to improve outcomes. The literature suggested that lack of knowledge among this population makes education and awareness on preventive measures critical (AHA, 2012).

Health promotion as well as providing prevention measures to the community is the core role of a DNP trained nurse. The information contained in the Toolkit could be used to effect changes among the target population and in the health care system overall. The Toolkit project could also help to expand the nursing practice by providing a model for nurses working in the community setting. Hypertension is a chronic disease yet is preventable through lifestyle modifications (Rigsby, 2011).

The Toolkit will provide preventive measures for hypertension among African American women. The information in the Toolkit will also empower and motivate these women to make good choices about their health decisions. The literature suggested that a powerful influence of culture on health behaviors for African American women is intervention tailored to suit their cultural beliefs and values (Moore et al., 2012). In such

programs, information will be specifically designed to raise and improve healthy lifestyles. Providers should also consider expanding their level of intervention to families and communities in order to improve hypertension prevention education among African American women. Through this project, African American women could be empowered to make changes in their lifestyle. The Lifestyle Modification Toolkit will provide resources to the African American women that will allow them to make the changes that will positively affect the overall system.

### **Definition of Terms**

Despite advances in the treatment of hypertension as well as education, health promoting behaviors continue to be an identified issue among African American women. Some of the reasons are associated with cultural beliefs and lack of lifestyle modifications. Below are the terms that are frequently used throughout the document that could help the reader to understand and appreciate the content of the information from the Toolkit.

*Hypertension* refers to a chronic medical condition in which the blood pressure is A diagnosis of hypertension is made when two different readings of 140/90mmHg and above is recorded on two visits (AHA, 2010).

*Lifestyle modifications* are health promoting behaviors that can enhance ones quality of life and aid in the prevention of diseases such as hypertension (Hong, 2010). Appropriate use of lifestyle modification is the primary means of prevention and early treatment of hypertension in African Americans (Brill, 2011).

*Toolkit* is a set of tools or information designed to be used together or for a particular purpose.

### **Assumptions and Limitations**

The prevention and management of hypertension among African American women remains a challenge with limitations. African American women are faced with limitations on their knowledge of evidence-based strategies to prevent and manage hypertension. According to Webb and Gonzalez (2006), African American women have limited knowledge on preventive measures for hypertension. Therefore, it is important for well-designed, culturally sensitive programs such as the Lifestyle Modification Toolkit to be developed for this population to help address the burden and minimize health disparities. Information contained in the Toolkit could be very important to the target population. It is necessary to target African American women who are at risk for early preventive measures.

Identifying these assumptions helped to clear any fears in the design and development of the project. Assumptions can be made that it will be important to understand and appreciate the cultural beliefs and values for the African American women as well as being culturally competent to provide care to this population. Lifestyle modifications are often met with resistance and challenges as well as barriers. Lack of communication can cause barriers and limitations to change, but providing appropriate education and resource tools on how to access the Toolkit was critical and helped to address the limitations. Reinforcing the need for making healthy choices and ensuring

access to evidence helped to understand the benefits of lifestyle modifications. There were no identified biases that affected the outcome of the scholarly project.

### **Summary**

In this chapter, hypertension was identified as a global public health issue with African Americans having the highest prevalence among all ethnic groups, with 44% being African American women (Barnes & Kimbro, 2012). According to the AHA (2012), lack of knowledge of preventive strategies among the target population is critical. As a DNP trained practitioner who could function in any setting, EBP is critical for quality health care.

Identifying interventions that are cost effective at the community level is imperative. Information from the Toolkit can be used to effect changes in this population and in the health care system overall. It could also help to expand the nursing practice by providing an opportunity for nurses working in the community setting with African American women. Hypertension is a chronic disease yet preventable through lifestyle modifications (Rigsby, 2011). Therefore, developing the Lifestyle Modification Toolkit could act as a template to encourage and improve healthy lifestyle choices among African American women in all settings.

### **Section 2: Review of Literature and Theoretical and Conceptual Framework**

The focus of the DNP project was to develop a Lifestyle Modification Toolkit to prevent and manage hypertension among African American women. Despite the advances in the treatment of hypertension as well as education and screening, this population continues to have high incidence in the development of hypertension (Barnes

& Kimbro, 2012). This section of the project examined literature on lifestyle modification strategies for African American females in the form of diet and physical activities as well as the use of the Toolkit.

### **Literature Search Strategy**

The search of the literature was conducted using key words such as *hypertension, African Americans women, diet, exercise, ethnic differences, beliefs/ values, cardiovascular disease, lifestyle modifications, health promoting behaviors, barriers, and toolkit development*. The databases used to conduct the searches were the Walden University library using the Cumulative Index of Nursing and Allied Health Literature (CINHAL), PubMed/Medline, and Google Scholar. Internet searches using the same keywords were conducted on the AHA, CDC, and the National Heart, Lung, and Blood Institute websites as well as the American Society of Hypertension website.

The search resulted in 40 articles for review. Through a thorough review of the abstracts, 31 articles were eliminated based on exclusion criteria for the following reasons: any article written before 2006 and earlier and non-English articles. The nine articles that met the inclusion criteria for this scholarly project were selected for the literature review. The articles employed were written from 2009 to 2014 and a few from 2006 to 2008 that were specific to the content of the project. The literature analysis and reviews that studied the effect of lifestyle modifications on prevention and management of hypertension among African American women varied in design from randomized to nonrandomized, longitudinal, cohort, and a pilot study. The studies focused on in this review consisted of evidence evaluating the effect of lifestyle modification approach to



prevent and manage hypertension in African American women through diet (DASH eating plan) and increased physical activities.

### **Lifestyle Modifications**

Lifestyle modifications are health promoting behaviors that can enhance one's quality of life and aid in the prevention of diseases such as hypertension. Appropriate use of lifestyle modification is the primary means of prevention and early treatment of hypertension in African Americans (Barnes & Kimbro, 2012). The literature suggested that lifestyle modification for promoting health is imperative for African American women to help reduce high blood pressure risk (Hong, 2010). African American women should be educated on the need for healthy lifestyle such as increased physical activities and diet. The best example of clinical evidence improving lifestyle in this population is increased physical activities and the DASH that established the importance of a heart-healthy eating plan for lowering blood pressure strategy among African American women (Spencer, Jablonski, & Loeb, 2012).

DASH is a carbohydrate-rich eating plan that emphasizes increasing consumption of fruits, vegetables, and low-fat dairy products and reducing the consumption of saturated fat, total fat, and cholesterol by decreasing consumption of red meat, sweets, and added sugars. A randomized controlled trial (RCT) showed DASH to be effective in lowering blood pressure among African American women (Rigsby, 2011).

Implementation of a culturally tailored community-based DASH intervention proved effective in the African American population, which included people being treated for high blood pressure (Whitt-Glover et al., 2010).

Barnes and Kimbro (2012) conducted a descriptive study analysis using a cross-sectional design on 1,110 African American women to explore successful weight loss through nonsurgical means. Participants were recruited between October 2006 and April 2009. Over 90% of respondents had at least some college education. Twenty-eight percent of respondents were weight-loss maintainers. Maintainers lost an average of 24% of their body weight and had maintained greater than 10% weight loss for an average of 5 years. Maintainers were more likely to limit their fat intake, eat breakfast most days of the week, avoid fast food restaurants, engage in moderate to high levels of physical activity, and use a scale to monitor their weight. This study provided evidence that educated African American women can and do achieve significant long term weight loss. The percentage of participants who achieved long term weight-loss maintenance reported various dietary and physical activity strategies, motivations for and social-cognitive influences on weight loss and maintenance, current eating patterns, and self-monitoring practices compared to African American women who lost weight but regained it. There were no limitations listed by the authors.

In a descriptive study conducted by Rigsby (2011) on the effectiveness of healthy lifestyle modifications on blood pressure control, 36 African American women participated in the 12-week project, with a 67% retention rate. Weekly sessions included interactive educational and walking components. Overall, the results revealed that participants experienced an increase in healthy lifestyle modification adoption resulting in blood pressure control improvement. Rigsby concluded by saying that implementation

of healthy lifestyle modifications is crucial in providing quality patient care to hypertensive individuals.

In a randomized control pilot study by Whitt-Glover et al. (2010), 152 African American women were randomly assigned to either an intervention or control group for the DASH eating plan. After 12 weeks of the study, the intervention group increased in their consumption of fruits and vegetables. The result concluded that implementation of a culturally modified community based DASH intervention was feasible in African American women that included individuals treated for high blood pressure. The study's limitations included small sample size of 152, which may not allow for generalization. The authors noted that because the study was selected for only African Americans, they had problems recruiting participants and indicated the need for future studies to identify methods of translating DASH for this population (Whitt-Glover et al., 2010).

Furthermore, Plescia, Herrick, and Chavis (2008) conducted a Behavioral Risk Factor Surveillance System survey in a community of 20,000 African Americans annually from 2001 to 2005 through a community coalition, community environment change strategies, and a lay health advisor program. The three behavioral risk factors for heart disease and diabetes were low fruit and vegetable consumption, low physical activity, and cigarette smoking. The results of the study showed that all three health behaviors improved in the study population. Improvements were statistically significant for physical activity and smoking among women and for physical activity among middle-aged adults (Plescia, Herrick, & Chavis, 2008).

Lower baseline physical activity rates improved to levels comparable to those of African Americans statewide in 2001 to 2005, and comparable fruit and vegetable consumption rates became significantly higher (Plescia, Herrick, & Chavis, 2008). The authors concluded that the findings supported the emerging role of policy and community environment change strategies and community participation as promising practices to improve health behaviors in African American communities and to reduce health disparities (Plescia, Herrick, & Chavis, 2008). One of the limitations to the study was that data on health behavior practices came from responses to BRFSS questions (Plescia, Herrick, & Chavis, 2008). Self-reported data may be subject to respondent bias (Plescia, Herrick, & Chavis, 2008).

The literature suggested that the DASH diet has proved to reduce both the systolic and diastolic blood pressure in African American women, and even better when combined with exercise (Blumental et al., 2009). The authors conducted a randomized controlled trial (RCT) study of 144 participants that met the inclusion criteria in a tertiary care medical center on the effects of the DASH diet alone and in combination with exercise and weight loss on blood pressure with assessments at baseline (Blumental et al., 2009). Data collection was done between the years 2003 to 2008. Recruitment of participants came from physician referrals with a blood pressure range of 130/85 to 159/99 and of 35 years or older, with 67% African American women. The result of the study suggested that the DASH diet, particularly when augmented by exercise and weight loss, can offer considerable benefits to patients with high blood pressure, not only through

reductions in blood pressure but through favorable modification of biomarkers of disease risk. There was no documented limitation to the study.

### **Toolkit**

According to O'Riordan (2012), a cardiovascular risk reduction Toolkit (IMPACT) developed by the International Society on Hypertension in Blacks (ISHIB) helped reduce systolic and diastolic blood pressure levels in African American hypertensive patients to a greater extent than patients treated with usual care. The randomized study of 32 African American women received the IMPACT Toolkit information in addition to usual care, while the control arm received usual care alone. Treatment with usual care alone reduced mean systolic and diastolic blood-pressure levels of 6.7 mmHg and 5.0 mmHg, respectively, while the IMPACT-intervention arm had reductions of 18.7 mmHg in systolic blood pressure and 9.7 mmHg reduction in diastolic blood pressure both of which were significant compared with the control arm. There were no limitations identified in the study.

Moreover, the South Carolina Department of Health and Environmental Control office of Minority Health developed a Toolkit for hypertension prevention and management for African American women called Protect Your Body-Your Temple. The Toolkit has information on preventive measures for hypertension in African American women. The content of the Toolkit is information on physical activity, nutrition, tobacco prevention, and resources. This Toolkit is designed to provide African Americans with ideas and resources to help them plan, develop, and implement health related programs and activities. The activities and programs contained within the Toolkit are easy to use

and implement. The Toolkit could be accessed through the following link:

<http://www.scdhec.gov/administration/library/CR/009934.pdf>.

The Delta States Stroke Network (DSSN) is a partnership of southeastern states in the Delta region, including Alabama, Arkansas, Louisiana, Mississippi, and Tennessee; five of the eight states comprising the stroke belt are where the stroke death rate is 1.5 times the national average. The DSSN Training and Education Workgroup developed the Stroke Awareness and Education toolkit for Healthcare Providers. The Toolkit was created to increase professional education about stroke, including statistics/incidence, risk factors, signs and symptoms, triage information, protocols for treatment, rehabilitation options, and patient quality of care issues. This Toolkit was designed to be used as an electronic resource. The Toolkit can also be printed and could be accessed through the following link: [http://www.msdh.state.ms.us/msdhsite/\\_static/resources/3904.pdf](http://www.msdh.state.ms.us/msdhsite/_static/resources/3904.pdf).

### **Physical Activity**

Walking is the most commonly reported leisure-time activity. According to McNeill and Edmonds (2012), populations of racial/ethnic minority groups and people of low socioeconomic status disproportionately live in urban environments that are perceived to be unsafe, thereby reducing opportunities for engaging in walking. In this population, the use of walking maps for increasing physical activity has proved to be effective (McNeill & Edmonds, 2012). In a focus group design study conducted by McNeill and Edmonds (2012), 24 residents were used to determine the effect of walking maps on physical activities. The study was carried out among low-income residents of public housing sites in Boston, MA. The study concluded that walking maps are critical

to improve physical activities. The authors identified nearby walking maps as opportunities for physical activity that could help members of racial/ethnic minority and low-income groups incorporate physical activity into their daily routines to reduce real and perceived barriers to physical activities (McNeill & Edmonds, 2012). The result of the study identified five themes that include increased awareness of neighbor resources, walking for pleasure and utilitarian purposes, perception of distances, community use of the map and fostering community, and barriers to map use.

Physical activity can be facilitated or constrained by the built environment. Features of the built environment influence the propensity to being physically active. For example, changes to the built environment may increase neighborhood physical activity in low-income, African American communities (Gustat et al., 2012). In a control study by Gustat et al. (2012), to determine the importance of the built environment on physical activity, two neighborhood communities were compared. The result of the study concluded that among residents who were observed engaging in physical activity, 41% were moderately to vigorously active in the section of the intervention neighborhood with the path compared with 24% and 38% in the comparison neighborhoods at the post intervention measurement. One the strengths of the study is that walking paths or trails may provide a long term, sustainable, and low cost strategy to increase the physical activity of residents in a low-income neighborhood (Gustat et al., 2012).

Engaging in regular physical activity not only decreases the risk of heart disease, hypertension, obesity, and diabetes but also helps to improve the burning of calories. It is beneficial to the musculoskeletal system, increases energy, and allows people to cope

more easily with stress (Buchholz & Artinnian, 2009). In a descriptive study by Buchholz and Artinnian (2009) with a sample size of 47 women to determine the dimensions of physical activity in African American women, the result of the study indicated that a well-tailored physical activity to a specific client can become a successful part of lifestyle modification as well as health promotion management for African American women. The limitation to this study was that only one tool, YPAS, was used to measure physical activity indicators, which may potentially lead to monomethod bias.

### **General Literature**

Staffileno, Minnick, Coke, and Hollenberg (2007) conducted an 8-week randomized control study on the impact of lifestyle compactible physical activities on blood pressure with primary intervention of an individualized, home-based program in which women randomized to exercise were instructed to engage in lifestyle-compatible physical activity. Inclusion criteria included African American women aged 18 to 45 years with prehypertension or untreated Stage 1 hypertension. The result of the study revealed that women in the exercise group had a significant reduction in systolic blood pressure, a decrease in diastolic blood pressure status to the prehypertensive level, and greater reductions in nighttime pressure load compared with the no exercise group. The authors concluded that given the excess burden of pressure-related clinical sequelae among African Americans and the strong correlation between pressure load and target organ damage, lifestyle physical activity may represent a practical and effective strategy among the target population (Staffileno, Minnick, Coke, & Hollenberg 2007).



Webb and Gonzalez (2006) conducted a qualitative study using focus groups to explore African-American women's mental representations of hypertension on 47 participants in a community setting. Leventhal's self-regulation process model was used to guide the development of the study. The mean age of the women was 50 years (range 23–77 years). The educational level ranged from grade school to doctorate. Over 47% held a master's or a bachelor's degree. Forty-three percent of the total sample reported current use of at least one hypertensive medication. In that study, four themes generated from the women's mental representations are vulnerability and inevitability, biobehavioral assaults, barriers to effective management, and culturally relevant remedies.

Hypertension was perceived as a significant disease threat; causality was associated with risk factors interacting within the context of psychological stress. The result of the study concluded that acquiring a clear perspective of how African American women perceive hypertension and their ability to reduce risk factors can assist in developing a model for stimulating the use of health promoting behavior. There were no limitations identified by the researchers. However, the sample size of 47 may not allow for generalization.

Several other clinical studies have demonstrated the benefit of educating African American females regarding identifying sodium levels in prepared foods, using fresh fruits, vegetables, and other sources of potassium and low-fat dairy products, restricting calories and increasing physical activity (Spencer, Jablonski, & Loeb, 2012). It is recommended to use both pharmacological and non-pharmacological approach in the

management of hypertension among the African American population (Flack, Nasser, & Levy, 2011). Whitt-Glover et al. (2013) recommended dietary changes to decrease calories, weight loss for overweight and obese individuals, reduction of sodium intake, and to follow dietary recommendation in the DASH study.

For patients with hypertension, adequate physical activity is an important part of the lifestyle-modifications plan. Optimal treatment of hypertension requires a comprehensive approach that encompasses multifactorial lifestyle modifications such as weight loss, salt and alcohol restriction, increased physical activity and drug therapy (Brill, 2011). There is ample evidence from major diet intervention studies that calcium-replete diets high in fruits and vegetables as well as low in sodium lower blood pressure to a similar magnitude to single-drug antihypertensive drug therapy (Flack, Nasser, & Levy, 2011). The recently updated consensus statement on the treatment of hypertension in African Americans from the International Society on Hypertension in Blacks (ISHIB) recommends comprehensive lifestyle modifications in all African Americans with blood pressure greater than 115/75 mmHg (Flack, Nasser, & Levy, 2011).

The United States Department of Health and Human Services (DHHS) 2008 guidelines on physical activity stipulated that adults should engage in minimal of 150 minutes of moderate to intense aerobic activity per week, or 75 minutes of intense aerobic activity. They should also engage in strength training activity that involves all major muscles groups at least twice a week. Engaging in regular physical activity has multiple health benefits. According to the World Health Organization [WHO] (2012) physical activity is a targeted goal in order to help decrease chronic diseases.

The content of the Lifestyle Modification Toolkit project provided information on the amount and type of educational programs needed to increase health promoting activities at an earlier age to decrease the incidence and improve the prevention and management of hypertension among African American women. This review summarized key findings of evidence for clinical practice, and provided similar conclusions like this project regarding interventions to prevent and manage hypertension in black women. The literature review conducted established the relationship between lifestyle modifications and reduction in systolic and diastolic blood pressure in African American women (Rigsby, 2011).

The resource Toolkit is different from previously developed toolkits in various ways such as; an evidence-based culturally lifestyle modification strategies to a culturally sensitive population. The Toolkit provided evidence-based materials to support the design and development of health behavior change strategies for minority groups (Davidson et al., 2013). In the past cost effectiveness was not assessed and nursing involvement was limited in the development of Toolkits. This gap provided an opportunity for a DNP student to develop the lifestyle modification toolkit. DNP practitioners have an important role in developing programs to help nurses and other health care providers better understand patient perceptions on hypertension. While utilizing the health promotion model in constructing the information contained in the Toolkit, the information was richly compiled and easily accessible to the target population. According to Davidson et al. (2013), this approach has proved to be effective

in delivering behavior change interventions among ethnically diverse underserved populations.

The five principles for adapting behavioral interventions for minority ethnic communities identified in the literature review were incorporated in the development of the Toolkit. These principles include; use community resources to publicize the intervention and increase accessibility; identify and address barriers to access and participation; develop communication strategies which are sensitive to language use and information requirements; work with cultural or religious values that either promote or hinder behavioral change; and accommodate varying degrees of cultural identification (Netto, Bhopal, Lederle, Khatoon, & Jackson, 2010).

There is currently a lack of evidence on how best to deliver life style modification strategies among this population because of the associated challenges. Although culturally adapting interventions can increase salience, acceptability and uptake, there are still not enough evidence on the clinical or cost-effectiveness of these adapted approaches. This project provided multiple guidelines available to inform practice as well as access to the Toolkit. It should also aim to specify all elements of interventions that may mediate and modify effectiveness, including both the content and delivery. The resource Toolkit could be a good framework for policymakers, practitioners as well as researchers who are providing lifestyle modification interventions to ethnic minority population. DNP practitioners has a critical role in developing programs to help hypertensive patients understand hypertension, disease progression and treatment modalities using a system based approach.

## **Theoretical Framework**

The focus on the DNP project was to develop a Lifestyle Modification Toolkit to prevent and manage hypertension among African American women between the ages of 20-45 years. The Health Promotion Model proposed by Nola Pender (1996) is the framework that guided the planning and development of the project. According to Hodges and Videto (2011) having a theoretical framework enhances the worth of a project. As a framework, it acted as a building block by providing guidance to the planning and development of the Lifestyle Modification Toolkit project to address hypertension prevention and management among African American females in the community setting. The literature suggested that cultural, environmental, social, and personal factors are variables involved in the representation of health threats, the planning, and performance of their control (Hacihasanoglu & Gozum, 2011).

These contextual factors may be both the initiating sources and the moderators of mediating factors that participate directly in the problem solving process associated with the prevention and management of hypertension among African American women. Incorporating the concept of the health promotion model to the content and information in the Lifestyle Modification Toolkit allowed the African American women to appreciate and utilize the resource. According to Buchholz and Artinian (2009) the health promotion framework is an excellent model in diverse population because it explores how culture impacts health promoting behaviors. The Lifestyle Modification Toolkit was developed by acknowledging the cultural beliefs/values and empowering the women to make healthy life style choices since the health promotion model presumes that

individuals takes active role in seeking to maintain healthy behaviors and changes their environmental context to support these behaviors.

The theoretical prepositions of the health promotion model summarizes that people will commit to performing behaviors in which they anticipate will benefit them, based on their behavior specific cognitions, perceived barriers, perceived competence, and emotions (Pender, Murdaugh, & Parsons, 2010). The health promotion model focuses on the relationship between individual's characteristics, experiences, behavior specific cognitions, and behavioral outcomes. In designing and developing the Lifestyle Modification Toolkit, the content and information was guided by the health promotion model by integrating the cultural values of the African American women and focusing the educational materials in the Toolkit.

The Health Promotion Model has been used in the past with African American women and proved to be effective in promoting health behaviors to prevent hypertension. In a quasi-experimental study by Thompson, Berry, and Nasir (2009) collaborative intervention showed beneficial weight loss among African American women and positive influence on health promotion and disease prevention. In another control study by Hacıhasanoglu and Gozum (2011) with African American women, using the health promotion model, result suggested lifestyle modifications strategies improved in both groups after educational sessions. In conclusion, Toolkits developed in the past among the target population for health promoting behaviors utilized the health promotion model as a guide.

## **Summary**

In this section extensive literature review and theoretical framework that guided the project was described. The articles utilized for the project development have evidence-based content of lifestyle modifications through diet and physical activities to prevent and manage hypertension. Pender's Health Promotion Model was identified as the framework that guided with the planning and development of the project. Its relevance and importance to the project was also identified and described from previous studies.

### **Section 3: Methodology**

The Lifestyle Modification Toolkit was designed to prevent and manage hypertension among African American women between the ages of 20 to 45 years. The Toolkit contained information on the following lifestyle modification strategies: regular exercise and dietary changes that can greatly reduce the risk of developing hypertension. The resource Toolkit was structured to provide specific educational materials from nursing organizations, position statements, and scholarly related literature on lifestyle modification strategies to prevent and manage hypertension.

As previously noted, there have been a few Toolkits developed for this population in the past. However, this resource Toolkit was developed using Pender's health promotion model as a guide. This model allowed the population's cultural practices, beliefs/values, and knowledge of access to cultural organizations to identify groups that are at an increased risk for developing hypertension (Buchholz & Artinian, 2009). Integrating the concept of the framework into the content of the Toolkit allowed for effective buy-in. This model was chosen because the literature suggested that it is an excellent model for a diverse population in lifestyle modification programs such as health

promotion education, smoking cessation, weight management/loss, community health, cardiovascular promotion, and women's clinics health promotion (Buchholz & Artinian, 2009).

### **Project Design/Methods**

The Lifestyle Modification Toolkit was developed for African American women as a resource to prevent and manage hypertension. The Toolkit was designed to form a reference guide among the target population. The literature suggested that evidence-based projects such as a lifestyle modification project must be aligned with the mission and vision of the organization for effective buy-in (Kettner, et al., 2013). This assisted in eliminating constraints and provided encouragement and persuasion as the organization forms its opinion about the evidence-based practice change (Melnyk & Fineout-Overholt, 2011). The Lifestyle Modification Toolkit was developed with the above information in mind while providing African American women with the required information, content, and necessary resources to prevent and manage hypertension.

The information contained in the Toolkit was richly compiled, easily accessible to the target population, and was used as a reference guide. Cultural sensitivity in health promotion projects refers to designing and delivering interventions that are relevant and acceptable within the cultural framework of the target population. The development of a culturally sensitive program depends on knowledge of the history, values, belief systems, and behaviors of the members of the target minority group. Information in the Lifestyle Modification Toolkit was from scholarly literature following a review. The Lifestyle Modification Toolkit contained information on hypertension, the DASH eating plan, the



need, and benefits of increased physical activities. The information was compiled using simple and short language noted to be at a fifth grade level for easy comprehension by the target population. Without adequate literacy skills, individuals cannot read health-related materials. Effective strategies included use of simple messages with short sentences (Artinian et al., 2010).

The Toolkit was constructed to address the following:

- Hypertension within the public health burden; this will outline the burden of hypertension and where it places the individual, the community, and the healthcare system in general.
- Reducing the burden by tackling hypertension; this will look at the strategic framework for hypertension through preventive measures, detection, and control using the lifestyle modification strategies of a DASH eating plan and increased physical activities.
- Resources that looked at information on relevant publications, organizations, as well as toolset and online resources to help review activities.

Developing the above strategies gave guidance on the practicalities of developing and implementing a community action plan (American Society of Hypertension, 2012). It provided information on the necessary elements to decide what action is needed and where it should be targeted: building local partnerships, choosing interventions on prevention, detection and control, and dealing with barriers to change (Barnes & Kimbro, 2012).

The development of the Lifestyle Modification Toolkit was a step-by-step approach. The project design for this Toolkit proceeded following a review of the literature as well as observations. One of the recommendations from the literature to improve lifestyle changes among the target population was access to resources (ASH, 2012). The objectives were aligned with the vision and mission for the target population. This involved what and why of the project, which would increase the cooperation and buy-in by the target population. I identified strategies on how to accomplish the project such as planning and design/development as well as an evaluation plan that was critical to sustain the project (Hodges & Videto, 2011).

The Lifestyle Modification Toolkit has information that can be used to motivate African American women to make changes and negotiate a specific plan to help them change behaviors while monitoring their progress. These are all critical components for successful development of the Lifestyle Modification Toolkit. The African American women's ethnic backgrounds also were considered in suggesting lifestyle modification strategies for effective buy-in (Barnes & Kimbro, 2012). The literature suggested that lifestyle modification is the best strategy to prevent and manage hypertension among the target population (Rigsby, 2011). According to CDC (2012), high blood pressure costs the nation \$47.5 billion annually in direct medical expenses and \$3.5 billion each year in lost productivity; therefore, a well-designed culturally structured program to prevent and manage hypertension was critical to the target population and to the overall health care system.

The dissemination of the scholarly project as an EBP helped to address the burden of hypertension on the health care system as well as the population involved. Lifestyle modifications including weight control and exercise are among the most difficult risk-reduction strategies to implement. Patients with hypertension and other vascular disease who understand the rationale behind recommended lifestyle changes as well as recognizing the potential benefits that can result are more likely to cooperate with program development (Brill, 2011).

Findings from the literature suggested that setting goals, outlining methods for achieving these goals, and monitoring the patient's progress are also critical to the success of lifestyle modification strategies (Barnes & Kimbro, 2012). Based on the literature reviewed, information provided in the Lifestyle Modification Toolkit would help to prevent and manage hypertension among African American women between 20 to 45 years of age (Barnes & Kimbro, 2012). This would be achieved by engaging in increased physical activities and a DASH eating plan. African American women were encouraged to optimize dietary and physical activity to achieve reasonable weight or that level of body weight that they reach when they meet all of the above behavioral changes.

The Toolkit project will be submitted to be published in the Journal of the National Black Nurses Association and can also be accessed through the following link: <http://www.nbna.org/nbna%20journal>. Information contained in the community resource Toolkit was culturally integrated using the health promotion model to assess and acknowledge cultural differences of African American women and their learning needs focusing on lifestyle modification changes and their benefits. According to American

Society of Hypertension (2012), one way to address this public health issue is access to resources such as the Lifestyle Modification Toolkit.

### **Develop Project Evaluation Plan.**

Evaluating outcomes produced by clinical practice changes is an important yet often overlooked step in EBP (Melnik & Fineout-Overholt, 2011). Outcomes reflect the impact that has been made with the change to best practices. It is important to measure outcomes before, shortly after, and for a reasonable length of time after the practice change (Melnik & Fineout-Overholt, 2011). The purpose of the evaluation plan for this project is to measure the extent to which the objectives that were set at the beginning of the project were met (Hodges & Videto, 2011). The evaluation plan is a critical step in the planning and development of a project usually initiated at the beginning of the project plan and is ongoing.

The evaluation of a program is determined by the project designer who will use the results for program improvement, modification, and decision making (CDC, 2011). As a developmental project, an evaluation plan is imperative. Therefore, content validity is critical to validate the information in the Toolkit. Content validity is the extent to which the elements within a measurement procedure are relevant and representative of the construct that they are used to measure (Polit et al., 2007). According to Polit, this requires strong conceptual and developmental work, good items, outstanding experts, and clear instructions to the experts regarding the underlying constructs and the rating task.

This is important because in developing the Lifestyle Modification Toolkit, establishing the content validity was a necessary initial task in the construction of a new

procedure or revision of an existing one. As previously noted, the content evidence of validity came from the judgment of stakeholders who are content experts. The Lifestyle Modification Toolkit project was evaluated by an advisory committee and consisted of two content experts and three members from the target population who validated the content of the Toolkit for the target population. It was essential that information in the Toolkit was current, relevant, and applicable to this population of African American women between the ages of 20 to 45 years. The readability level for the Toolkit was at a fifth grade level. According to Artinian et al. (2010), health related materials should be written in short and simple language, and without adequate literacy skills, individuals cannot read health-related materials.

Through purposive sampling advisory committee members were selected to review the Toolkit. The benefit of this method is that the sampling procedure allows one to draw inferences about the population from which the sample was drawn and state these with a known degree of confidence that any similar chosen sample would yield the same results as that given by the present sample (Melnik & Fineout-Overholt, 2011). The advisory committee members were contacted through an initial email followed by a phone call. The Toolkit was in two formats, a hard copy and an electronic version. The electronic version was linked to a URL link for easy accessibility.

I collected all responses from the advisory committee members electronically via a link provided for all correspondences on the evaluation process. To make this Lifestyle Modification Toolkit generalizable, effective strategies may include the use of simple messages with short sentences. Therefore, it is important that information contained in

the Toolkit is presented in a level that is easy to understand (Artinian et al., 2010). Since evaluation is an ongoing process, follow-up as well as accurate feedback is critical. The Toolkit will be evaluated every 12 months for updates. The measuring scale for the Lifestyle Modification Toolkit was the Content Validity Index (CVI), which validated the construct validity of the Toolkit for readability (Polit, Beck, & Owen, 2007).

According to Polit and Beck (2006), the CVI scale is valid to assess the construct of the Toolkit based on the following criteria: it is recommended that for a scale to be judged as having excellent content validity, it would be composed of items with three to five experts ( $1 - CVI = 1.0$ ) and a minimum of ( $1 - CVI$  of .78) for six to 10 experts. This requires strong conceptualizations of construct, good items, judiciously selected experts, and clear instructions to the experts regarding the underlying constructs and rating task.

Below are samples of survey questions retrieved from the CDC website (2012) and could also be found under Appendix C of the document. The content experts reported on the validity, appropriateness, and relevance of the educational materials contained in the toolkit while the target population focused on appropriateness and relevance of the information presented in the Toolkit.

- How easy did you find navigating the web-based Toolkit?
- How interesting did you find the content of the Toolkit?
- How relevant did you find the information in the Toolkit?
- How appropriate is the information for African American women between 20 to 45 years of age?
- How current is the information contained in the Toolkit?

## **Summary**

Hypertension remains one of the significant health problems in the United States (Webb & Gonzalez, 2006). The prevention and management for African American women remain a great challenge; therefore, it is important for well-designed, culturally sensitive programs to be developed. The prevention of hypertension and cardiovascular diseases is critical to minimize health disparities. Hence, it is necessary to target African American women who are at risk for early prevention measures. The literature has suggested that African Americans are the highest in prevalence for developing hypertension, with 44% being African American women (Barnes & Kimbro, 2012). This project could provide an effective module for culturally tailored lifestyle modification changes for African American women. The scholarly project could help to advance the nursing practice by providing a template for nurses caring for African American women because evidence-based practice is critical for quality care to patients. This project was approved by Walden University Institutional Research Board August 2014. The IRB approval number is 08-15-14-0193495.

## **Section 4: Findings, Discussion, and Implications**

The purpose of this DNP project was to develop a Toolkit of resource for African American women between the ages of 20 to 45 years to reduce the risk of developing hypertension through lifestyle modifications. The Toolkit was developed to support the seventh report of the Joint National Committee on Prevention, Evaluation, and Treatment of High Blood Pressure that cited the critical need for primary and secondary prevention strategies in African American women (Buchholz & Artinian, 2009). As a resource

Toolkit, it was developed based on current literature and findings from the practicum experience. The Toolkit was designed and developed to encourage African American women to use lifestyle modification strategies to prevent and manage hypertension.

### **Summary and Discussion**

The Toolkit was developed to provide educational information and resources to African American women to prevent and manage hypertension. The project was designed as a reference guide to address the gaps identified in care. The health promotion model guided the planning and development of the Toolkit by integrating the cultural beliefs and values of the African American women focusing on the educational materials for effective buy-in. The Toolkit was created to provide a framework and resources to prevent and manage hypertension among the target population through lifestyle modification strategies in the form of a DASH eating plan and increased physical activities. In developing the Toolkit, the objectives of the project were linked to the resources and activities to achieve the desired outcomes.

The Toolkit organized strategies into three domains of care gaps bearing in mind the objectives of the project, which was to support the critical need for lifestyle modification strategies to prevent and manage hypertension among African American women. The domains addressed in the Toolkit are hypertension as a public health burden to the individual, community, and the health care system, and reducing the burden by tackling hypertension and providing resources to the target population to help review activities. The Toolkit aimed to establish evidence-based strategies to help the target population prevent and manage hypertension. The Toolkit provided a standardized,



culturally based set of strategies that would increase lifestyle modification strategies.

According to Giger (2013), cultural beliefs may hinder full participation in activities and or events that alter health outcomes. Therefore, the cultural values and beliefs of African American women were integrated in the creation of the Toolkit. Resources provided in the Toolkit are easily accessible for the target population.

The final Toolkit included various lifestyle modification strategies to address the gaps identified in care among African American women. The Toolkit also contained educational materials on hypertension and its associated complications, taking control of your blood pressure through various lifestyle modification strategies, culturally designed programs for effective buy-in by the target population, and resources to review activities. The final Toolkit was revised based on feedback from the advisory committee members for appropriateness and relevancy. The Toolkit was created and assessed for readability to be at a fifth grade level for easy comprehension by the target population. This process is documented under the evaluation of findings.

The Lifestyle Modification Toolkit project underwent multiple revisions to make sure that the content was properly suited for the target population. Upon each revision, it was reviewed by the content experts. My practicum experience gave me an advantage to the development of the project. It provided me the opportunity to engage in activities that supported the development of the project. The opportunity was used to gather information, educational materials, and resources relevant to the Toolkit development. This also assisted in choosing the precise and most appropriate resources to complete the

DNP project. The Toolkit could help to advance the nursing practice as well as be a professional development tool for nurses in all settings, especially in the community.

As a resource Toolkit, the content was constructed to address the gaps in care as previously stated. The Toolkit consisted of educational materials and information from the literature, professional organizations/position statements as well as internet sources. The Toolkit will be published in the Journal of the National Black Nurses Association. An electronic version was linked to a URL link for easy accessibility. A Microsoft Word version of the Toolkit is placed under Appendix A and B of this document. The final Lifestyle Modification Toolkit contains the following information:

### **What About Hypertension**

High blood pressure (or hypertension) is a chronic disease characterized by an increase of blood pressure to levels above normal. Blood pressure is the force exerted by blood against artery walls. High blood pressure is very common and affects as many as 74 million Americans (AHA, 2012).

### **Two Kinds of Hypertension**

Essential hypertension (known as primary) is high blood pressure for which a specific cause is unknown. About 90 to 95% of hypertension cases fall into this category (AHA, 2012). Secondary hypertension is high blood pressure that is identified with a medical problem, such as kidney disease. If the medical problem is treated, the high blood pressure decreases.

### **Causes of Hypertension**

Exact causes of hypertension are not known, but there are some risk factors such as hereditary, race, and age. Environmental and life style factors such as salt, weight, stress, alcohol, and exercise are also risk factors.

### **How Blood Pressure is Measured**

- Systolic—the top number gives the measurement of the blood's force against blood vessel walls as the heart beats.
- Diastolic—the bottom number is the measurement of the blood's force against blood vessel walls when the heart is at rest between beats.
- What the numbers mean—a person has hypertension when either systolic or diastolic blood pressure is at or above 140/90 mmHg (Top/bottom).

### **Dangers of High Blood Pressure**

The dangers associated with hypertension are target organ damage, heart attack, heart failure, angina, brain, and kidneys.

### **How to Take Control of High Blood Pressure**

- Eat a heart healthy diet,
- Become more physically active,
- Lose weight,
- Reduce salt and sodium intake,
- Reduce alcohol intake,
- Quit smoking,
- If you are pregnant, make sure you are under a doctor's care,
- Talk with your health care professional, and

- Take medication as prescribed.

### **Culturally Competent Health Services for African American Women**

African Americans are a culturally distinct group of people bound by unity and a functional system of values and beliefs. As a highly complex and diverse people, African American behaviors and lifestyle factors make them a culturally identifiable entity. Understanding the core elements of the African American culture and tailoring programs to suit their cultural beliefs and values can improve participation in lifestyle modification strategies and buy-in.

### **Rethink the Framework**

It is essential to recognize that an individual or community dysfunction may stem from the disruption, dislocation, or corruption of core cultural structures. Therefore, it is important to enhance, strengthen, or rebuild critical cultural structures and knowledge in the individual and community. Hence, it is critical work to develop a broad understanding of the social and political contexts of the communities being served.

### **Redefine the Concept of Health**

It is important to redefine the vision of success in the African American community as well success with individual clients. Hence, it is critical to focus on strengthening or rebuilding cultural structures within the community on rebuilding cultural traditions founded on critical relationships, shared responsibilities, personal/community and a sense of joined destinies.

### **Impact of the Breakdown of Cultural and Social Immune Systems**

The challenges an African American community faces can weaken or overwhelm its immune system, making the community vulnerable to a variety of contagious or opportunistic diseases, such as hypertension. As with a biological system, the need is not to simply treat the symptoms or even the disease but to rebuild the capacity of the immune system by developing a strategy such as the Toolkit.

### **Reducing the Burden of Hypertension Through Lifestyle Modifications**

To reduce the burden of hypertension, lifestyle modification strategies in the form of a DASH eating plan and increased physical activities is critical.

#### **Lifestyle Modifications and Recommendations**

- Adopt a DASH eating plan--Consume a diet rich in fruits, vegetables, and low-fat dairy products with a reduced content of saturated and total fat.
- Dietary sodium reduction--Reduce dietary sodium intake to no more than 100mmol per day (2.4g sodium or 6g sodium chloride).
- Physical activity--Engage in regular aerobic physical activity such as brisk walking (at least 30 min. per day, 3-4 days in a week).
- Weight reduction--Maintain normal body weight (body mass index 18.5-24.9kg/m<sup>2</sup>)
- Moderation of alcohol consumption--Limit alcohol consumption to no more than 2 drinks (1oz or 30mls ethanol, e.g., 24 oz. beer, 10 oz. wine) per day.

#### **Resources to Help Review Activities**

Some of the resources that would help the target population review activities may include the following: family members, television news, books, magazines, doctors,

nurses, community programs, health centers/clinics, and food nutrition labels. Resources can also include the following internet web sites: AHA, CDC, and ISHIB.

### **Evaluation of Findings**

In this part of the document, I analyzed the extent to which the items created for evaluation are representative of the target construct and the degree to which such items represented the goal of the construct they were developed for, including their relevance and comprehension. The advisory committee members consisted of two content experts and three members from the target population who were purposely selected based on desired characteristics of the population of interest. To be eligible, the two content experts were knowledgeable and had published scientific works on the subject while the three members from the target population were African American women within the age bracket of 20 to 45 years. After being invited to participate via an email, the survey was sent to them via an electronic link provided for evaluation correspondences. They were given 2 weeks to respond to the survey and send their feedback.

All the advisory committee members who were invited to assess the items completed the task. The content experts reported on the validity, appropriateness, and relevance of the educational materials contained in the toolkit while the target population focused on appropriateness and relevance of the information presented in the toolkit. After completing the task, they returned their report to me for analysis using the CVI. Their responses indicated that they strongly agreed with Number 1, 2, 4 and 5 of the survey questions, and they also responded that Question 3 was highly relevant, indicating universal agreement to the survey questions. The revised toolkit was sent to the advisory

committee members for review, and there were no changes in their opinion on the content of the toolkit in the context of appropriateness and relevancy.

Feedback was collected on their overall opinion of the task. The CVI was calculated for the key criterion by dividing the number of advisory committee members who considered that the item corresponded to the intended goal by the total number of items provided. The universal agreement approach calculation (S-CVI/UA) method was used according to the method coined by Polit and Beck (2006). Using this method, the CVI score was calculated by adding the number of experts who responded to the survey questions ( $n = 5$ ) and divided by the number for all the items surveyed ( $n = 5$ ), resulting in a CVI score of 1.00, indicating universal agreement.

The Toolkit content was assessed for readability and determined to be at a fifth grade level using the Readability Level feature found in Microsoft Office Word as a powerful word processor from the following website: <http://office.microsoft.com/en-us/word-help/test-your-document-s-readability-HP010354286.aspx>. This process was done to ensure the readability was at a fifth grade level for the following criteria: short and easy to understand words, sentences not longer than one line, and paragraphs not longer than six lines. Based on the result of findings from the Toolkit, positive behavioral changes as well as acquisition of knowledge are indicators of the effectiveness of the educational materials from the Toolkit (Brill, 2011). Lifestyle modification remains an evidence-based strategy to prevent and manage hypertension among the target population. Therefore, a constant review of literature and updating the Toolkit is critical.

### **Discussion of Findings in Context of Literature and Framework**

In the United States, African Americans have the highest rates of hypertension with forty-four percent to being African American women (Barnes & Kimbro, 2012). Some key factors are that African Americans face socioeconomic and environmental barriers. The barriers identified are access to medical treatment, stress from living in urban environments, provider-patient relationship, cultural barriers, and lack of health insurance (Rigsby, 2011). Improving clinical outcomes will reduce human suffering as well as economic burden associated with this public health issue. Hypertension is an important modifiable risk factor for the prevention of coronary heart disease, stroke, congestive heart failure and end-stage renal disease. African American women have poor knowledge of risk awareness on this public health issue (AHA, 2010).

Health care professionals should not only seek to treat hypertension, but also educate the general public on risk factors and promote a healthy lifestyle (Thompson, Berry, & Nasir, 2009). The articles reviewed for this project studied lifestyle modification as an evidence-based strategy to prevent and manage hypertension among African American women between the ages of 20 -45 years. The studies varied in design; from randomized to non-randomized, longitudinal, cohort, and a pilot study. The studies consisted of evidence evaluating the effect of lifestyle modification using DASH eating plan and increased physical activities to prevent and manage hypertension among African American women.

These articles established that the best example of clinical evidence for improving lifestyle among the target population is increased physical activities and the DASH diet which established the importance of a heart-healthy eating plan for lowering blood



pressure strategy among African American women (Spencer, Jabonski, & Loeb, 2012). Findings from the literature revealed, among other issues limited knowledge on lifestyle modification strategies among the target population and the high prevalence of this public health issue (Rigsby, 2011). This prompted the development of the toolkit.

In designing and developing the Toolkit, the Health Promotion Model guided development of the content and information by integrating the cultural values of the African American women to refine the educational materials. This model helped to explore the cultural values and beliefs of the target population. The literature supported that the Health Promotion Model is excellent for the African American women, because it helped to explore their cultural values and beliefs in context to health promoting behaviors (Buchholz & Artinian, 2009). This model has been used previously in health promotion programs for weight management and lifestyle modification programs among the target population and has shown good success (Buchholz, & Artinian, 2009). Culture is a powerful influence of health behavior for African American women so this project was tailored to suit their cultural beliefs and values for effective buy-in (Davidson, et al., 2013).

### **Implications for Practice/Future Research/Social Change**

EBP refers to program and practices that have proven to be successful through research to enhance the care of patients. The programs help to bridge the gaps and barriers to effective health care. DNP graduates possess the skills to analyze strategies to translate research into practice. Community health can be improved through knowledge and implementation of EBP initiatives (Brownson et al. 2009). Health promotion

programs and resources such as the Lifestyle Modification Toolkit can provide a holistic approach to meeting the very diverse needs of African American women.

Implications to nursing practice will involve exacting professional maturity as a DNP prepared nurse. Expansion and evolution of knowledge is inevitable as a DNP trained nurse. It is important for DNP trained practitioners to effectively lead and serve as roles models developed through years of learning and practice. DNP practitioners must be embedded in empirical and ethical patterns of nursing practice.

Evidence-based findings are identified results from research which is applied to practice to improve outcomes. With the increasing demands to improve the lifestyle changes among African American women, developing the Toolkit was critical. The finding from this project supports the effectiveness of health promotion programs, therefore both health knowledge and health behaviors would improve. Reinforcing factors that encourage or discourage the continuance of the behavior change will be a good strategy as well as the importance of enabling factors that help or hinder behavioral change need to be identified as a strategy if the outcome does not provide positive results. Nurses should caution and educate African American women on healthy lifestyle behaviors that can help to reduce their risk for developing hypertension which may include weight reduction programs, a DASH eating plan, and reading food labels.

Nurses need to refer families to appropriate networks such as- dieticians, nutritionists, exercise therapy, and support groups. Based on results of the present studies, additional research needs to be completed to develop possible nursing interventions that can help African American women reduce their risks for developing

hypertension. In order to promote positive change in the target population and to assist nurses working in the community setting, the Lifestyle Modification Toolkit project was designed and developed as an evidence-based project using clinical skills, knowledge, and expertise to improve outcomes. The Toolkit could provide preventive measures for hypertension among African American women. The information in the Toolkit would empower and motivate the target population in making good choices about their health decisions.

The literature suggested that a powerful influence of culture on health behaviors for African American women is interventions tailored to suit their cultural beliefs and values (Davidson et al., 2013). In such programs information will be specifically designed to raise and improve healthy lifestyles. Providers also should consider expanding their level of intervention to families and communities in order to improve hypertension prevention education among African American women. The Lifestyle Modification Toolkit could provide resources to the African American women which allow them to make changes in their eating and shopping habits that would positively affect the overall health system by reducing the risk of hypertension.

### **Project Strengths/Limitations and Recommendations**

This project has both strengths and limitations. The Toolkit could be used in diverse settings by all nurses as a template for African American women. The project would advance nursing practice because nurses in clinical settings require the most current and complete evidence of effective approaches to guide their decision-making as well as practice (Zaccagnini & White, 2011). The process selected evidence-based

strategies for effectiveness, as well as real-world evidence of feasibility. As a developmental project, the literature review had a great impact on the content and information of the selected educational materials. According to Oermann and Hays (2011), a literature review is a critique and synthesis of all the current information about a particular topic.

There are three main purposes of a literature review; to describe what is already known about the subject; to identify gaps that exist in the knowledge, to determine how the proposed study or project will contribute new knowledge to nursing. A literature review is critical in an evidence-based project because it adds to the worth of the project. It is clearly stated that the literature review was the major process in the planning and development of the project. It provided the background and rationale for the evidence of what has been in the past and how the new knowledge could advance nursing practice. According to Oermann and Hays (2011) an integrative or narrative review provides a summary of empirical and theoretical literature to improve understanding of a particular topic.

Limitations do exist for an evidence-based project's characteristics and design or methodology that set parameters on the application or interpretation of its result. A limitation of the DNP project was that, it was reasonable to predict that African American women have limited knowledge of lifestyle modification strategies and providing information to them comes with barriers and challenges. Lifestyle modifications are often met with resistance, challenges, as well as barriers. Recommendations include reinforcing the need for making healthy choices and ensuring access to evidence will help

to understand the benefits of lifestyle modifications. Another recommendation would be the need for culturally sensitive programs such the Lifestyle Modification Toolkit to be developed for this population to help address the burden of hypertension. It is also very important to target African American women who are at risk for early prevention measures. A constant review of the literature and update of the Toolkit would be another recommendation.

### **Analysis of Self**

Being a DNP practitioner comes with great responsibilities and challenges. It is of great importance that the DNP practitioner knows the devastating effects of hypertension on the individual, family, community and the overall health care system. EBP by nurses is the process of arrival at clinically relevant research question, attempting to gather evidence that answer the questions. In trying to accomplish the DNP project the professional growth that came with the project cannot be quantified. It has been a great mile stone. It was a rough journey but been focused and having patience contributed to this accomplishment. The position statement from AACN (2004) stated that the current level of preparation necessary for advanced nursing practice is moving from master's degree to the doctorate level by the year 2015. With this in mind, the DNP education has prepared and positioned me to function as an APN in the health care system based on the knowledge, skills, and expertise acquired during the course of training for this degree.

According to the National League for Nursing [NLN] (2008) educator roles in nursing require preparation of leaders in higher education. DNP prepared nurse educators utilize critical thinking skills to provide care to both students and patients with

good outcomes. As a DNP prepared faculty I can bring new perspectives to my population and explore how research is applied to problems to bring better outcomes. According to Zaccagnini and White, (2011) APNs with doctoral education can practice and function at the bed sides, in the communities, as well as college boards making changes and improving care delivery in any setting. An APN is not only skilled nursing clinician but a practice leader who is able to create a significant impact on care across a wide range setting.

### **As a Scholar**

The merging of nursing leadership skills, evidence-based decision-making, and expert clinical care will ensure that nursing has a strong and credible presence in an ever changing and complex health care system. According to Rains (2010) the DNP degree accurately reflects current clinical competencies and includes preparation for the changing health care system. Scholarship is the dissemination of those findings in publications, presentations and internet offerings that can be used by others (Zaccagnini & White, 2011). Clinical scholarship is a core role of DNP trained practitioners. Scholarship should be integrated with practice, as a purposeful, systematic, and conscious endeavor because the emphasis is on inquiry, outcomes, and evidence to support practice. APNs should be well informed in order to formulate strategies or initiatives to make changes in the health care system (Zaccagnini & White, 2011).

The dynamic nature of the health care system of the 21<sup>st</sup> century requires that DNP practitioners be up to date on new information as well as be able to translate research findings in understandable ways that improve care and practice. Based on the

education, knowledge, skills and expertise that I have learned and acquired during the course of the DNP education, I am well positioned to impact changes in the health care system. An implication for practice is for the DNP practitioner to perform effectively in the role that will lead to greater proficiency in each of the advanced nursing competencies with continued professional development.

### **As Practitioner**

The DNP advance practice role creates and maintains a focus on prevention and health maintenance through health teaching centered on promoting a healthy diet, exercise, safety, stress management, and the identification and treatment of existing health problems by prompt screening for disease. The development of nursing knowledge emphasizes a holistic approach that seeks to assess, plan, implement, and evaluate programs that will provide optimum wellness to patients (Zaccagnini & White, 2011). DNP graduates have a new focus on capabilities as they reflect the need to respond and adapt to the changing health care environment. Competencies help to articulate standards of practice in more concrete ways that can direct current and future professional developmental needs.

DNP education is one of the terminal degrees in nursing that equips practitioners with these competencies. The DNP education provided me with the training, knowledge, skills and expertise required to be a change agent in the health care environment. The changing demands of this nation's complex healthcare environment require the highest level of scientific knowledge and practice expertise to assure quality patient outcomes. Therefore as a DNP trained practitioner, I am

well positioned to impact changes in the health care system. DNP-prepared nurses are well-equipped to fully implement evidence-based results generated from research to improve outcomes. Through my training I have developed needed advanced competencies for increasingly complex clinical, faculty, and leadership roles.

As a nurse faculty/educator with DNP education, I can function in any setting as a board member, policy maker, administrator, nurse leader, etc. According to Zaccagnin and White, (2011) DNP practitioners can work in any health care setting impacting positive changes. As a DNP trained practitioner the level of expectations, responsibility and accountability has changed. I will create an environment that enhances the use of translational research to solve practice problems and improve health outcomes.

Developing the Lifestyle Modification Toolkit to promote EBP initiative, based on synthesis and analysis of the most current literature relevant to the APN is core to the role of the DNP trained practitioner. I will continue to be proactive in developing EBP initiatives to improve outcomes in my practice setting.

### **As Project Developer**

As a DNP student, I wrapped up my education with the planning and development of a Lifestyle Modification Toolkit to prevent and manage hypertension among African American women between the ages of 20 to 45 years. DNP education requires one to forge their own intellectual path and wrap up their curriculum with an intense Capstone experience. The DNP student is expected to address a significant healthcare problem defined by their interest and based on their experience-in real time and in their practice setting. Being a community health nurse, nurse educator, and having lost so many family



members through hypertension and its complications contributed to my choice of developing a Lifestyle Modification Toolkit to prevent and manage hypertension among the target population. This was accomplished with the guidance and support of my committee chair, committee members, and my preceptors during my practicum experiences.

The DNP graduate was expected to evaluate, implement and translate best research evidence into practice. As part of this process, DNP graduates are expected to disseminate and integrate new knowledge, participate as members of inter-professional research teams, and conduct evidence-based research projects that lead to improvement in direct and/or indirect practice. Developing the Lifestyle Modification Toolkit was a challenging process that included multiple revisions of the proposal based on feedback from committee members. The feedback was critical to establishing the parameters of the methodology in developing the Lifestyle Modification Toolkit. This entire process required a tremendous amount of time from both the student and committee members. The process helped me to produce a scholarly product that is good for dissemination.

Writing for publication is an integral part of DNP practitioners as well as nurse leaders (Oermann & Hays, 2011). Disseminating the results of the DNP project is critical to practice change and improved outcomes. The Lifestyle Modification Toolkit has a URL link to access the toolkit online and will also be published in the Journal of the National Black Nurses Association. As an evidence-based project it is imperative that the new knowledge be shared with other nurses in the clinical setting for practice change.

Knowledge acquired from developing the Toolkit has added to my professional growth and would remain to guide me in future projects.

### **Lifestyle Modification Toolkit and Future Professional Development**

The Lifestyle Modification Toolkit was a requirement for the DNP education. The Toolkit was developed to meet this requirement. The focus was to develop a Lifestyle Modification Toolkit to prevent and manage hypertension among African American women between the ages of 20 to 45 years. The primary goal of the network was to determine which improvement strategies work as we strive to assure effective and safe patient care. To affect better patient outcomes, new knowledge must be transformed into clinically useful forms, effectively implemented across the entire care team within a systems context, and measured in terms of meaningful impact on performance and health outcomes (Stevens, 2013).

The Lifestyle Modification Toolkit was a community based project therefore it would be an excellent professional development tool for all nurses especially in the community setting. According to Stevens (2013) the IOM report (2011a) focuses on the convergence of knowledge, quality, and new functions in nursing. These competencies focus on utilizing knowledge in clinical decision-making and producing research evidence on interventions that promote uptake and use by individual and groups of providers. As an important form of knowledge, systematic reviews are characterized as the central link between research and clinical decision-making. The Lifestyle Modification Toolkit would help to advance nursing practice by acting as a template for

nurses to educate and coach this community about how to deal with hypertension through lifestyle modifications.

### **Summary and Conclusions**

The prevalence of hypertension among African American women in the United States is the highest in the world (WHO, 2012). Given the strong interest in reducing health disparities and increasing health promoting behaviors among the target population, there was a need for an evidence-based project such as the Lifestyle Modification Toolkit to be developed and implemented. The literature suggested that to examine both roles of behavioral and psychosocial factors in hypertension prevention, the adoption of new health promoting behaviors among ethnic minority women is imperative (Brill, 2012). APNs have important role to play in the health care system to help address the burden of hypertension among the African American women.

To support the above citation the Lifestyle Modification Toolkit was developed to address the public health issue and advance nursing practice. African American women have poor risk awareness on hypertension; therefore developing a culturally based Lifestyle Modification Toolkit as a resource was critical to address the public health issue (Rigsby, 2011). Culturally appropriate education regarding nutrition and physical activity is imperative as well as post intervention support and long term follow up for sustainability. The Toolkit contained evidence-based culturally relevant information for effective buy-in by the target population and will prove to produce effective results with improved outcomes.

### **Section 5: Scholarly Product**

Disseminating an evidence-based project result is an integral role of a DNP trained practitioner. According to the AACN (2006), one of the essentials of DNP education is the development of a capstone project. DNP trained practitioners engage in EBP initiative to makes changes in practice and improve care delivery. To achieve the objectives of this project, collaboration with other individuals within the profession and across other disciplines was critical because it helped to develop outcomes that were relevant and useful for the organization and system as a whole. The focus of the capstone project was to develop a Lifestyle Modification Toolkit to prevent and manage hypertension among African American women between the ages of 20 to 45 years.

### **Manuscript for Publication**

Disseminating the outcomes of an evidence-based project is important to inform the community of the value of this Toolkit and to promote a culture and practice change. The effectiveness of a nursing intervention is essential to build the knowledge base for nursing and provide new evidence for practice. According to Oermann and Hays (2011), nurse leader involvement in an evidence-based project and publication helps to advance the field of nursing significantly. This scholarly product is intended to be published in the Journal of the National Black Nurses Association (JNBNA) as well as having a link to access the Toolkit online for easy accessibility. It is required that the completed manuscript be of publishable quality. It was important to plan with my committee chair and committee members to target the appropriate journals for dissemination of the Toolkit. However, as a member of the National Black Nurses Association and a writer for the NBNA newsletter, I am well informed of the guidelines and requirements for

publication in this journal. To improve the chances of successful publication, it is imperative to have the manuscript reviewed by others.

Reviewers can be clinical experts on the topic. The manuscript may also be reviewed for clarity by someone who is not an expert in the topic. The process of peer review is an important part of scholarship and one that should be used when writing for publication. It is also critical to work with the committee to review the manuscripts, abstracts, and previous publications. The Toolkit developed in this study underwent a review process by content experts for validation. According to Zaccagnini and White, (2011), APNs with doctoral education have the core role of impacting changes to improve outcomes through dissemination of evidence-based practice initiatives.

### **Project Summary**

The development of the Lifestyle Modification Toolkit was a great achievement as a scholar, practitioner, project developer, a professional, and an author. Developing the Toolkit was very challenging and time consuming. I chose the topic based on my background as a community health nurse, mental health nurse, and a nurse educator who understands the impact and burden of hypertension among the target population. The Toolkit was developed as a resource tool to provide culturally based educational materials from scholarly literature to the target population. At the beginning of this project, it was very difficult to separate research from an evidence-based project. However, my instructor, who is also my committee chair as well as my preceptor, made it easier for me to differentiate between the two.

This project underwent multiple processes, from several revisions to approval by my committee members and oral defense of the proposal. My practicum experience made the process much easier because I was engaging in activities that helped with the development of the project. The Lifestyle Modification Toolkit was developed for African American women between the ages of 20 to 45 years because the literature suggested that African Americans develop hypertension in their late 30s (AHA, 2010). The Toolkit project could help to advance nursing practices by providing a template for nurses caring African American women in any setting because EBP is critical for quality care to patients. Since it is a community based project, nurses working in the community health setting can use the Toolkit as a framework to provide a culturally tailored intervention for African American women (Rigsby, 2011). The Toolkit would also give room for future scholarship and professional growth.

### **Program Evaluation Report**

Evaluation of any program must be initiated from the planning phase of the project. Evaluation results indicate how well the goal and objectives outlined at the beginning of the project were met. Evaluation of the Lifestyle Modification Toolkit was continuous and thorough and determined how I intended to use the results for program improvement, modification, and decision making (CDC, 2011). As a developmental project, content review by the advisory committee members was the evaluation plan. The Content Validity Index scale was used as the measurement tool.

The report from the advisory committee members provided universal agreement on the content of the Toolkit with a CVI score of 1.00. The evaluation process proved to be beneficial, relevant, and necessary to the target population.

During the process of developing the Lifestyle Modification Toolkit, multiple revisions were made for accuracy. The evaluation report for this project was based on the report from the advisory committee members, which consisted of two content experts and three members from the target population. I collected all responses from the advisory committee members electronically via a link provided to them during the evaluation process. I confirmed the content validity report provided by the five members from the advisory committee ensuring its adability. Feedback provided by the advisory committee members was analyzed, and the CVI score was calculated, which determined the adaptability of the toolkit for program improvement, modification, and decision making (CDC, 2012).

The advisory committee members validated the content of the Toolkit for the target population by responding to the survey questions. Feedback provided by the committee members suggested that the educational materials contained in the Toolkit were current and evidence-based. The advisory committee members also agreed on the relevancy of the educational materials. It is essential that information in the toolkit was current, relevant, and applicable to the target population of African American women between the ages of 20 to 45 years. Given that this population may have different degrees of difficulty in understanding and participating in lifestyle modification strategies, it was critical that information contained in the Toolkit was written in easy to

understand language with clear actionable guidance. Based on the above statement, the Toolkit was created making sure it was at a fifth grade level for easy comprehension.

### **Conclusion**

The focus of this project was to develop a Lifestyle Modification Toolkit to prevent and manage hypertension among African American women between 20 to 45 years of age. Delivering preventive care is a challenge, but many health care systems have improved in providing preventive care through EBP projects. The Toolkit provided resources to the target population to help address this public health issue. Optimal health can be attained from the individual's belief in self-actualization through behavior modification and change. Perceived self-efficacy can be attained through behavior change, and this is one of the main objectives of this project.

It is evident that the outcomes of this evidence-based project will impact changes by incorporating clinical effectiveness, patient empowerment, clear organization, and timely communication to improve lifestyle changes among the target population. This project provided a good module for culturally tailored lifestyle modification changes for African American women. The scholarly project will help to advance nursing practices by providing a template for nurses in diverse settings caring for African American women because EBP is critical for quality care to patients. The capstone project is integral to the DNP degree because the hallmark of all doctoral education is the completion of a project that both illustrate synthesis of the student's work and the foundation for future scholarship.



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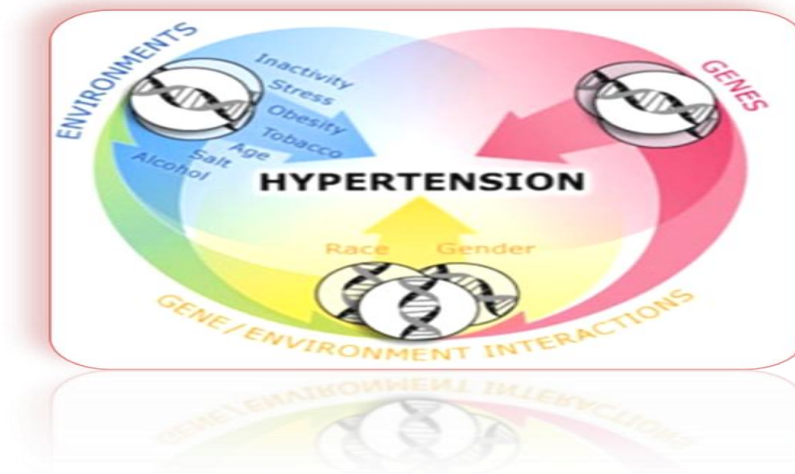
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## Appendix A: Lifestyle Modification Toolkit

### Developing a Lifestyle Modification Toolkit to Prevent and Manage Hypertension

#### Among African American Women

Julia U. Ugorji DNP, MSN/Ed, RN



The Toolkit was constructed to address the following:

- Hypertension the public health burden
- Reducing the burden by tackling the hypertension through lifestyle modifications
- Resources to review activities

### Hypertension the Public Health Burden:

#### What About Hypertension

High Blood Pressure (or hypertension) is a chronic increase of blood pressure to levels above normal; blood pressure is the force exerted by blood against artery walls. It is very common and affects as many as 74 million Americans.

### **There Are Two Kinds of Hypertension**

- Essential Hypertension (known as primary) is high blood pressure for which a specific cause is unknown. 90-95% of hypertension cases fall into this category.
- Secondary Hypertension is high blood pressure that is a symptom of an identified medical problem, such as kidney disease. If the medical problem is fixed, the high blood pressure decreases.

### **Causes of Hypertension**

Exact causes not known but there are some risk factors: Hereditary factors: race, age (Men at greater risks, African Americans more than Caucasians). Environmental and life style factors: salt, weight, stress, alcohol, lack of exercise

### **How Blood Pressure is Measured**

- Systolic – the top number gives the measurement of the blood's force against blood vessel walls as the heart beats.
  - Diastolic – the bottom number, is the measurement of the blood's force against blood vessels walls when the heart is at rest between beats
- What the numbers mean – a person has hypertension when either systolic or diastolic blood pressure is at or above 140/90 mmHg.

### **How Do You Feel With High Blood Pressure**

Hypertension has no symptoms sometimes; often called a 'Silent Killer' because its results can be deadly.

### **Dangers of High Blood Pressure**

Target Organ Damage: Heart Attack and Angina, Heart Failure, Brain, Kidneys, Eyes

### **Taking Control of Your High Blood Pressure by the Following Ways:**

Eat heart healthy diet  
Become more physically active

Lose weight  
 Reduce salt and sodium intake  
 Reduce alcohol intake  
 Quit smoking  
 If you are pregnant make sure you are under a doctor's care  
 Talk with your health care professional  
 Take medication as prescribed.

## **Principles for Culturally Competent Health Services for African American Women**

African American women are culturally distinct group of people bound in unity and a functional system of values and beliefs. As a highly complex and diverse people, African American women's behaviors and lifestyle factors make them a culturally identifiable entity. Understanding the core elements of their culture and tailoring programs to suit their cultural beliefs can improve participation in lifestyle modification strategies and effective buy-in.

### **Rethink the Framework**

It is essential to recognize that an individual or community dysfunction may stem from the disruption, dislocation, or corruption of core cultural structures. Therefore, it is important to enhance, strengthen, or rebuild critical cultural structures and knowledge in the individual and community. Hence, it is critical work to develop a broad understanding of the social and political contexts of the communities being served.

### **Redefine the Concept of Health**

It is important to redefine the vision of success in the African American community as well success with individual clients. Hence, it is critical to focus on strengthening or rebuilding cultural structures within the community on rebuilding cultural traditions founded on critical relationships, shared responsibilities, personal/community and a sense of joined destinies.

**Reducing the Burden by Tackling Hypertension Through:**

### Lifestyle Modifications to Prevent and Manage Hypertension

Modifications	Recommendation	Approximate SBP reduction range
Adopt DASH eating plan	Consume a diet rich in fruits, vegetables, and low-fat dairy products with a reduced content of saturated and total fat	8-14mmHg
Dietary sodium reduction	Reduce dietary sodium intake to no more than 100mmol per day (2.4g sodium or 6g sodium chloride).	2-8mmHg
Physical activity	Engage in regular aerobic physical activity such as brisk walking (at least 30min per day, 3-4 days in a week)	4-9mmHg
Weight reduction	Maintain normal body weight (body mass index 18.5-24.9kg/m <sup>2</sup> )	5-20mmHg
Moderation of alcohol consumption	Limit alcohol consumption to no more than 2 drinks (1oz or 30mls ethanol, e.g., 24 oz. beer, 10 oz. wine) per day.	2-4mmHg

### Resources: Relevant Publications, Organizations, Toolset and Online Resources to Help Review Activities.

Family members  
 Television news  
 Books  
 Magazines  
 Doctors / Nurses  
 Community programs / Health centers and clinics  
 Food nutrition labels  
 Internet through the following web sites:

American Heart Association web site  
 Center for Disease Control and Prevention web site  
 International Society on Hypertension in Blacks (ISHIB) web site



## What Is High Blood Pressure?

Another name for high blood pressure (HBP) is hypertension (hi-per-TEN-shun).

High blood pressure means the pressure in your arteries is elevated. Blood pressure is the force of blood pushing against blood vessel walls. It's written as two numbers, such as 112/78 mm Hg. The top, systolic, number is the pressure when the heart beats. The bottom, diastolic, number is the pressure when the heart rests between beats. Normal blood pressure is below 120/80 mm Hg. If you're an adult and your systolic pressure is 120 to 139, or your diastolic pressure is 80 to 89 (or both), then you have "prehypertension." High blood pressure is a pressure of 140 systolic or higher and/or 90 diastolic or higher that stays high over time.

No one knows exactly what causes most cases of high blood pressure. It usually can't be cured, but it can be controlled. High blood pressure usually has no symptoms. It is truly a "Silent Killer."

About 72 million Americans and 1 in 3 adults have it, and many don't even know they have it. Not treating high blood pressure is dangerous. High blood pressure increases the risk of heart attack and stroke. You can live a healthier life if you treat and control it!



High blood pressure usually doesn't have any signs — that's why it's so dangerous. Make sure you get it checked regularly and treat it the way your doctor advises.

### Who is at higher risk?

- People with close blood relatives who have HBP
- African Americans
- People over age 35
- Overweight people
- People who aren't physically active
- People who consume too much salt
- People who drink too much alcohol
- People with diabetes, gout or kidney disease
- Pregnant women
- Women who take birth control pills, who are overweight, had HBP during pregnancy, have a family history of HBP or have mild kidney disease

## Appendix B: Lifestyle Modifications

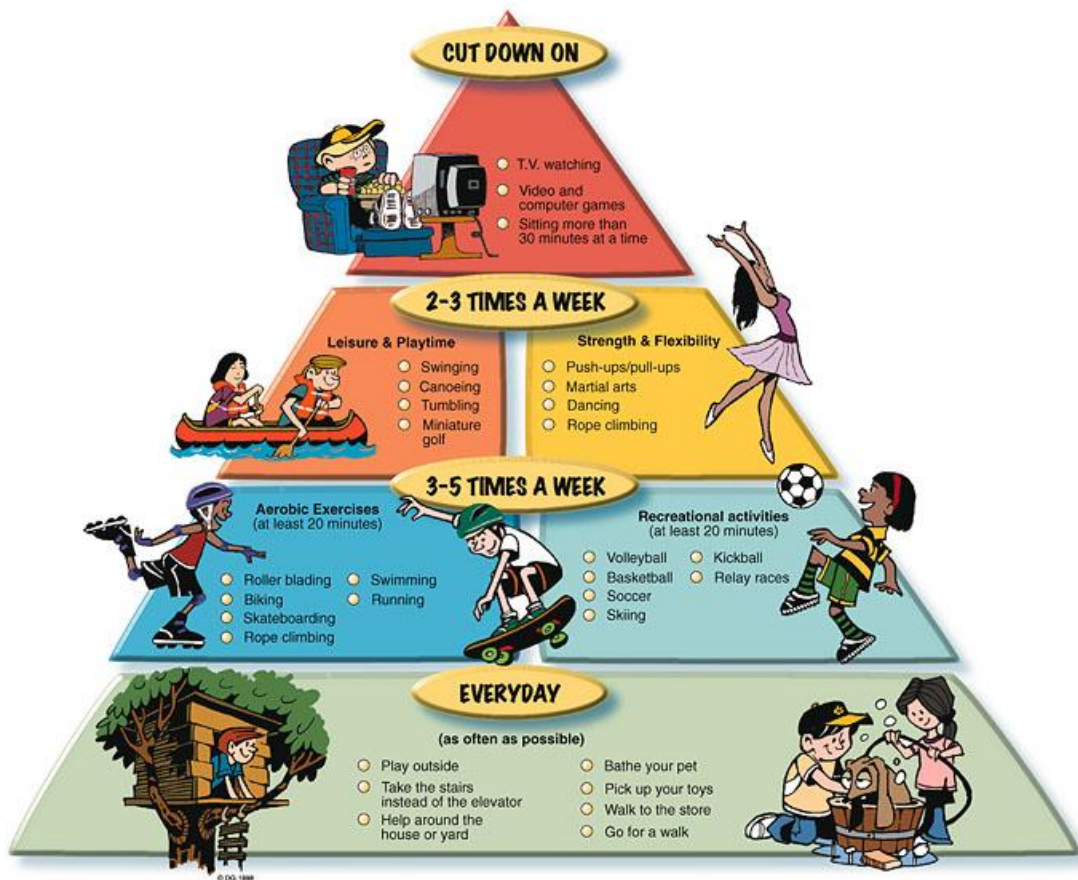


**Foods Emphasized  
in the DASH  
Eating Plan**

- ✓ **LOW-FAT or FAT-FREE MILK, yogurt or reduced-fat cheese**
- ✓ **FRUITS**
- ✓ **VEGETABLES**
- ✓ **WHOLE GRAINS**



# Physical Activities





## Appendix C: Survey Questions

## Toolkit Content Review Survey Questions Retrieved From the CDC Website

1. How easy is the web-based toolkit to navigate?

- 1  Not Easy
- 2  Somewhat Easy
- 3  Quiet Easy
- 4  Very Easy

2. How interesting did you find the content of the toolkit?

- 1  Not Interesting
- 2  Somewhat Interesting
- 3  Quiet Interesting
- 4  Highly Interesting

3. How relevant did you find the information in the toolkit?

- 1  Not Relevant
- 2  Somewhat Relevant
- 3  Quiet Relevant
- 4  Highly Relevant

4. How appropriate is the information for African American women between the ages of 20-45 years?

- 1  Not Appropriate
- 2  Somewhat Appropriate
- 3  Quiet Appropriate
- 4  Highly Appropriate

5. How current is the information contained in the toolkit?

- 1  Is not current
- 2  Somewhat Current
- 3  Quiet Current
- 4  Highly Current

## Curriculum Vitae

Julia U. Ugorji DNP, MSN/Ed, RN

**Education:**

- 2012-2014            Doctor of Nursing Practice (DNP)  
Walden University Minneapolis, MN  
Major area of study: Nursing Education /Leadership
- 2010-2012            Master of Science in Nursing (MSN)  
Grand Canyon University, Phoenix, Arizona  
Major area of study: Nursing Education
- 2009-2010            Graduate Studies  
Catholic University of America, Washington, DC  
Major area of study: Public Health Nursing
- 2006-2008            Bachelor of Science in Nursing (BSN)  
University of the District of Columbia  
Major- Nursing
- 1998-2000            Bachelor of Science (BS)  
Imo-State University, Nigeria  
Major- Management
- 1997-1998            Diploma in Midwifery  
School of Midwifery Aboh-Mbaise,  
General Hospital, Imo-State, Nigeria
- 1992-1995            Diploma in Nursing  
School of Nursing  
Holy Rosary Hospital Emekuku  
Owerri, Imo-State, Nigeria

**Work Experience:**

- ❖ Adjunct Professor; Clinical Faculty Instructor BSN Program (2013-Present)

Howard University  
Washington, DC

- ❖ Adjunct Professor; Clinical Faculty Instructor AA Program (2013-Present)  
University of the District of Columbia Community College  
Washington, DC
- ❖ Adjunct Professor; Clinical Faculty Instructor BSN Program (Summer, 2014)  
Catholic University of America  
Washington, DC
- ❖ Psychiatric Clinical Nurse Specialist (2008-Present)  
Walter Reed National Military Medical Center  
Bethesda, MD
- ❖ House Manager (2008-2013)  
Carroll Manor Nursing and Rehabilitation Center  
Providence Hospital, Washington, DC
- ❖ Psychiatric Nurse (2004-2008)  
St. Elizabeth Psychiatric Hospital  
Washington, DC
- ❖ Staff Nurse Float Pool (2004-2006)  
KBC Nursing Agency  
Washington, DC
- ❖ Nurse Manager (1989-2000) (56 Bed Capacity)  
Ikenegbu Hospital Owerri  
Imo-State, Nigeria

**Teaching Experience:**

***Didactic Undergraduate Courses Taught:***

- ❖ NRS-434V Health Assessment (Spring 2012, Online @ GCU)

***Undergraduate Clinical Courses Taught:***

- ❖ NURS-230C Mental Health Nursing (Fall, 2013 to present)
- ❖ NURS-436 Community Health Nursing (Spring, 2014)
- ❖ NURS-421 Mental Health Nursing (Summer, 2014)
- ❖ NURS-421 Mental Health Nursing (Fall, 2013 to present)
- ❖ **Awards:**
- ❖ Nominated as the best 100 nurses in DC, MD, VA, 2011, by STII Howard University
- ❖ Scholarship Award by National Black Nurses Association, 2010
- ❖ Scholarship Award by Black Nurses Association of Greater Washington DC Area, 2010

**Current Committee Appointments:**

Vice President- National Association of Nigerian Nurses in North America

Founder and President- National Association of Nigerian Nurses in North America; DC, Mary Land, and Virginia- Chapter

Chair Scholarship Committee-Black Nurses Association of Greater Washington DC Area

**Professional Memberships:**

American Nurses Association (ANA)

American Psychiatric Nurses Association (APNA)

Association of Nurses in AIDS Care (ANAC)

District of Columbia Nurses Association (DCNA)

Golden Key International Honor Society (GK)

Metropolitan Washington Public Health Association (MWPHA)

National Association of Nigerian Nurses in North America (NANNNA)

National Black Nurses Association (NBNA)

National League of Nursing DC/MD (NLN)  
Sigma Theta Tau International (STII)

**Professional Licenses and Certifications**

Registered Nurse, District of Columbia, Valid to June 30, 2016

Registered Nurse, Mary Land Board of Nursing, Valid to March 8, 2015

Certified in CPR- (AHA) Valid to June 2015

Certified HIV/AIDS Counseling by National Minority Aids Education & Training Center, 2012

Case Management/Delegating Nurse Certification; Mary Land BON (2007)

Intravenous Veni-puncture Certification by Nursing Spectrum (2006)

**TECHNICAL SKILLS**: Microsoft Word, Access, Excel, PowerPoint, Publisher, various patient care hospital-based systems.

**An Author to the Following Articles**

The Changing Healthcare Environment: Application of Technology in Nursing and Patient Education. Published in the National Black Nurses Association Newsletter (2012)

Migration of Health Professionals from Nigeria to developed countries. Published in the National Association of Nigerian Nurses in North America Newsletter (2013)

Engaging the Faith Community to Address Mental Health Disparities: Home and abroad. Published in the National Association of Nigerian Nurses in North America Newsletter (2012)

Health Challenges Among Active Military Females. Published in the National Black Nurses Association Newsletter (2014)

The Value of Mentorship Within Nursing Organizations: Skills and Professional Development for NBNA Members. Published in the National Black Nurses Association Newsletter (2014).

**A Peer Reviewer**: Journal of the Association of Nurses in AIDS Care (JANAC)

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