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Nutritional Education Program Using the DASH Diet for African Americans

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Walden University

College of Health Sciences

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Angela Williams

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Dr. Janice Long, Committee Member, Nursing Faculty
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Chief Academic Officer
Eric Riedel, Ph.D.

Walden University
2019

Abstract

Nutritional Education Program Using the DASH Diet for African Americans

by

Angela B. Williams

MSN, Hampton University, 2008

BSN, Winston-Salem State University, 1992

Project Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Nursing Practice

Walden University

May 2019

Abstract

Hypertension (HTN) is a serious yet common condition that can be prevented or controlled. Complications of uncontrolled HTN can lead to cardiac failure, renal disease, and stroke. In the United States, HTN is greater among African Americans than any other ethnic group and is prevalent in the community in which this project was conducted. To address the problem of HTN and its effect on members of the African American (AA) population in the site community, a program of HTN self-management emphasizing patient education and healthy behaviors for the AA community was developed. The purpose of this project was to search the literature for evidence to support a plan to improve HTN among AA participants and to develop an education program for AAs who attended a community health center. The Dietary Approaches to Stop HTN (DASH) diet was identified as the diet of choice for preventing and managing HTN and was incorporated into the plan for the program using the logic model as a framework. A project team made up of a wellness coordinator, 2 fitness staff, a nutritionist, and the program director at the community center evaluated the program. The program included a plan for screening, education, and follow-up evaluation. After multiple sessions of review, the program was unanimously approved by the project team. The final program included 6 weekly educational sessions with a nutritionist and fitness staff working with the participants individually. The project may support positive social change as a program of HTN self-management and control for AAs in a community setting.

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Dedication

This DNP Project is dedicated in the memory my mother late Doris Ann Butler and to my father Rev. Frank R. Butler, Sr. I would like to thank them for instilling in me the importance of education and the value of working hard to be successful in life.

Acknowledgments

I would like to first, thank The God Almighty for establishing me to complete this Capstone Project. I am grateful for the opportunity. I would like to acknowledge my husband, and children for all their support and understanding.

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Section 1: Overview of the Evidence-Based Project

Introduction

Hypertension (HTN), or high blood pressure, is a chronic health disease which places individuals at risk for coronary artery disease (CAD), chronic renal failure (CRF) and stroke. Nearly one out of every three adults in America has high blood pressure (Merai et al., 2016). HTN does not discriminate; it affects all ages, races, males and females. The overall prevalence of HTN among the United States adults aged 18 and over was 29.1% in 2011–2012 and was similar among men (29.7%) and women (28.5%) (Centers for Disease Control and Prevention [CDC], 2012). Patients with HTN may have no clinical symptoms until organ damage begins, giving the disease its reputation as a silent killer (CDC, 2012). The primary management for HTN is frequently contingent on the stage of HTN, which is determined by the systolic and diastolic blood pressure (Merai et.al., 2016). Additionally, almost 30% of adults with uncontrolled HTN who are cognizant of their HTN and pharmacologically treated have Stage 2 HTN systolic blood pressure (SBP) ≥160 mmHg or diastolic blood pressure (DBP) ≥100 mmHg. These patients have significantly elevated blood pressure and are at great danger for adverse cardiac events (Centers for Disease Control and Prevention[CDC], 2013a). The prevalence of HTN among blacks in the United States is among the highest in the world (American Heart Association, 2015). African Americans, unlike other ethnic groups, are more likely to have chronic health disease because of their high blood pressure (Centers for Disease Control and Prevention [CDC], 2014).

What individuals eat can affect their chances of developing high blood pressure. High blood pressure can be prevented and lowered by following the Dietary Approaches to Stop HTN (DASH) eating plan, which focuses on fruits, vegetables, whole grains, and other foods that are healthy and low in salt and sodium (CDC, 2013b). The DASH diet requires no special foods and includes easy-to-follow recipes (CDC, 2013b). African Americans are often unaware of the benefit DASH could bring to their health (CDC, 2014). Education specifically aimed toward the African American population could assist individuals diagnosed or at risk for HTN and contribute to positive social change.

Background

To control HTN among African Americans, community-based clinicians can add their efforts to those of primary care providers. Evidence-based practice recommendations set the foundation for providers on how to address the care of patients with HTN. When patients' blood pressures are properly managed the incidence of renal failure, CAD, and stroke is lower (Merai et.al., 2016). High blood pressure is not challenging to diagnose and can be vastly preventable through lifestyle and dietary interventions (CDC, 2012). While HTN management is challenging for patients and their healthcare providers, due to the silent nature of the disease, even modest elevations in blood pressure increase the risk for cardiovascular disease and mortality (CDC, 2013).

African Americans have the highest prevalence of high blood pressure among the minority populations, which places them at risk for stroke, coronary disease, chronic kidney disease, even kidney failure (CDC, 2014). In the United States, 35% of African Americans have HTN which contributes to 20% of deaths, which is double the

percentage of deaths among Caucasians from HTN (CDC, 2014). Efforts to assist patients with dietary modification are often delivered through health care settings, where they have been successful in the reduction of health risk factors among African Americans (CDC, 2012). Similar programs may be applied successfully in community settings to reduce the incidence of hypertensive disease in the African American, which can have a positive effect on lowering blood pressure and decreasing healthcare expense.

Problem Statement

African Americans have the highest prevalence of high blood pressure, which places them at proliferation of stroke, coronary artery disease, and chronic kidney disease and failure (American Heart Association, 2015). Improved HTN control among minorities will require an expanded effort and an increased focus on HTN from health-care providers, clinicians, and individuals (CDC, 2012). The DASH plan has been recognized as the diet of choice for preventing and managing HTN (CDC,2013). The need to address this was vital because HTN is a progressive health problem among the African American community contributing to complications leading to morbidity and mortality (CDC,2013).

The site for this project was a community health center located in a predominately African American neighborhood. The health center plays a central role in the neighborhood and residents make regular use of the center's resources and programs, which make valuable contributions to this community's culture of health. Many of the residents are known to have HTN, with varying degrees of management and treatment

provided by their chosen health care providers. Given the symptomless nature of the disease, recognition and treatment is often delayed, which places these residents at increased risk for complications associated with HTN. While diet and lifestyle changes can decrease the associated risk factors and significantly improve blood pressure, the members of this African American community remained unaware of the DASH diet, its effectiveness for the management of HTN, or strategies to adapt the diet for their individual situational needs. Involving community-based resources already available to this population can add to the expanded effort needed to improve these patient's ability to successfully manage their HTN.

Purpose Statement

The purpose of this project was to plan a community based nutritional education program on the DASH diet for African Americans with HTN. There was a need for a nutritional program to be developed in community health centers to address this gap in knowledge and understanding regarding DASH and HTN in the African American community. The community center was the setting for the project as a strategy to address diet and life style changes. There are two other community health centers which are branches of this center. Several African Americans attend these community centers and there are several African Americans who are members of the community centers have HTN. In order to close the gap, the need for a nutritional education plan as identified for the African Americans who attend the community centers was addressed.

Goal and Outcome Objectives

To reduce the incidence of associated risk factors and improve blood pressure among African Americans, the goal of this project is to reduce HTN in the African American population in the community center. By the conclusion of the project, a nutritional educational plan was developed. A plan for implementation and evaluation was developed which will be conducted after graduation from Walden University.

Framework

The logic model is an evaluation model. The logic model runs from the visionary (goals) to the ordinary (activities), when the unexpected arises it can be evaluated on how closely it addresses goals and outcomes and can be tied to that goal or outcome when reporting (Hamasu & Kelly, 2017). The logic model aligns and supports the goals and objectives of this project. The model supported the HTN education plan, by improving blood pressure control using the DASH diet approach among ethnic minorities. The logic model allowed a planner to see the rational flow of addressing the problem and applying a process while maintaining a focus on the purpose of the entire effort, effecting positive changes in the lives of clients and reducing the size and scope of a problem in a community. (Kettner, Moroney, & Martin, 2014). This model was a visual way to present and share understanding of the relationships among the resources to operate the program, and the strategic outputs/outcomes hope to achieve . A finished logic model can be also be useful to explain the capstone project design and objectives to staff, partners, funders, and decision makers. This was a framework which can be used to develop an evaluation plan and provide feedback mechanisms for project leadership.

Nature of the Project

The purpose of this project was to plan a community based nutritional education program on the DASH diet for African Americans with HTN. An initial draft of the education program was developed based on a literature review of HTN and management strategies including the DASH diet. This initial draft was presented to a team of expert leaders from the community health center, including the director, fitness staff, and nutritionists. The team provided feedback regarding content, method of delivery, and individualizations for the community center's African American population. Plans for implementation and evaluation of the education was developed during the team discussions.

Definition of Terms

African American: The Black or African American population includes people, who marked their race as "Black or African American" or reported entries such as African American (CDC, 2013a).

Dietary Approach to Stop HTN (DASH) diet: The DASH eating plan focuses on fruits, vegetables, whole grains, foods that are fat-free or low-fat dairy products, fish, poultry, nuts, cholesterol, and sodium (salt). DASH also focuses on reduced red meats (including lean red meats), sweets, added sugars, and sugar-containing beverages. The diet is rich in nutrients, protein, and fiber (Centers for Disease Control and Prevention [CDC], 2013b).

High blood pressure or HTN: Blood pressure of 140 mm Hg or above or diastolic blood pressure of 90 mm Hg or above most of the time or currently taking medication to lower blood pressure (CDC, 2013a).

Stage 1 HTN: Systolic 140 - 159 mmHg, OR diastolic 90 - 99 mmHg (CDC, 2013).

Stage 2 HTN: Systolic greater than 159 mmHg, OR diastolic greater than 99 mmHg (CDC, 2013a).

Uncontrolled HTN: An average SBP ≥140 mmHg or an average DBP ≥90 mmHg, among those with HTN (CDC, 2013a).

Assumptions

Assumptions are statements that are taken for granted or are considered true, even though they have not been yet proven (Burns & Grove, 2008). The assumption was that with the implementation of this project African Americans with HTN will want to assume better control of their HTN, make better dietary lifestyle changes, and increase knowledge about their chronic health problem. Another assumption was that clinical providers and healthcare professionals would make HTN management through dietary changes a priority in their clinical settings

Scope and Delimitations

HTN is a vital modifiable risk factor and, in the United States, as the population ages high blood pressure will convert into an even greater problem. This education program differs from a generic program. This program was developed with the needs of a

specific group of African American people in mind in a community setting. The community based nutritional education program on the DASH diet for African Americans with HTN could be delivered at other community centers serving similar community populations, or other facilities in African American communities such as churches. Nurses who have developed faith-based practices could assist. More importantly, the nutritional educational program on the DASH diet has tremendous potential to improve the health of many African Americans in a community setting.

Limitations

One limitation of this project may be resistance to change among the participants during the implementation of the DASH diet. It was important for the planning team to discuss the potential for resistance and incorporate motivational components into the educational program. Another limitation was the possibility of literacy and language barriers among the participants, which made it important to include visual learning tools in the educational materials.

Health professionals involved in patient education must always be aware that the high value they place on behavioral change may be a source of bias. Not all patients will perceive the need for behavioral change with that same urgency, making it important to avoid making any assumptions about individual participants. Education that is developed with no specific target audience can inadvertently contain many biases against African Americans. This program incorporated the view of African Americans from the very beginning, to tailor the education for this community.

Significance in Nursing practice

HTN awareness among adults, meaning ages 18 years and above, remains a challenge today. HTN is a leading risk factor for cardiovascular disease, a major cause of morbidity and mortality, and costs $131 billion annually in health-care expenditures (CDC, 2013). Because the risk for cardiovascular disease mortality increases as blood pressure increases, clinical recommendations for persons with Stage 2 HTN include a more extensive treatment and follow-up regime than for those with Stage 1 HTN (CDC, 2013). Although racial and ethnic inequalities in the occurrence of HTN have been well documented, there is still room for improvement with ethnic disparities in the awareness, treatment, and control within blood pressure. Health promotion for this chronic disease is vital. The findings from this project can be used to target the minority population and improve interventions to increase HTN control. Improved HTN control determination necessitates an extended determination from patients and healthcare providers. The professional nurse's clinical decision making should be based on the current best evidence available with clinical expertise and patient values (Clutter, 2009). Translation and implementation of science is the investigation of methods, interventions, and variables that influence adoption of evidence-based practices (EBPs) by individuals and organizations to improve nursing clinical and operational decision-making in health care (White & Dudley-Brown, 2012). Although EBP guidelines are not practiced by all providers, the effects of implementing evidence-based practice by healthcare providers have shown to improve the quality of patient care. Evidence based practice has been a

priority with other clinical disciplines that make up the interdisciplinary team of caregivers at the point of care delivery (Ball, Douglas, & Walker, 2011).

Improving the treatment of HTN requires an understanding of the ways in which physicians manage this condition and a means of assessing the efficacy of this care (Berlowitz et al., 1998). Increase awareness and education to patients with HTN could better manage their high blood pressure and improve their overall quality of life. Clinicians, practitioners, health care providers, and individuals can focus on disease management strategies to improve blood pressure control in order to improve health outcomes for patients with HTN (CDC, 2014). For patients, understanding basic treatment is crucial for patients in order to be able to better control their HTN.

Policy

According to Berlowitz et al. (1998), few physicians are aggressive enough in their approach to HTN. A 2-year study was conducted in older men with poorly controlled blood pressures, meaning 160/90mmHg or greater (Berlowitz et al., 1998). Men who received intense medical treatment blood pressures were better controlled and declined by 6 mmHg. The men with least intensive treatment blood pressure increased by 4.8 mmHg. Evaluating the treatment of patients with HTN by primary care providers with medication is a way to improve and reduce the number of deaths and HTN-related diseases (Berlowitz et al., 1998). The DASH diet is recognized as the diet of choice for preventing and managing high blood pressure, is rich in fruits, vegetables, and low fat dairy products, and is low in fats and cholesterol (Horowitz, Tuzzio, Rojas, Monteith, &

Sisk, 2004). One documented guideline is the Eighth Joint National Committee (JNC 8). This report takes a rigorous, evidence-based approach to recommend treatment thresholds, goals, and medications in the management of HTN in adults (James et al., 2014). According to Staffileno et al. (2013), randomized trials have demonstrated the effectiveness of the DASH program for lowering blood pressure. As a DNP, my role is to use my knowledge and assistance to implement strategies to promote and improve the quality of health among the population with high blood pressure. Evidence-based practice is believed to pertain most closely to empirical knowing, focusing on critical appraisal and application of available data and research in order to understand the process of clinical decision making more fully (Terry, 2011).

Social Change

A project educational plan for African Americans with HTN will result in increased awareness and nutritional education. The intent of this project was to better manage their high blood pressure and improve overall quality of life. A report documented during 2005–2008, indicated nearly one third of U.S. adults with HTN had it under control (CDC, 2013a). Uncontrolled HTN among adults with HTN is associated with increased mortality. Adequate HTN treatment and control can reduce the incidence of first and recurrent heart attacks and strokes, heart failure, and chronic kidney disease, and can save lives (CDC, 2012). Positive implications for social change is vital to prevent complications such CAD, chronic kidney disease (CKD), renal failure, stroke, death, and to contest high healthcare expenses managing hypertensive disease in African Americans.

Summary

HTN is more common and more severe among African Americans, than other population groups in the United States (American Heart Association, 2015). This places them at an increased risk of cardiovascular disease, stroke, and end-stage renal disease (Russer & McCarron, 2006). HTN is a chronic health problem which affects many American lives daily. HTN, the most common condition seen in primary care and leads to myocardial infarction, stroke, renal failure, and death if not detected early and treated appropriately (American Heart Association, 2015). People in the United States self-awareness and control of their HTN remain poor. The DASH diet is an effective strategy to prevent and lower HTN through nutrition. The purpose of this project was to plan a community based nutritional education program on the DASH diet for African Americans with HTN. The goal of this project is to reduce HTN among African American participants at the community health center serving as the site for this project. Section 2 will describe the review of literature regarding this project and the local context at the project site.

Section 2: Review of Scholarly Evidence

Introduction

African Americans have the highest prevalence of high blood pressure, which places them at proliferation of stroke, CAD and CKD and heart failure (CDC, 2013a). Compelling literature has showed HTN or high blood pressure occurrence is the highest among African American population. The DASH eating plan features plenty of fruits, vegetables, whole grains, and other foods that are heart healthy and lower in salt/sodium (CDC, 2013b). The purpose of this project was to plan an education evaluation plan of DASH diet in African Americans with HTN. The effectiveness of the DASH diet plan for lowering blood pressure has been demonstrated consistently. However, program participation has been limitated in some populations (CDC, 2013). This section of the DNP project will present both specific and general literature review related to African Americans with HTN and the DASH diet plan approach, and the conceptual model which supports this capstone project.

Literature Search Strategy

In this specific literature review, electronic searches of NIHCDC, PubMed, ProQuest, Medline, Cochrane Library, EBCOS Host, Cumulative Index to Nursing and Allied Health Literature (CINAHL), and Ovid Plus were conducted to identify studies of minorities with HTN and of the DASH diet with HTN population throughout the world. The searches were limited to studies reported in English from 2003 to 2017. The keywords were *ethnic minorities, African Americans, HTN,* and *Dietary Approach to Stop HTN (DASH) diet*. The articles selected specifically directed towards prevention of

risk factors associated with high blood pressure, adherence, treatment for HTN, and education through modification of lifestyle changes.

HTN and African Americans

High blood pressure is a severe problem in the United States. Uncontrolled HTN and its complications continue to be major health problems that disproportionately affect minority communities (CDC, 2013a). In the United States, HTN is higher in African Americans, increases with age in men and in women, and after age 60 affects approximately 50% to 80% of adult (Champagbe, 2006). The occurrence of HTN has amplified by nearly ten percentage points over the last decade. HTN is a leading cause of cardiac, vascular disease (CVD) and affects almost one-third of U.S adults (CDC, 2012). When HTN has no known cause, it is called primary HTN. When an underlying condition, such as kidney disease, causes the HTN, it is called secondary HTN (CDC, 2013). African American tend to develop HTN at an earlier age, and target organ damage differs from that in white people. (Brown, 2006). Most studies in the United Kingdom and United States report a higher prevalence and lower awareness of HTN in blacks than in whites (Brown, 2006).

Dietary Modification

One key fact about the DASH studies was it is made up of regular foods that are accessible at grocery stores. This diet does require an increase intake serving of fruit, vegetables, and whole grains, 15 to 18 per day, although each serving is typically either a half-cup of cooked vegetables or grain or a whole cup of raw leafy vegetables (Harvard

Men's Health Watch, 2013). The DASH diet plan reduces amount of sodium consumed which lowers blood pressure (CDC, 2013b). The daily recommendations for sodium intake are 2,300 milligrams (mg) a day or less. Adhering to the DASH diet can lower one blood pressure up to 14mm Hg. (CDC, 2013a). The recommended daily intake of salt is no more than 6g (one teaspoon) per day, however many people are unaware they may be consuming 9g of salt or more per day as a result of the high quantity in processed food, including ready-meals and takeaways (CDC, 2011). Champagbe (2006) conducted a randomized controlled trial (RCT) that examined dietary interventions in blood pressure; the study was known as the DASH trials (Champagbe, 2006). The DASH diet trial consisted of 459 randomized participants, 49% women and 51% men, minorities 66% (60% African Americans). The average age of participants in the study was 45 years, most subjects were overweight. The average BMI for women was 28.7 and the average BMI for men was 27.7. Blood pressure measurements were slightly elevated, mean systolic BP of 132 mmHg/mean diastolic BP of 85 mmHg. Approximately 29% of the population in the study were hypertensive. The DASH diets were given for 8 weeks, DASH participants were fed a controlled diet for 3 weeks in a run-in period and then were randomized to one of three conditions: (a) the control or average American diet, (b)) a fruit and vegetable diet, or (c)) a combination diet, known as the DASH diet. Nutrient targets for the DASH trial were designed to distinguish the three dietary regimens (Champagbe, 2006). This study showed a significant decrease in systolic blood pressure and no effect in diastolic blood pressure with just the fruit and vegetable diet, however

both systolic and diastolic pressures decreased significantly in the DASH diet. Blood pressure measurements in both genders and ethnicity showed equal results using the DASH diet plan. Minorities' blood pressure droped significantly, lowering both diastolic and systolic blood pressures than non-minority measurements. Given the bendits obtained in the DASH diet the model was an excellent option for use in the current community project focused on planning education to reduce hypertension among the African American population in a community setting.

The DASH diet is widely promoted in the USA for the prevention and treatment of high blood pressure (Harnden, Frayn, & Hodson, 2010), however it has also been conducted in other countries such as the United Kingdom. Harnden et al. (2010) showed the DASH diet applicability and adequacy to a UK population. In this RCT fourteen healthy subjects followed the adapted DASH diet for 30 days in which they self-selected all food and beverages, dietary intake was assessed by 5-day food diaries completed before and towards the end of the study. Blood pressures were measured at the start and end of the study to evaluate compliance to the DASH style diet. The DASH diet was simply modified to fit with the UK food preferences. The volunteers had to be healthy, between the ages 25–60 years with a body mass index (BMI) 20–40 kg, no diabetes, no hyperlipidemia requiring treatment. However, this study also involved Caucasians. The study showed that participants on the DASH diet plan consumed significantly more carbohydrate and protein, less total fat, sodium intakes decreased by 860 mg day and

diastolic blood pressure decreased significantly by 4.6 and 3.9 mmHg. This study further confirms the benefit of the DASH diet to large groups of individuals.

In 2012, scientists from the CDC analyzed data from the (2003-2010) National Health and Nutrition Examination Survey to determine if racial-ethnic disparities in awareness, treatment, and control of high blood pressure by HTN stages was present. The results indicated that the proportion of Mexican-Americans and Blacks with Stage 1 and Stage 2 HTN was greater than Whites. Among those with Stage 1 HTN, treatment and medication was significantly lower for Mexican-Americans compared with their non-Hispanic counterparts (CDC, 2012). In 2006, Ruesser and McCarron published a study focused on DASH diet and CVD. The results showed the DASH trials and confirmed positive direct relationship between diet quality and BP management, and CVD risk. Adoption of a nutrient-rich dietary pattern is associated with no side effects, can be practiced at reasonable cost and minimal complexity, and can effectively improve multiple medical conditions within a short time period and be sustained indefinitely (Russer & McCarron, 2006).

In a study by Horowitz et al. (2004), the influence of diet on HTN was examined among urban African Americans and Latinos. The study was conducted using nine focus groups with 88 African American and Latino patients treated for HTN to assess their knowledge, attitudes, behaviors, and beliefs concerning HTN. The results indicated that clinicians recommended diets were too difficult to follow in the context of their family lives, social situations, and cultures (Horowitz et al., 2006). Recommendations from the

study included making the DASH diet more culturally focused. The study results were used in designing the education program for use in the committee settings.

The Logic Model

The logic model can be a valuable tool in a methodical evaluation process. The Logic model over time has been applied to intricate programs to help improve both community and health outcomes. The Logic Model has several benefits which is why it was chosen to guide this DNP project. As an evaluation, the model aligns, guides and supports the goals and objectives of the DNP project. The model was most appropriate to support the HTN education plan, by improving blood pressure control using the DASH diet approach among ethnic minorities. The Logic Model, allowed the planner and team to see the rational flow of addressing the problem and applying a process while maintaining a focus on the purpose of the entire effort, effecting positive changes in the lives of clients and reducing the size and scope of a problem in a community. (Kettner et al., 2013). This model was a visual way to present and share understanding of the relationships among the resources to operate the program, and the strategic outputs/outcomes hope to achieve . The Logic Model was not only useful for the team but also was a way to explain the capstone project design and objectives to staff, partners, funders and decision-makers. This framework model can be used to develop an evaluation plan and provide feedback mechanisms for project leadership.

Local Background and Context

The community center is 18 years old, serves approx 4,000 people, which are primarily African Americans. The center is a division of City Parks and Recreation. The

center's mission is to provide and sustain resilient and supportable recreational services to build a system for the present and future generations and to provide the community with programming intended to enrich their recreational activities and general well-being. The community center was built 10 years ago, based on a community needs assessment. The addition of the DASH education does help with meeting expectations from division of City Parks and Recreation.

There was a connection to this community center and utilizing the DASH diet educational program in African Americans with HTN. The motivation, to work on this problem with this population, stemmed from seeing a large number of African American population in in the community with HTN, majority of AA were young, ages ranged from early 30's to 40's and was on dialysis as a result of their HTN. When the patients were asked what they think contributed most to HTN, the majority answered was lack of knowledge about their diet.

Summary

In summary, what is known is literature has shown the DASH diet plan is a good way to start lowering HTN or high blood pressure, especially among African Americans. Since HTN is an adjustable risk factor for such disease as coronary artery disease, stroke and renal disease, crucial significance to recognize the aspects which can aid in its regulation. Diet plays a vital role in contributing to high blood pressure promoting lifestyle modifications can start with correcting one of the most common behaviors, sodium restriction. This project addresses the gap in knowledge regarding dietary

strategies in the management of HTN among the patient population of a community-based health center. Section 3 will describe the methods for this project.

Section 3: Approach

Introduction

The prevalence of HTN is widespread, occurring in more than 70 million people in the United States (CDC, 2015). Evidence supports the role that lifestyle including dietary changes can decrease HTN or high blood pressure in African Americans (Merai et al., 2016). The purpose of this project was to plan a community based nutritional education program on the DASH diet for African Americans with HTN. The section will identify the approach to building a team who developed the plan. The plan includes the education program, and the plans for implementation and evaluation at a later date.

Developing a Team

The term *team* carries with it many meanings, perceptions, and approaches, depending on one's frame of reference (Bartolome, Chen, Handler, Platt & Gould, 2016). The team consisted of the program director, local community nutritionist, fitness staff, and myself. The program director assisted with coordination of resources, future implementation and eventual evaluation. Because the DASH diet is ranked very high as the best and healthiest diet, with a balance of healthy food groups for lowering high blood pressure (CDC, 2013b), the nutritionist assisted with overseeing the lay out of the DASH diet plan. The nutritionist's role is essential, especially at the initial screening to assess participants' food record reviewing to see if their habitual diet is amendable as well as being an advocate in the community sector to instruct the public population on the importance of the DASH diet. My role was to collaborate with the team and oversee the

overall project and education regarding the DASH diet plan for African Americans with high blood pressure.

Setting and Target Population

The community health center serves a population which includes African Americans ages 18 years or older, both males and females who have known histories of Stage 1 or 2 HTN. These individuals make frequent visits to the community center and participate in the exercise classes and other health-related activities. The fitness staff and nutritionist have established relationships with many of these individuals and have discovered in their interactions that the knowledge regarding the role of diet in the management of HTN is generally low among this group.

Program Planning

The project included a thorough literature review after receiving institutional review board (IRB) approval. An initial draft of the DASH education was then developed and presented to the team. The team developed specific education content and visual aids tailored for African Americans, which was the target audience at the community center. The project included a plan for implementation of the education, including recruitment of participants, class meeting times, and collection of baseline dietary records and blood pressure measurements. A specific evaluation plan was developed, which consisted of serial blood pressure measurements.

Summary

In summary, the DASH diet is recognized as the diet of choice for preventing and managing high blood pressure in African Americans (CDC, 2013b). The team members

for this project contributed to the development of an educational program regarding DASH and a plan for the implementation and evaluation of the education.

Section 4: Findings

Introduction

The purpose of this project was to plan a community-based nutritional education program on the DASH diet for African Americans with HTN. The overall goal was to reduce HTN in the African American population in the community center. By the conclusion of the project, a nutritional educational plan was developed. As well, an implementation plan and evaluation plan developed which will be conducted after my graduation from Walden University.

Findings and Discussion

After receiving IRB approval, the literature was reviewed. Initially, due to schedule conflict with team. I only met with two of the team members and presented the plan based on the literature review. A date was set to meet with the entire team to discuss the ideas of the DNP project. During the planning phase, one issue was planning a meeting time convenient for the entire team. After establishing a time convenient for the entire team, I was able to move to the planning phase. During this phase, current available information was discussed with the team to develop specific educationa; content tailored specifically for African Americans, which was the target audience at the community center. Although the entire team was involved, the nutritionist's input was valuable, especially in the choosing of visual aids.

The team members worked together well, and there were no episodes of conflict to resolve. The group spent time discussing how African Americans might have challenges with accessing the food need to follow the DASH diet. Even though DASH

does not require special food, it can be a challenge for some families to access even basic nutritional items required for DASH. Through combined efforts, a list of resources was assembled to help community members with shopping. The team learned that it was a challenge for some families in the community population to get the basic nutritional items required for the DASH diet. Therefore, a team decision was made to give each participant a $50.00 gift card towards the purchase of their list of food. The team members verbalized that the group process was effective, and all agreed that the result of the effort was a quality education program. Written comments were obtained from the team for their feedback regarding how to develop the program in a way that it would fit the unique needs of the African American participants. The goal is to reduce blood pressures that's would fit the unique needs of African American among the participants

Implications Recommendations

The team developed a 6-week education program, with a 1-hour class meeting held every week. During the initial meeting participant information regarding age, race, blood pressure, clinical history and food consumption were collected from a structured questionnaire (see Appendix). Baseline blood pressure measurements will be taken and recorded. The following 5 weeks will consist of education discussion led by one of the team members. The education will rely heavily on visual aids. The team considered many of the available DASH diet charts and chose one that shows the daily servings in each food group with the guidance of the team nutritionist (see Appendix). See Appendix for a list of weekly topics and sample class materials.

The plan for implementation was decided among the team. The team decided which community center would be used first and would be most beneficial location for the implementation based on the number of African Americans members with HTN. After deciding which community center in which to disseminate the DNP project, the plan was for the director and fitness staff to inform the community center members. To try to approach most of the community center members, the team decided will divide different sections of the center. The director will speak to members who attended the different classes at the center.. The staff member who worked in the cardio/workout informed the community center members of the DNP project, a nutritional education program on the DASH diet for African Americans with HTN. Front desk staff member will inform the community center member with a known history of HTN when they checked in the intent was to verbally inform of the DNP HTN project. Initially, community center members will be informed verbally, after 1-week signs will be posted and advertised for volunteer participants.

The goal of this project is to reduce HTN in the African American population in the community center. To evaluate the effectiveness of this education to achieve the goal, blood pressure measurements will be taken and recorded 2, 4 and 6 weeks after completion of the 6-week education.

Implications

As health providers search for ways to engage patients in behavior change, community-based programs can be used to combat HTN (Young, 2014). Involving the

community can build trust and increase the probabilities that their involvement will be more successful. The community center facility is where people congregate, which plays a valuable part increasing the number of African Americans who may participate. This project can serve as an example of how a community-based approach could work for the delivery of health education. Health education delivered through community centers can also be attractive to policy makers, not only for the potential for increased effectiveness, but also for the potential cost savings of using these existing resources for additional health delivery activities. Nursing practice could benefit from community center delivered education through better surveillance, assessment and early recognition of patient problems. This project contributes to research through the application and evaluation of the DASH diet in a specific community-based group of African Americans. The potential for positive social change from this project result from social group support in which neighbors learn while encouraging each other, learning from one another through interaction, communicating and learning to taking responsibility for ownership of managing their high blood pressure. Positive implications for social change exist through the effort to prevent complications such CAD, CKD, renal failure, stroke, death, and to contest high healthcare expenses managing HTN in African Americans.

Strength and Limitations of the Project

One of the strengths when planning for this design only proposed project was the feedback from the team and how the team could come together. Another strength was the setting of the community center. Getting health and health education out of the hospital

and doctor offices, and into people's everyday lives, closer to their day to day lives is likely to be more successful way to encourage healthful changes. Initially, the limitation was trying to coordinate a time which worked for the team. Therefore, the meeting was one on one, first with the community center program director, next met with the two community staff members and then the nutritionist. The team felt nutritional plan was tailored for the right group, African Americans, and the precise neighborhood.

One potential limitation is participants accepting change with the implementation of the DASH diet. Potential knowledge integration challenges the proposed project is client challenges for the program, participants lack education, non-adherence to the DASH and not able to change diet plan due to financial cost. Potential community challenge could be lack of community support. It is one thing to understand a need, it is quite another matter to design an intervention that will meet that need (Kettner et al., 2013). Non-adherence could be a major down fall to the success of the implementation of the program. A strategy for addressing non-adherence is to form a social support group. Through the social group support could promote adherence by encouraging each other, learning from one another through interaction, communicating and learning to taking responsibility for ownership of managing their high blood pressure. Positive change is instituted to align with the accepted goals to benefit the organization (White & Dudley-Brown, 2012).

Summary

HTN is higher in African Americans than any other ethnic group in the United States. Can be prevented and lowered by following the Dietary Approaches to Stop HTN (DASH) eating plan. Improved HTN control among African Americans will require an expanded effort and an increased focus on HTN from health-care providers, clinicians, and individuals (CDC, 2012). This proposed project was to plan and develop a nutritional education program using the DASH diet plan for African Americans who have a history of HTN. The plan and implementation of the DNP project is to plan a nutritional education program on the DASH diet for African Americans with HTN. Diet and lifestyle changes can decrease the associated risk factors and significantly improve blood pressure

Section 5: Scholarly Product

The Purpose

The purpose of this project was to plan a community based nutritional education program on the DASH diet for African Americans with HTN. An initial draft of the education program was developed based on a literature review of HTN and management strategies including the DASH diet. This initial draft was presented to a team of expert leaders from the community health center, including the director, fitness staff, and nutritionists. The team provided feedback regarding content, method of delivery, and individualizations for the community center's African American population. Plans for implementation and evaluation of the education was developed during the team discussions.

Goal and Outcome Objectives

To reduce the incident of associated risk factors and improve blood pressure among African Americans, the goal of this project is to reduce HTN in the African American population in the community center. By the conclusion of the project a nutritional educational plan was developed. A plan for implementation and evaluation was developed which will be conducted after my graduation from Walden University.

Background and Nature of Project

The background and nature of the project is control of HTN among African Americans. Community-based clinicians can add their efforts to those of primary care providers. Evidence-based practice recommendations set the foundation for providers on how to address the care of patients with HTN. When patients' blood pressures are

properly managed, the incidence of renal failure, CAD and stroke is lower. (Merai et al., 20) High blood pressure is not challenging to diagnose and can be vastly preventable through lifestyle and dietary interventions (CDC, 2012). While HTN management is challenging for patients and their healthcare providers, due to the silent nature of the disease, even modest elevations in blood pressure increase the risk for cardiovascular disease and mortality (CDC, 2013a).

African Americans have the highest prevalence of high blood pressure among the minority populations, which places them at risk for stroke, coronary disease, CKD, and even kidney failure (CDC, 2014). In the United States, 35% of African Americans have HTN which contributes to 20% of deaths, which is double the percentage of deaths among Caucasians from HTN (CDC, 2013a). Efforts to assist patients with dietary modification are often delivered through health care settings, where they have been successful in the reduction of health risk factors among African Americans (CDC, 2012). Similar programs may be applied successfully in community settings to reduce the incidence of hypertensive disease in the African American which can have a positive effect on lowering blood pressure and decreasing healthcare expense.

The Impact

This project can serve as an example of how a community-based approach could work for the delivery of health education. Health education delivered through community centers can also be attractive to policy makers, not only for the potential for increased effectiveness, but also for the potential cost savings of using these existing resources for

additional health delivery activities. Nursing practice could benefit from community center delivered education through better surveillance, assessment and early recognition of patient problems. This project contributes to research through the application and evaluation of the DASH diet in a specific community-based group of African Americans.

Evaluation

Plans for implementation and evaluation of the education will be implemented and evaluated by the community staff. The plan was presented to community center preceptor, nutritionist, and the team implementing and evaluating the project. The community director who oversees other centers in other counties, suggested the project may be conducted at other community sites. An initial draft of the education program was developed based on a literature review of HTN and management strategies including the DASH diet. This initial draft was presented to a team of expert leaders from the community health center, including the director, fitness staff, and nutritionists. The team provided feedback regarding content, method of delivery, and individualizations for the community center's African American population. Plans for implementation and evaluation of the education was developed during the team discussions.

Analysis of Self

This project has required detailed exploration to develop and plan a nutritional education program using the DASH diet for African Americans. As a scholar, I have gained great knowledge while pursuing this project how to plan and implement a program into a community setting. The foundation for a new approach to a practice starts with the experience of the need to address the problem. The overall goal was to combine

my project and clinical knowledge through evidence-based practice to enhance the quality of care in the community population. Although the community center was not a clinical setting, clinical practice guideline could still be applied and key resources could still guide decision making and support the movement of evidence-based into clinical practice. Enduring to build upon leadership skills and professional knowledge will aide in promoting continued professional development.

Conclusion

In conclusion, the development of a nutritional educational plan using the DASH diet is vital to combat HTN among African Americans. The DASH diet is an effective strategy to prevent and lower HTN through nutrition. The plan and implementation of a nutritional educational plan will deliver a structural program which will help with reduction of HTN among African Americans with HTN and improve overall quality of life.

References

American Heart Association. (2015). African Americans and heart disease, stroke. Retrieved from https://www.heart.org/en/health-topics/consumer-healthcare/what-is-cardiovascular-disease/african-americans-and-heart-disease-stroke

Ball, M. J., Douglas, J., V., & Walker, P. H. (2011). *Nursing informatics: Where technology and caring meet*. New York, NY: Springer.

Bartolome, R.E., Chen, A., Handler,J., Platt, S., & Gould, B. (2016). Population care management and team-based approach to reduce racial disparities among African Americans/Blacks with hypertension. *The Permanente Journal, 20*(1),53-59. Retrieved from http://dx.doi.org/10.7812/TPP/15-052

Berlowitz, B.R., Ash, A. S., Hickey, E.C.,Friedman, R.H., Glickman, M., Kader, B., & Moskowitz, M. A., (1998). Inadequate management of blood pressure in a hypertensive population .*New England Journal of Medicine,339,* 1957-1963 DOI: 10.1056/NEJM199812313392701

Harvard Men's Health Watch. (2013). *Blood pressure: What's food go to do with it?* Retrieved from https://www.health.harvard.edu/diseases-and-conditions/blood-pressure-whats-food-got-to-do-with-it

Brown, M. J. (2006). HTN and ethnic group. *BMJ British Medical Journal, 32*(7545). Retrieved from: http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1432176/.

Burns, N., & Grove, S. K. (2008). *Practice of nursing research: Appraisal, synthesis, and generation of evidence.* (6th ed.). St Louis, MO: Elsevier Saunders.

Centers for Disease Control and Prevention. (2012). Vital Signs: Awareness and treatment of uncontrolled hypertenstion among adults — United States, 2003–2010. *MMWR. 61*(35), 703-709. Retrieved from http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6135a3.htm?s_cid=mm6135a3_w.

Centers for Disease Control and Prevention. (2013a). Racial/ethnic disparities in the awareness, treatment, and control of HTN — United States, 2003–2010. *MMWR 62*(18), 351- 355. Retrieved from http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6218a2.htm?s_cid=mm6218a2_w.

Centers for Disease Control and Prevention. (2013b). Translating the dietary approaches to stop hypertension (DASH) diet for use in underresourced, urban African American communities. Retrieved from http://www.cdc.gov/pcd/issues/2013/12_0088.htm.

Centers for Disease Control and Prevention. (2014). Racial and ethnic minority population. Retrieved from http://www.cdc.gov/minorityhealth/populations/REMP/definitions.html.

Champagbe, C, M. (2006). Dietary interventions on blood pressure: The dietary approaches to stop hypertension (DASH) trials. *Nutrition Reviews. 64*(1). Retrieved from https://onlinelibrary.wiley.com/doi/abs/10.1111/j.1753-4887.2006.tb00234.x

Clutter, P.C. (2009) Clinical practice guidelines:Key resources to guide clinical decision making and enhance quality health care. *Journal of Emergency Nursing, 35*, 460-461. doi.org/10.1016/j.jen.2009.05.023

Hamasu, C., & Kelly, E. (2017) The logic model: More than a planning tool. *Performance Measurement and Metrics*, *18*(2), 158-164. Retrieved from https://www.emeraldinsight.com/doi/abs/10.1108/PMM-08-2017-0032?journalCode=pmm

Harnden,K.A., Frayn, K.N., & Hobson, (2010). Dietary approaches to stop hypertension (DASH) diet: Applicability and acceptability to a UK population. *The Journal of Human Nutrition and Dietetics*, *23*(1) 3-10. Retrieved from https://doi.org/10.1111/j.1365-277X.2009.01007.x

Horowitz, C. R., Tuzzio, L., Rojas, M., Monteith, S., & Sisk, J., (2004) Dietary approaches to stop hypertension patterns in older Latinos with or at risk for hypertension. *Journal of Healthcare for the Poor and Underserved*, *5*(4) 631-644.

James, P.A., Oparil, S.,Carter, B.L.,Cushman, W.C., Dennison-Hemmilfarb, C., Handler,…Ortiz.E.(2014). 2014 Evidence-based guideline for the management of high blood pressure in adults. *Journal of the American Medical Association, 311*(5), 507-520.

Kettner, P.M., Moroney, E.M., & Martin, L.L, (2016). *Designing and managing programs: An effectiveness based approach* (5th ed.).Los Angeles, CA: Sage Publications Ltd.

Merai, R., Siegel, C., Rakotz, M., Basch, P., Wright, J., Wong, B., & Thorpe, P. (2016). CDC grand rounds: A public health approach to detect and control hypertension. *MMWR Morbidity & Mortality Weekly Report, 65* (45), 1261-1264. DOI: http://dx.doi.org/10.15585/mmwr.mm6545a3external icon

Russer, M. E., & McCarron, D.A. (2006) Reducing hypertensive cardiovascular disease risk of African Americans with diet: Focus on the facts. *The Journal of Nutrition. 136*(4)1099-1102. Retrieved from: https://doi.org/10.1093/jn/136.4.1099

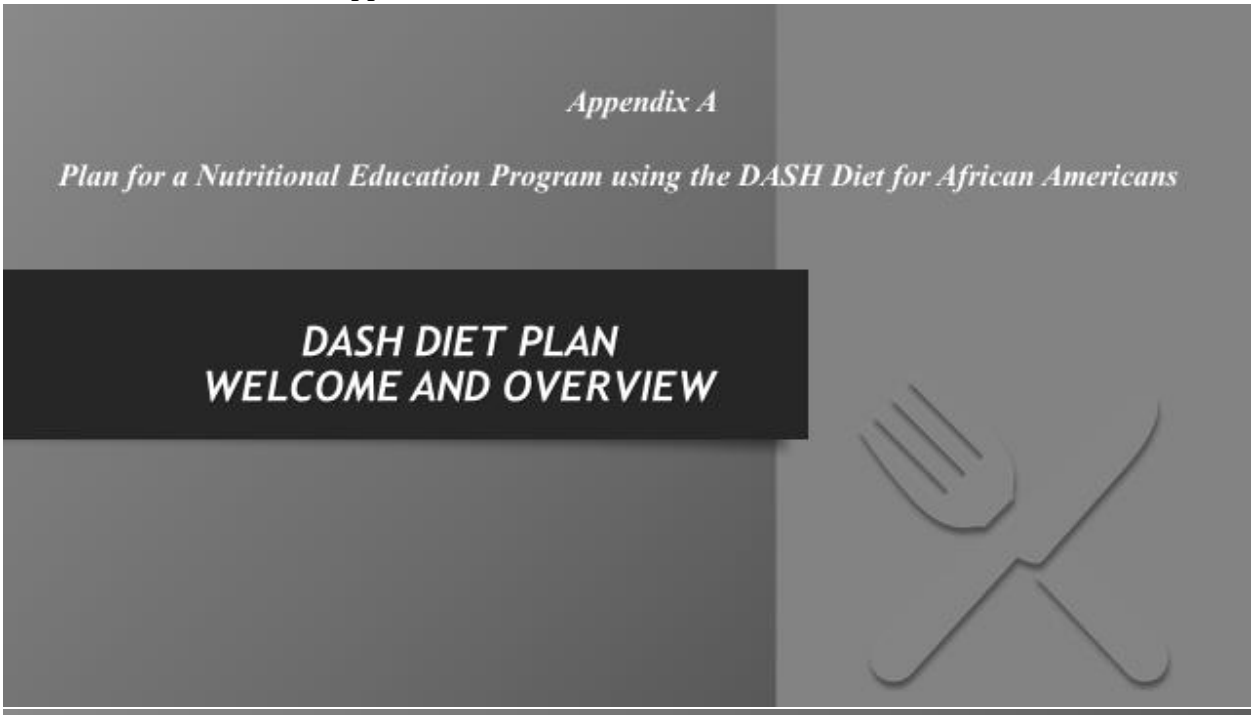
Staffileno, B. A.,Tangney, C., Wilbur, J., Marquez, D., Fogg,L., Manning, A….Morris, M. (2013). Dietary approaches to stop hyperension patterns in older Latinos with or at risk for hypertension . The *Journal of Cardiovascular Nursing*, *28*(4), 631-44. Retrieved from https://www.researchgate.net/publication/227856973_

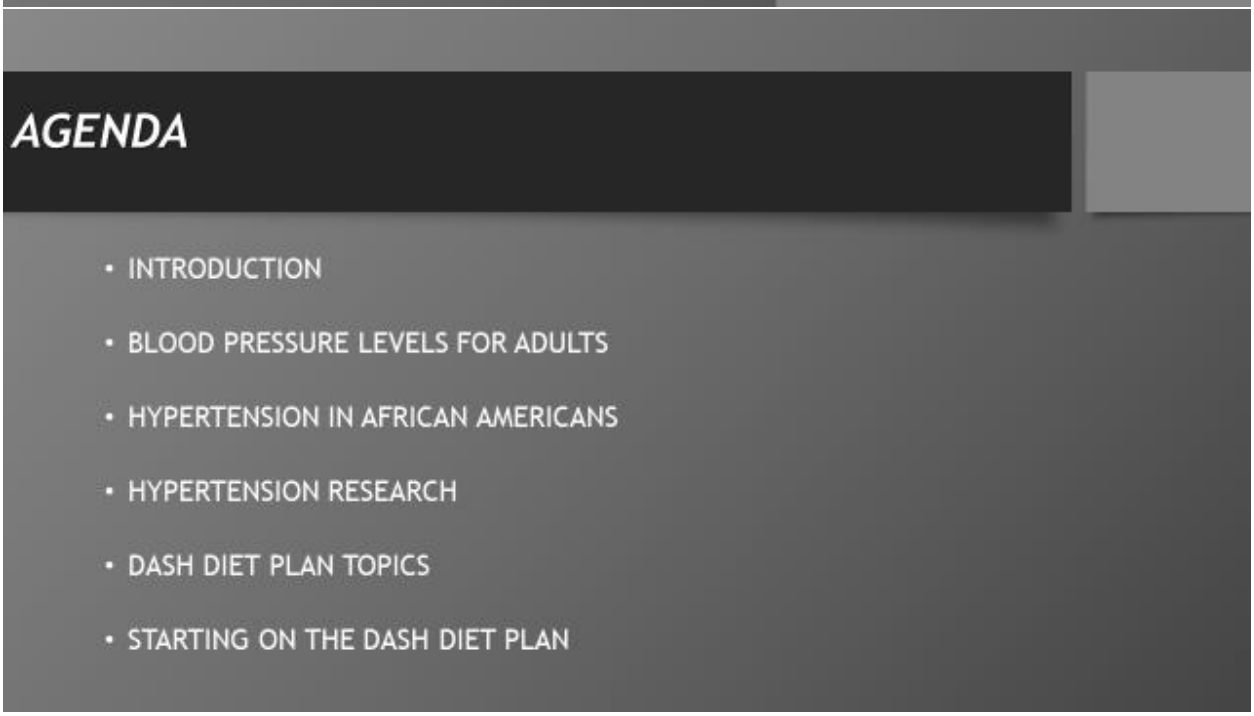
Terry, A. (2011). *Clinical research for the doctor of nursing practice*. Sudbury, MA: Jones & Bartlett.

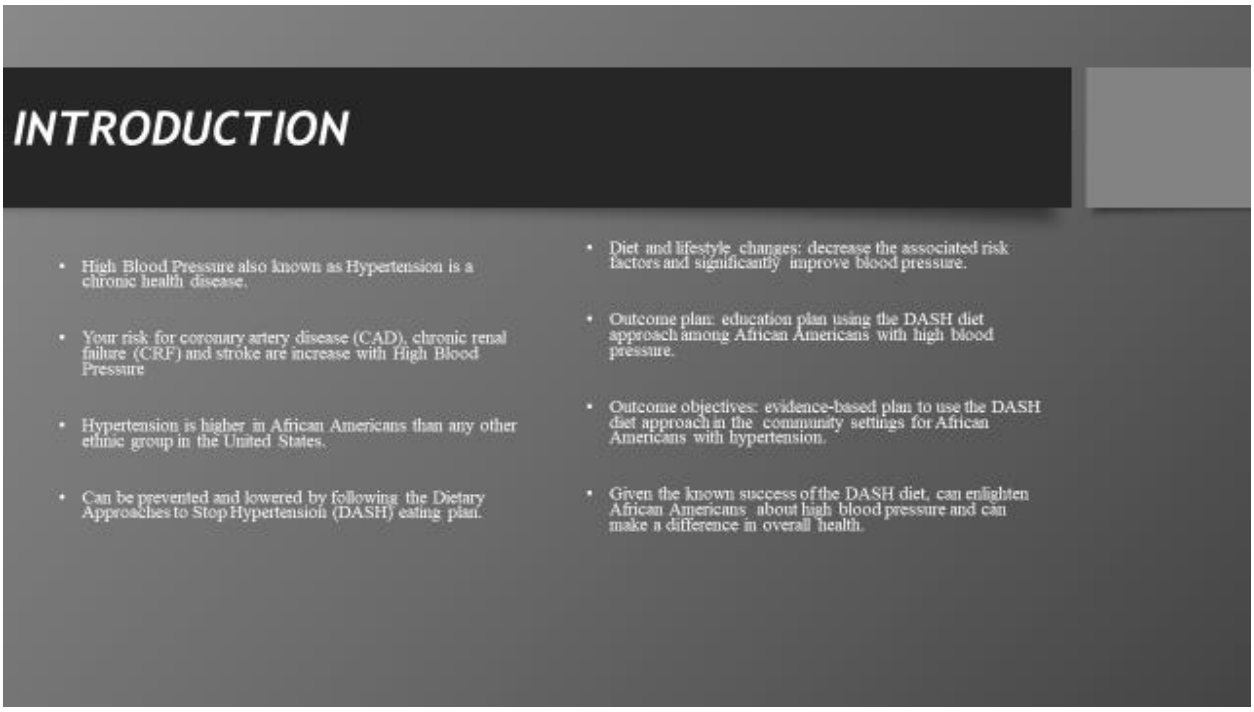
White, K.M., & Dudley-Brown, S., (2012) *Translating evidence into nursing and healthcare practice.* New York, NY: Springer Publication Co.

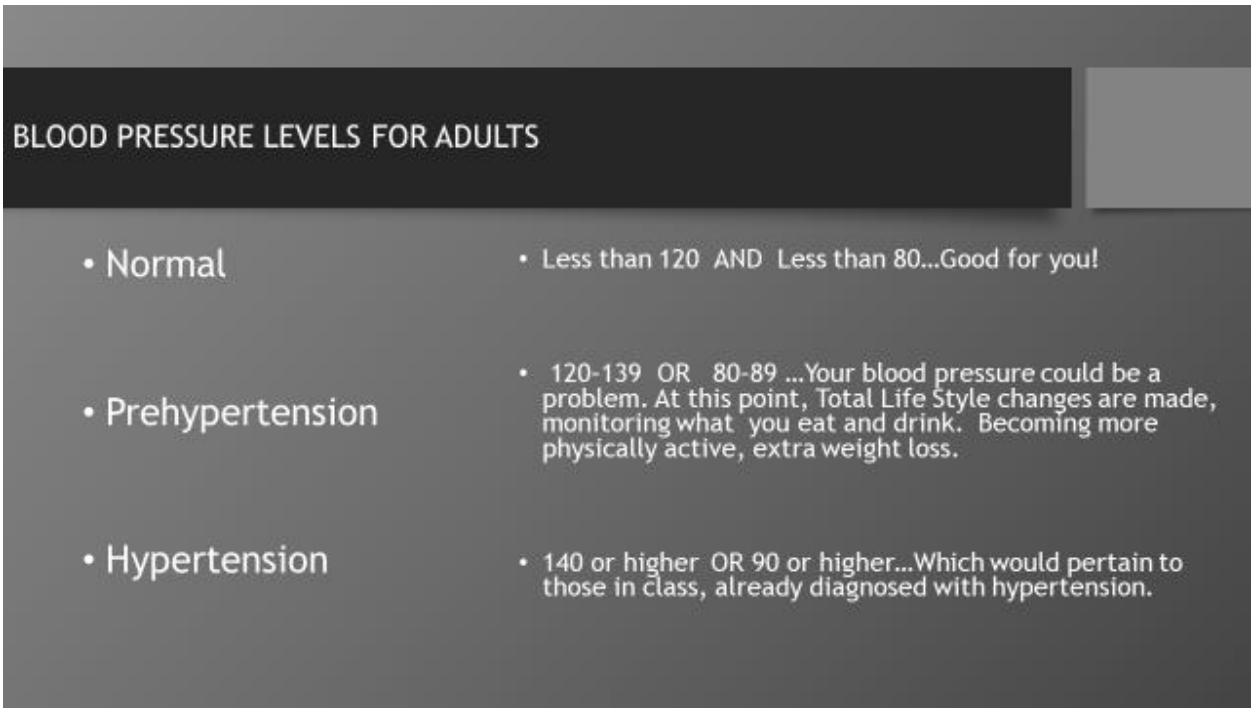
Young, S. (2014). Healthy behavior change in practical settings. *The Permanente Journal, 18* (4), 89-92.

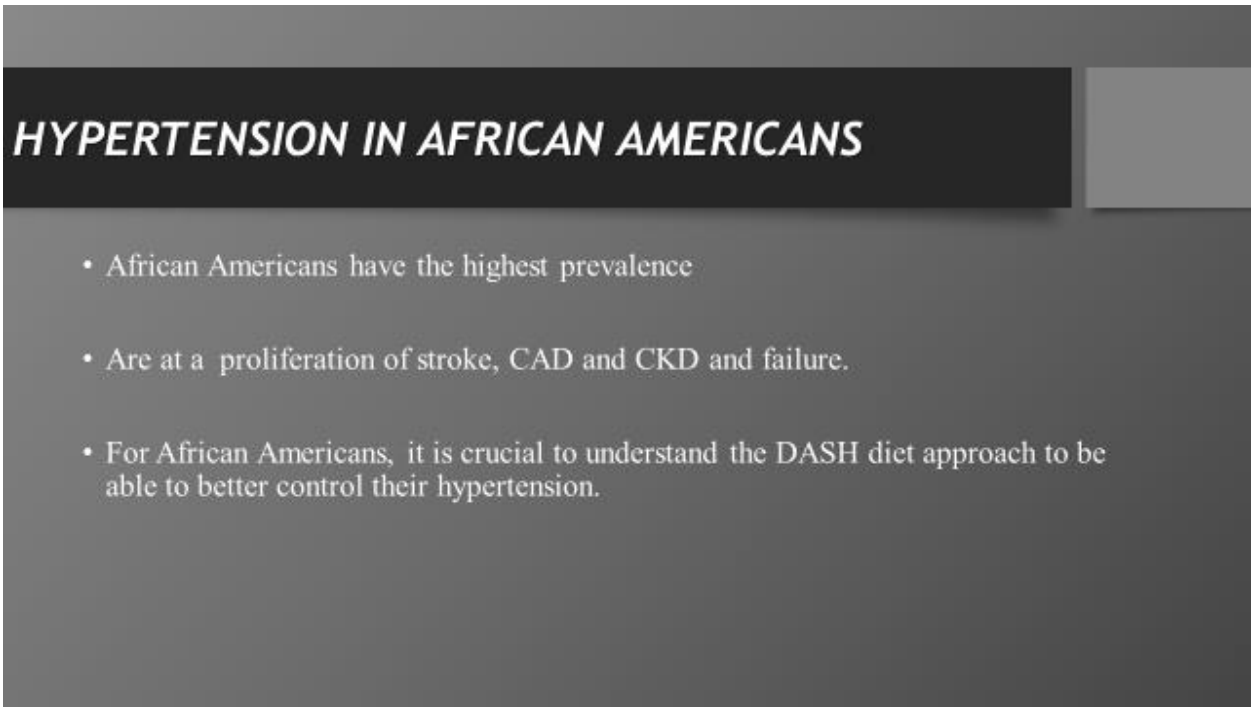
Appendix: Dash Diet Plan Power Point






INTRODUCTION
• High Blood Pressure also known as Hypertension is a chronic health disease.
• Your risk for coronary artery disease (CAD), chronic renal failure (CRF) and stroke are increase with High Blood Pressure
• Hypertension is higher in African Americans than any other ethnic group in the United States.
• Can be prevented and lowered by following the Dietary Approaches to Stop Hypertension (DASH) eating plan.
• Diet and lifestyle changes: decrease the associated risk factors and significantly improve blood pressure.
• Outcome plan: education plan using the DASH diet approach among African Americans with high blood pressure.
• Outcome objectives: evidence-based plan to use the DASH diet approach in the community settings for African Americans with hypertension.
• Given the known success of the DASH diet, can enlighten African Americans about high blood pressure and can make a difference in overall health.


BLOOD PRESSURE LEVELS FOR ADULTS
• Normal
• Less than 120 AND Less than 80...Good for you!
• Prehypertension
• 120-139 OR 80-89 ...Your blood pressure could be a problem. At this point, Total Life Style changes are made, monitoring what you eat and drink. Becoming more physically active, extra weight loss.
• Hypertension
• 140 or higher OR 90 or higher...Which would pertain to those in class, already diagnosed with hypertension.


HYPERTENSION IN AFRICAN AMERICANS
• African Americans have the highest prevalence
• Are at a proliferation of stroke, CAD and CKD and failure.
• For African Americans, it is crucial to understand the DASH diet approach to be able to better control their hypertension.

HYPERTENSION RESEARCH

- Research has shown what you eat can have an affect on your high blood pressure,(HTN) or hypertension (which is the medical term).
- Research has also shown that your high blood pressure can be lowered by following the Dietary Approaches to Stop Hypertension (DASH) diet eating plan, which consist of eating less salt, also known as sodium.
- Uncontrolled hypertension among adults is associated with increased mortality.
- Nearly one third of U.S. adults with hypertension, less than half had it under control, most is due to diet
- The DASH diet eating plan findings showed that blood pressures were reduced with an eating plan that is low in saturated fat, cholesterol, total fats, emphasizes fruits, vegetables, fat-free or low-fat milk and or milk products.
- This DASH eating plan is reduced in lean red meat, sweets, added sugars, and or sugar-containing drinks. This diet is also rich in potassium, magnesium, calcium, protein as well as fiber.

DASH DIET PLAN TOPICS

- Grocery Shopping
  - The DASH is made up of regular foods that are accessible at grocery stores.
- Food Groups
  - Requires to eat a lot of servings of fruit, vegetables, and whole grains, 15 to 18 per day.
- Portion control
  - Each serving is typically either a half-cup of cooked vegetables or grain or a whole cup of raw leafy vegetables
- Read the Labels
  - Reading the food labels can help you choose foods which are lower in sodium or salt, , saturated fat, trans fat, cholesterol, calories, those which are higher in potassium and also calcium.
  - Look for label information, found on cans, boxes, bottles, boxes, cans bags, and any other packaging.