ABSTRACT

AN EDUCATIONAL INTERVENTION: STORYTELLING, BLOOD PRESSURE, AND THE AFRICAN AMERICAN COMMUNITY

Storytelling, Blood Pressure, and the African American Community is a research project that sought to improve hypertension knowledge among African Americans who suffer from hypertension, in a church setting in San Jose, California. Hypertension is a significant contributor to vascular disease that affects approximately 75 million people, with African Americans significantly impacted. Education using storytelling is shown to increase knowledge about hypertension among African Americans.

This study recruited a convenience sample of 32 African Americans between the ages of 30-70 at a church in San Jose, California. The participants were recruited by email, word of mouth, in person, and Zoom church-service announcements. Recruitment was limited due to the COVID-19 pandemic. The data collection was from September 2020 to December 2020. The Hypertension Evaluation of Lifestyle and Management knowledge (HELM), a 14-item survey using Likert's scale items, was administered to measure pre/post knowledge related to hypertension. The intervention included a storytelling video about hypertension shared by an African American woman.

Results from a paired sample t-test indicate that there are significant pre/post gains facilitated by the storytelling.

Storytelling seems to have an impact on knowledge related to hypertension.

Josephine Okafor
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AN EDUCATIONAL INTERVENTION: STORYTELLING, BLOOD PRESSURE, AND THE AFRICAN AMERICAN COMMUNITY

by

Josephine N. Okafor

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Doctor of Nursing Practice:

We, the undersigned, certify that the project of the following student meets the required standards of scholarship, format, and style of the university and the student's graduate degree program for the awarding of the Doctor of Nursing Practice degree.

Josephine N. Okafor
Project Author

DocuSigned by:
Lisa Walker-Vischer
2BAFF86AA57741C...

Lisa A. Walker-Vischer — Nursing

DocuSigned by:
Praba Koomson
5C1961FC32C24E0...

Praba Koomson — Nursing

DocuSigned by:
D5BEAED9DB444AC...

Michael C. Aninyei — Doctor of Internal medicine and Geriatric

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Signature of project author: DocuSigned by: C5D23FDCBA8D453...

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CHAPTER 1: INTRODUCTION

In the United States, more than 75 million adults are affected by high blood pressure, also referred to as hypertension (HTN) (Centers for Disease Control [CDC], 2020; Pettey et al., 2016; Whelton et al., 2018). HTN is a major cardiovascular risk factor for heart disease, stroke, heart attack, heart failure, kidney failure, peripheral vascular disease, and untimely, cardiovascular death, with high mortality and morbidity rates (American Heart Association [AHA], 2015 & 2018; CDC, 2020; Fang et al., 2017, 2018; Mueller et al., 2015; Pettey et al., 2016; Whelton et al., 2018).

Worldwide, HTN is a leading, yet preventable, cause of premature death (Mills, 2016; World Health Organization [WHO], 2013). It is currently estimated that 1.39 billion adults have hypertension worldwide, and the number is expected to increase by 1.5 billion by 2025 (Mills et al., 2016; Pettey et al, 2016; Whelton et al., 2018; WHO, 2013).

Annually, HTN, treatments, and expenses associated with its complications cost the U.S. economy approximately $100 billion (AHA, 2017; Benjamin et al 2017; CDC, 2020). Benjamin et al (2017) estimated projected costs to be $220.9 billion by 2035, including direct medical costs and indirect financial burdens (AHA, 2015; Ataklte et al., 2015). The estimated annual cost of HTN is approximately $50 billion per year in healthcare costs, including direct and indirect services, medication, and missed work (AHA,2017; CDC, 2020). Furthermore, HTN resulted in as many as 78,862 deaths in 2015 (Whelton et al., 2018). Due to its tremendous economic cost and its impact on the quality of life, increased awareness and knowledge of hypertension prevention and control are

essential to the elimination of fear, lack of awareness, and misconceptions associated with this disease.

Problem Statement

In the United States, African Americans have a disproportionately high rate of HTN compared to other ethnic groups, with three in four adults suffering from HTN by age 55 (American Heart Association, 2017). Compared to other racial groups, African Americans experience higher rates of death from cardiovascular diseases such as stroke, heart attack, and kidney failure, and they tend to develop HTN at an earlier age (AHA, 2018, 2017; Ataklte et al., 2015; Ahuja et al.,2018; CDC, 2020).

The high rate of HTN among African Americans is partly due to barriers like lack of knowledge about hypertension, inadequate hypertension management skills, and poor understanding of the hypertension disease process (Benjamin et al. 2017; Ferdinand et al., 2017; CDC, 2020). Moreover, factors such as distrust of the healthcare system, irregular use of prescribed medication, insufficient access to health insurance, lack of transportation, and misinformation about the risks of high blood pressure contribute to the prevalence of HTN among underserved and minority communities (AHA, 2018; Ferdinand et al., 2017, Gene et al., 2013; Heydaari et al., 2014; Houston et al., 2011; Mueller et al., 2015). Financial strains impacting affordability for treatment, ineffective communication between patients and healthcare providers, and a high prevalence of violence have been shown to be additional contributors to HTN (AHA, 2018; Cene et al., n.d.; Gee et al., 2013).

Review of the evidence on gaps related to hypertension care appears to indicate that an educational intervention program using relevant cultural material can help African Americans improve knowledge related to HTN (Bertera, 2014;

Beune et al., 2014; Pettey et al., 2016). Once an individual has gained improved knowledge and awareness of the risks and the impact of poorly controlled elevated blood pressure, self-care actions can be taken to mitigate the emergent complications and adverse impacts of HTN (e.g., heart attack, stroke, and kidney failure).

Definition of Terms

The 2017 guidelines of the American Heart Association and American College of Cardiology (ACC) address the detection, prevention, and management of high blood pressure (Whelton et al., 2018). They define HTN as a reading of 130/80 millimeters of mercury (mmHg). According to ACC 2017 guidelines, a normal blood pressure is less than 120/80 mm Hg and elevated blood pressure is a systolic between 120 mmHg -129 mmHg and a diastolic reading greater than 80 mmHg. The ACC guidelines further define three stages of HTN: stage 1 is when patients have a systolic reading of 130 mmHg -139 mmHg or a diastolic reading between 80 mmHg -90 mmHg; stage 2 is identified when there is a systolic reading of at least 140 mmHg or diastolic reading of at least 90 mm Hg; and stage 3 is recognized as Hypertensive Crisis when there is a systolic reading over 180 mmHg and diastolic reading over 120 mmHg (Whelton et al., 2018).

Hypertension impacts the cardiovascular system, resulting in heart attacks, strokes, and heart disease. This disease process does not always display symptoms resulting in a physical alert. Often, the individual is not aware of the impending sentinel event that will likely result in death (American Heart Association, 2017). As a result, many people refer to hypertension as the silent killer (WHO, 2013; AHA, 2017). Maintaining healthy blood pressures between 120 mmHg -130 mm Hg will reduce stroke risk by 37%, coronary heart disease by 21%, death from

cardiovascular disease by 25%, and death from other causes by 13%. (Whelton et al., 2018).

Healthy People 2020 Hypertension Objective

The *Healthy People 2020* initiative calls for an increase in blood pressure control and community-based intervention programs that are tailored to meet the population's needs. Such programs can help neglected populations gain insight into effective managmeent strategies that can reduce the onset of hypertension (*Healthy People 2020*, 2020). One means of accomplishing this goal is through storytelling, which can be an effective vehicle to promote awareness and improve knowledge about hypertension, particularly in underserved communities (Bokhou et al., 2016). Storytelling has been proven to be an educational intervention that encourages participants to adopt healthy lifestyle changes and so may be an effective strategy for closing the hypertension disparity gap (Bertera, 2014; Bokhou et al., 2016). Thus, storytelling is a powerful intervention, as it provides people with the knowledge and tools to make positive lifestyle changes (Bertera, 2014; Nguyen et al., 2017).

Purpose

This study aims to implement an educational intervention utilizing storytelling approaches to improve knowledge about HTN among African Americans suffering from this condition. The goal of this study is to facilitate knowledge and skill development related to safe care, understanding of the disease trajectory, and self-management habits. Altogether, the goals of this study support adoption of healthier habits to decrease the risk and impact of poorly managed hypertension.

Theory

This project's theoretical framework incorporates two sources, the Narrative Communication by Hinyard and Kreuter (2007) and the Pender Model, developed in 1982 and revised in 1996 (Pender, 1982, 1996). These theories will serve as guides for the planning and implementation of the project.

Narrative Communication

Storytelling has been employed as a powerful marketing force in various domains ranging from commerce to politics and religion. African Americans have used storytelling for centuries to pass on wisdom, including folk stories that evoke emotion and meaning that fosters sound judgment. Storytelling is powerful because it allows people to identify themselves in narratives stories. Furthermore, storytelling is noted for motivating positive lifestyle changes (Bertera, 2014; Hinyard & Kreuter, 2007; Muvuka et al., 2020).

Storytelling is the most basic model of communication used throughout history to transfer knowledge and inspire action (Hinyard & Kreuter, 2007). This holds true across cultures, traditions, borders, and generations. In recent times, storytelling has been leveraged in health communication with increasing popularity to advance public health objectives. Storytelling, an actual vehicle for effective communication and instruction, has inspired action for many generations (Hinyard & Kreuter, 2007). Therefore, storytelling can help to instill knowledge and healthy behavior changes to improve HTN outcomes (Hinyard & Kreuter, 2007).

Research has shown that health literacy is a vital cornerstone for achieving high levels of self-efficacy, which heavily influences health outcomes (Muvuka et al., 2020). In recent times, storytelling has increased in popularity and is used in health communication to advance public health objectives (Hinyard & Kreuter,

2007). Consequently, storytelling can be helpful as an alternative method for inspiring action in vulnerable populations, increasing health literacy, and achieving higher self-efficacy levels.

It is worthwhile to explore the extent to which narrative techniques such as storytelling might provide an innovative, cost-effective alternative to more traditional health education approaches. If such an approach is found to be powerful, then storytelling interventions can provide significant value for minority, low-income, and underserved populations. It is likely that storytelling will positively impact underserved populations, as this medium of communication and learning takes into consideration the cultural norms of these populations.

Positive health changes can be inspired by focusing on African Americans' unique experiences and communicating narratives from a familiar perspective. We hypothesize that educational intervention through storytelling can support the African American Community by improving their understanding of HTN. By developing a greater understanding of HTN, they will be more knowledgeable about lifestyle changes that are needed to reduce its complications. The educational intervention in this study aims to promote healthy lifestyle changes, regular exercise, and solid commitment to prescribed medication routines, and to improve diet quality (Ferdinand et al., 2017). Storytelling alone will not be enough to reduce the prevalence of HTN among African Americans, yet it can serve as a foundation for developing critical insights into health interventions.

Pender Theory

The Pender Health Promotion Model is a theory that can provide a framework to guide education intervention among African Americans with HTN that are 30 to 80 years old. Pender’s model agrees that individuals regulate their

behavior through interactions within their environment. As such, regulation can occur at physical, psychological, interpersonal, and social levels. Furthermore, this model emphasizes how individuals work together with healthcare providers to produce positive health outcomes (Master, 2018; Pender, 1996; Pender et al., 2006).

The Pender health promotion model is one of the theories that can lead to improving healthcare outcomes and minimizing the long-term problems associated with hypertension (e.g., stroke heart attacks, blindness, kidney damage, heart disease). Pender understood the role nursing has in promoting healthy changes in a manner that empowers individuals to act responsibly to produce positive health outcomes (Master, 2018; Pender et al., 2006). Pender also recognized that educational interventions have a critical role in empowering people to make positive changes within their lifestyle.

Pender Health Theory Origination

Pender first published the Health Theory Organization model in 1982 and then revised it in 1996. Pender's health promotion model aims to provide nurses with a comprehensive understanding of many variables that affect individual and family health behavior. As such, the model offers ways to provide preventative and health-promoting services to patients and society (Pender, 1982). Many studies have used Pender's health promotion model as a theoretical framework. Its foundation rests on two theories: the expectancy-value theory and the social cognitive theory. The expectancy-value theory postulates that individuals engage in an action that they perceive to be of value, resulting in a changed lifestyle and self-care performance, such as taking medication (Pender, 1996). The social cognitive theory refers to the unique ways in which individual characteristics,

environmental factors, and behavior directly or indirectly influence and interact. According to Pender et al. (2006), self-direction, self-regulation, and self-efficacy perception are described as one's ability to perform a particular action. The triadic reciprocation between self-direction, self-regulation, and self-efficacy plays a critical role in one making positive health changes.

Assumptions of the Health Promotion Model

Pender's model rests on the assumption that people will seek to create conditions in which they can express their unique human potential by the way they live. Storytelling education can feed into this assumption by empowering and encouraging people to improve their knowledge of hypertension. People value growth and aspire to achieve an ideal balance between change and stability (Master, 2018; Pender et al., 2002). The Pender Health model assumes that individuals can self-reflect and actively seek to regulate behavior and engage in managing their health and environment. Another premise central to Pender is that the health professional is part of the interpersonal environment that influences persons throughout their lifespan (Pender et al., 2006).

Concepts and Their Relationship in Pender's Model

Pender identified four major nursing concepts, which are person, environment, health, and nursing (Master, 2018). The person is a unique individual with life experiences that can inspire action and influence behavior change (Master, 2018). That said, a person can be viewed from different angles. For example, people can be assessed as an individual or as part of a greater community. This distinction is essential, and both perspectives are relevant when implementing an education intervention using storytelling when educating African

Americans to improve their HTN knowledge. When nurses understand the patients' perception-related behavior, they can provide interventions that take into consideration their culture, community, and socioeconomic background (Master, 2018).

Pender maintains that each person has unique experiences and characteristics that shape their actions and can be leveraged to affect the positive change necessary to improve their health outcome. For this reason, it is essential to implement health promotion interventions in a community, because individuals learn healthy behaviors within family and community structures. These types of interventions include engaging in physical activity for 20 to 30 minutes daily, eating a healthy diet, avoiding excessive smoking and alcohol consumption, and taking the prescribed medication to control hypertension (Master, 2018; Pender et al., 2006).

According to Pender, health refers to a person's well-being seen through several different lenses, including individual, community, socioeconomic status, and culture (Master, 2018). Pender indicates that an environment encompasses the individual's physical body, interpersonal relations, employment, and social realities (Master, 2018). Considerations such as access to healthcare services, health disparities, and impediments to care are factors related to the environment. A person's health outcome can be affected by negative environmental situations. Thus, the HTN education intervention program will emphasize the importance of increased awareness regarding healthcare services availability.

A nurse empowers the patient to engage in lifestyle behavior changes by providing support. Nurses play a crucial role in the HTN educational intervention by informing their patients and promoting healthy behaviors. To increase knowledge about HTN among African Americans, the HTN educational

intervention and storytelling program will address the dangers of HTN. African Americans should be encouraged to have their blood pressure monitored regularly, become educated on the importance of taking prescribed HTN medication, and understand how blood pressure control can reduce the risk of stroke, heart attack, and kidney disease.

Pender maintained that health promotion is markedly different from disease prevention. As she noted, health promotion is motivated by a desire to actively avoid illness, detect illness early, or maintain functioning within disease constraints (Master, 2018). In contrast, disease prevention refers to maintaining a state of wellbeing.

The Relationships Between the Concepts

A person's health can be influenced by their environment, family, community, culture, and socio-economic status. For instance, someone with limited income may need to prioritize food and shelter over medication. Such circumstances are likely to lead people into thinking that they are not sick. Furthermore, individuals who are faced with such decisions may not fully understand the disease process of hypertension, along with its associated risks of increased mortality and morbidity. Nurses, then, play a critical role in educating patients by encouraging them to adopt positive lifestyle changes, seek early treatment, and be proactive in managing hypertension complications.

The Application of Pender's Theory to the Management of Hypertension in the African American Population

Pender's health promotion model provides a framework to guide a culturally sensitive health education program for African Americans with HTN. Master (2018) pointed out that Pender's theory is considered essential to the

formation and administration of health education programs for hypertension control among the African American community. For instance, blood pressure is affected by salt. Engaging the person and society in health education that addresses salt intake reduction in their diet would lower their blood pressure. Training on avoidance of food with high sodium content will impact HTN control, as well. Another example is a reduction in sedentary lifestyle. Nurses can recommend an appropriate form of physical activity. Promoting physical activity will help lower blood pressure. Studies have shown that physical exercise can significantly lower blood pressure. Physical activity, such as walking and dancing, are ideal exercises and can be done outdoors or indoors if there are any environmental safety concerns (Schapira et al., 2012; Tesfaye et al., 2017).

Pender (1982) noted that individual characteristics, experiences, personal factors (biological, psychological, social-cultural), and prior related behavior could affect health outcomes. The nurse can provide education to improve HTN after determining the underlying contributing factors. The nurse will empower the individual to engage in healthy lifestyle changes that promote self-efficacy and reduce risky behavioral habits (Pender, 1982).

According to Pender's theory, behavioral outcomes can be obtained when a person maintains a sense of self-empowerment. She suggests that interventions that emphasize health education promote self-efficacy and control for environmental factors that often inhibit change and motivate positive health-promoting behavior (Master, 2018).

How This Theory is Relevant Overall to DNP Project

Pender's model applies to the DNP project because it addresses issues that impact an underserved population, African Americans with HTN. Implementing a

health promotion intervention program helps provide insight into individual, community, and environmental concerns.

The HTN educational intervention seeks to create a more supportive environment, and the objective of this project is increased understanding of hypertension and its management. The HTN educational intervention will provide new innovative tools to educate African Americans about the disease and the consequences of not taking prescribed medication. It will also empower the target community to engage in positive healthy lifestyle changes that will facilitate blood pressure control. As a result, this study will provide new innovative tools to educate the African American population on the risk of HTN and the consequences of uncontrolled blood pressure. We hypothesize that education intervention through storytelling can improve the African American community's understanding of HTN, its complications, and the need to improve medication adherence and lifestyle changes.

CHAPTER 2: LITERATURE REVIEW

Hypertension (HTN) is a severe health issue in the United States, especially among African Americans (Miller et al., 2013). There are disparities in prevalence, awareness, and hypertension management among African American adults in comparison to other ethnic/racial groups (Rimando, 2015). Consequences of HTN include stroke, heart attack, kidney disease, peripheral vascular disease, heart failure, and high morbidity rate (American Heart Association [AHA], 2018; Centers for Disease Control and Prevention [CDC], 2020).

Healthcare Disparities

African Americans have a higher prevalence, less awareness, and lower management of HTN in comparison to other ethnic groups (AHA, 2018). From 1993 to 2008, hypertension management improved more among other ethnic groups, leaving African Americans' hypertension management neglected (Rimando, 2015). Studies among African Americans have revealed barriers to hypertension self-management, such as refusal to accept the diagnosis of HTN, lack of knowledge about the HTN disease process, poor communication with providers, inconsistent adherence to hypertension medication, and confusion about prescribed medication (Lackland, 2014; Mueller, et al, 2015; Rimando, 2015).

Education intervention through storytelling is one way to combat these barriers. It can improve hypertension self-management among African Americans, thus helping to close the gap. Education improves patients' understanding of hypertension management and the available resources, meanwhile allowing them to communicate effectively with healthcare providers. It should be noted that, despite these previous findings, minimal studies have been conducted on African Americans' knowledge related to HTN (Rimando, 2015).

Rimando (2015) conducted one such analysis to understand the perceived barriers and facilitators of HTN management among low-income, medically underserved African American adults in a southeastern clinic. This study utilized qualitative, semi-structured interviews. It included a qualitative descriptive design to explain factors affecting several management aspects of HTN and provide a better understanding than the typical ethnographic approach. The research was focused on factors influencing hypertension self-management in older African Americans. Twenty-eight African American males and females were recruited for the study. Information was obtained from the patients through face-to-face, semi-structured interviews. The interview questions focused on various aspects of hypertension self-management, including knowledge, nutrition, exercise, stress management, and barriers and facilitators of hypertension management. Patients had been receiving hypertension treatment for eight years and attending the clinic for 10 years. Most patients were either high school graduates, married, low-income or uninsured and employed, or unemployed. Eighty-six percent of the patients reported that they self-managed their high blood pressure, and 14% said they could not. This study further showed that patients might have uncontrolled HTN due to healthcare systems, social influences, insurance status, cost of medications, or family issues, as noted in previous studies.

The patients reported barriers and perceived obstacles to hypertension self-management, including lack of money, lack of motivation to exercise, fear of injury, and pain from exercise. Patients acknowledged their lack of awareness of the severe consequences of unmanaged HTN before attending a research clinic. They felt that doctors had not explained the effects of unmanaged hypertension in terms simple enough for them to understand. The study points to the importance of health literacy in patient-provider communication. Results from this study indicate

that healthcare providers' ability to provide simple and clear hypertension self-management education during a clinic visit plays a critical role in patients' understanding of hypertension. This study suggests a need for practice redesign and transformation of future hypertension education that is focused on older African Americans. Furthermore, it demonstrates the importance of tailoring language and hypertension education to the educational level of specific patient populations.

Hypertension Knowledge

To successfully manage HTN, it is important to possess the knowledge needed to determine underlying causes and symptoms. Furthermore, patients need to be knowledgeable about several aspects of everyday functioning, including what entails proper nutrition, how much physical activity one should engage in, how to take medication, and what makes up a healthy lifestyle. Schapira et al. (2012) determined that these factors are important in gaining insight into whether patients have sufficient knowledge related to hypertension. This study evaluated knowledge of hypertension and self-care management. Four hundred American veterans with HTN were recruited for the study. Scores from the hypertension education lifestyle management (HELM), a 14-item knowledge questionnaire survey, were compared pre- and post-intervention. Some improvements were observed in the participants after the intervention compared to the baseline, such as knowledge increase and self-management efficiency. The study concluded that the HELM provides an effective means to measure the knowledge needed for hypertension management.

Studies performed by Ataklte et al. (2014) on the burden of undiagnosed HTN in Sub-Saharan Africa revealed that of the 33 surveys conducted involving

over 110,000 participants, only 27% of the people were aware of their hypertension status. Additionally, limited knowledge about HTN among patients and health professionals, poor adherence to medication, and lack of access to affordable healthcare were shown to interfere with the implementation of an effective intervention program. The findings demonstrate the need for developing educational interventions for the African American population. In specific, educational interventions should facilitate the development of knowledge related to adherence to prescribed medication routines, regular physical activity, and healthy diets comprised of fruits, vegetables, and a low-salt diet (Ferdinand et al., 2017; Tong et al., 2016).

Gene et al. (2016) discussed the effect of a multicomponent practice-based intervention to lower blood pressure and to reduce racial disparities in rural primary care practices. This cohort study was conducted from 2000 to 2015, with a total of 525 adults with a mean age of 58 years. The research occurred in six primary-care locations in Lenoir County, North East Carolina. In these locations the residents represented a lower socioeconomic status, being on Medicaid and living below the state poverty level. The intervention consisted of theory-based strategies whereby the community-based health coach taught behavior and communication change using social cognitive theory. The response included quarterly in-person practice-level strategies, monthly phone coaching, and home blood pressure monitoring. Data collection was done at baseline, 6-, 12-, 18-, and 24-months post-enrollment. Those who had the intervention were more likely to have moderate-to-high medication adherence.

Hypertension Education Strategies

Houston and colleagues (2011) suggested that storytelling may significantly improve patients' knowledge about high blood pressure. In a controlled study of 230 African Americans in the southern United States, participants with hypertension were randomly assigned to a control and an intervention group. The control group received a versatile digital disk (DVD) with instructions on hypertension and other chronic conditions. In contrast, the intervention group received two DVDs of recorded stories of patient experiences with HTN and education on HTN. The data were collected at baseline, three months, six months, and nine months. The patients in the intervention group had a 10 mm Hg drop in systolic blood pressure compared to the control group. The storytelling intervention provided the opportunity for social interactions and engagement in activities that lowered blood pressure.

Nguyen et al. (2017) conducted a similar study to examine whether adult Vietnamese patients receiving cultural adaptive storytelling intervention would improve their blood pressure compared to the instructive response.

The randomized trial involved 160 patients with uncontrolled HTN, recruited from four communities in Vietnam. The control group used hypertension instruction contained in one DVD, and the intervention group used two recorded DVDs containing storytelling and hypertension instruction, shown three months apart. Over the 12-month follow-up, the group that received the storytelling intervention showed a drop of 10.8 mm Hg in systolic blood pressure compared to a 5.8 mm Hg decline in the instructive-only control group. The storytelling group also showed improvement in behaviors that led to positive lifestyle choices that resulted in reduced salt and alcohol intake and increased physical activity, all of which improved blood pressure control. These results were similar to previous

research, which indicated that the promotion of healthy lifestyle changes through storytelling indeed improves blood pressure control among adults (Houston et al 2011).

Bokhou et al. (2016) conducted a randomized study on 618 African Americans to assess the effectiveness of storytelling on the successful management of HTN control. The study demonstrated that the educational material, along with the storytelling format, can promote behavior change that eventually controls HTN. The information intervention alone had a limited effect on HTN management in the control group; however, when combined with storytelling, it proved to be more effective. Previous research indicates that storytelling motivates patients to become more engaged in self-care and promotes healthy behavior changes that allow effective management of HTN.

Health education interventions have been shown to improve knowledge and reduce the adverse consequences of HTN. When patients fail to adhere to their prescriptions, their blood pressure is less likely to be controlled, and the risk of heart attack, stroke, heart disease, and death increases (Ferdinand et al., 2017; Tong et al., 2016;). Nonadherence to medication can be intentional or unintentional and is attributed to factors such as lack of knowledge, limited access to medical resources, and misconceptions about the disease process. By incorporating an education intervention, health professionals can help patients improve knowledge and increase medication adherence. An educational intervention may help them to seek appropriate intervention support, which will reduce the impact of morbidities such as stroke (Petty et al., 2016). Controlling blood pressure decreases the death rate by 25%, heart attack by 21%, and stroke by 37%, thereby improving quality of life (Benjamin et al. 2017; CDC 2020; Whelton et al., 2018). Overall, increased awareness has been correlated with

increased blood pressure control (Benjamin et al., 2017; CDC, 2020; Ferdinand et al., 2017). Health intervention serves to increase patient knowledge and empowers them to be more self-sufficient, which are both essential for HTN control. Moreover, education allows patients to recognize comorbidities and to seek appropriate interventional support when needed (Ferdinand et al., 2017).

In a qualitative study involving focus groups diagnosed with HTN, two groups of participants were recruited (Johnson et al., 2016). The groups were 18-29 and 30-39 years old. Data collection was done via a survey followed by conventional content analysis. The results of the study revealed that respondents were surprised and angry about their hypertension diagnosis. While they expected to develop HTN eventually, most presumed it would take place at a much older age. The HTN diagnosis conflicted with the participants' sense of youth. Respondents reported feeling older than their peers due to the recommended behavioral changes and anti-hypertensive medication. Additionally, the young participants opted not to conduct communication around hypertension management via social media out of concern that their peers would become privy to that communication. Ultimately, the current educational material was regarded as insufficient and inadequate in addressing their concerns. Even so, the study offered insights into the attitudes of the target audience who were young adults with HTN.

A study by Bertera (2014) assessed the effectiveness of the storytelling slide shows on knowledge, attitudes, and practices related to diabetes and high blood pressure. The storytelling education program was conducted among older members of the African American community residing in the Washington, DC, metropolitan area and living in senior affordable housing operated by the community. The intervention used both pictures and voices captured in the

storytelling slide shows, produced by using PowerPoint and Adobe software. Written and spoken dialogue in each slide show were pretested with participants to ensure that the language used did not exceed the fifth-grade level, that messages were culturally appropriate, and participants readily understood the language preferences. The educational intervention sessions were administered in two and a half to three hours throughout the study. A total of 212 study participants were recruited for the intervention group and 217 for the comparison group. Comparison-group data were collected as a baseline in the first study-year before any educational sessions and replicated as a follow-up survey at the end of the third year after all educational interventions were completed. Both the intervention and comparison groups completed self-administered questionnaires containing the same items.

Four storytelling slide shows were developed, two to address diabetes and two to treat high blood pressure. The diabetes storytelling slide shows included healthy diets to control diabetes, steps towards a more active lifestyle, foot care, and physical activity. The blood pressure slides dealt with taking charge of your health and decreasing high blood pressure (Bertera, 2014). Health literacy was inversely associated with self-efficacy changes, indicating that those with the lowest literacy level showed the most significant self-efficacy increase in post-assessment. The study suggests that educational materials and skill-building activities benefit the oldest participants and those with the lowest health literacy in terms of increased confidence in managing diabetes and high blood pressure.

Studies have shown that African Americans respond better to culturally adaptative methods than the general educational purposes. According to a study by Beune et al. (2014), nurse-led culturally adaptive patient education appears to have a beneficial effect on diastolic blood pressure and adherence to lifestyle

recommendations for Blacks when compared to routine care. That study was a randomized cluster trial in Dutch primary healthcare centers comparing the culturally adjusted health education intervention to the general standard of care. The intervention group received culturally adjusted health education during the 2nd-, 8th-, and 20th-weeks post baseline. A trained practice nurse conducted health education with one group, while the control group received only the usual care. The nurse-led studies were found to increase adherence and, as a result, improve outcomes (Beune et al., 2014).

Summary of Literature Review/Implications of the Evidence

The literature suggests that African Americans, compared to other ethnic groups, are more greatly affected by complications that are associated with hypertension (Lackland, 2014; Mueller et al., 2015; Rimando, 2015). The evidence further indicates that huge disparities that exist are due to multifactorial issues such as healthcare provider communication and knowledge gap.

Evidence indicates that group classes, storytelling, and community lay health workers can be useful in educating African Americans. Thus, considering African Americans' unique barriers, research has shown that hearing and reacting to stories of others can be a catalyst for change (Lackland, 2014; Pettey et al., 2016). Education models and behavioral intervention based on knowledge of HTN, health literacy, and social support are proven to be effective in lowering blood pressure among African Americans.

The current studies raise intriguing questions about how clinicians might use patient stories in other settings and with different populations. Although Houston et al. (2011) have done much to corroborate that storytelling can benefit patients with chronic illness, stories are unlikely to become a routine part of

treatment until additional evidence shows that their effect is both sustainable and generalizable. When storytelling becomes accessible as an effective intervention, physicians might include a prescription for stories along with one for medication.

Many educational interventions have focused on diet, exercise, and medication adherence to address hypertension management among African Americans. New studies have shown that using novella format can be impactful among the African American community. The goal of this project is to use storytelling as an educational intervention to instruct African Americans about hypertension to increase awareness and to improve blood pressure.

CHAPTER 3: METHODOLOGY

This is a mixed-methods study relying on quantitative and qualitative research methodologies. The study surveyed a convenience sample of 32 English-speaking African American adults between the ages of 30-89 who were experiencing hypertension and were interested in learning about the disease.

This study took place at a church in San Jose, California. The study hypothesized that education intervention through storytelling can improve the African American community's understanding of hypertension (HTN), its complications, and the need to improve medication adherence and make lifestyle changes. The study compared pre/post scores on the HELM survey that measures participants' knowledge related to HTN. Pre- and post-intervention measures provide insight into how storytelling helps African American populations develop knowledge related to HTN.

Study Sample and Setting

The participants were recruited by email, word of mouth, in person, and during Zoom church services. The size of the sample was limited due to the COVID-19 pandemic. Consent was obtained at the beginning of the study from all participants. The researcher chose the faith community church for this study because it is a place for worship for African Americans who are actively involved in church events and felt free to participate and learn more about hypertension. They value their church space because it is welcoming and culturally reflective.

Methods

The study started after written approval from the church and the Fresno State University Institutional Review Board (IRB) was obtained. Once consent

was obtained, a pre-survey questionnaire on hypertension education lifestyle management (HELM) was administered to participants to establish a knowledge baseline (Appendix A). Written permission was obtained from the author, Dr. Schapiro, through email, to use the hypertension education lifestyle management (HELM) (Schapiro et al., 2012). The HELM survey consisted of demographic data and 14 questions about hypertension knowledge. Following the pre-survey, the participants were asked to watch a video. The video included the story of a 59-year-old African American woman who, in 2009, was diagnosed with hypertensive crisis. She was initially diagnosed with hypertension at 50 but did not take the diagnosis seriously due to a lack of knowledge and distrust for health care. She instead used home remedies to treat her condition, had no medical check-ups, consumed high-sugar carbonated drinks and unhealthy food, and did not engage in any form of exercise. She finally sought care when she started to experience severe headaches and when her close friend died of complications due to uncontrolled hypertension. She is currently engaging in healthy lifestyle changes and taking her medication, which have improved her condition. Next, a PowerPoint presentation consisting of educational information on blood pressure was given (Appendix B). Instruction occurred in a group of three to six participants for 45 minutes while wearing masks and maintaining physical distance in the church courtyard due to the COVID-19 pandemic. A post-intervention survey was given after the instruction. Data was collected for three months, from September to December 2020. In addition, the participants' blood pressure was checked pre- and post-intervention.

The Hypertension Evaluation of Lifestyle and Management knowledge (HELM) consisted of 14 questions covering knowledge about hypertension, lifestyle, medication management, and goal setting. A paired samples t-test was

used to determine the significance of the difference between pre- and post-intervention. Eight additional questions were added to further assess the baseline knowledge of the participants regarding hypertension (see survey Appendix A). The researcher asked one additional question on the post-intervention to study participants to determine if the storytelling was helpful.

Confidentiality, Coding, and Storage After Study

The participants' demographic information was handled with full confidentiality and stored in a safe box in the researcher's home. Each participant was assigned a number as an identifier to protect their privacy. The demographic information was used for descriptive statistics and was not linked to any participant's identity. The author will destroy the survey data after the results have been analyzed, reported as aggregate, and submitted for publication by May 2021.

Research Question

This project attempted to determine if relevant cultural materials and storytelling will significantly improve hypertension knowledge among the African American population suffering from hypertension. This study answers the following research questions:

- How does storytelling impact African Americans' hypertension knowledge?
- What experiences and perceptions do African Americans develop when engaging in storytelling that revolves around hypertension?

Hypothesis

Culturally relevant education using storytelling will improve hypertension knowledge among the African American population suffering from hypertension.

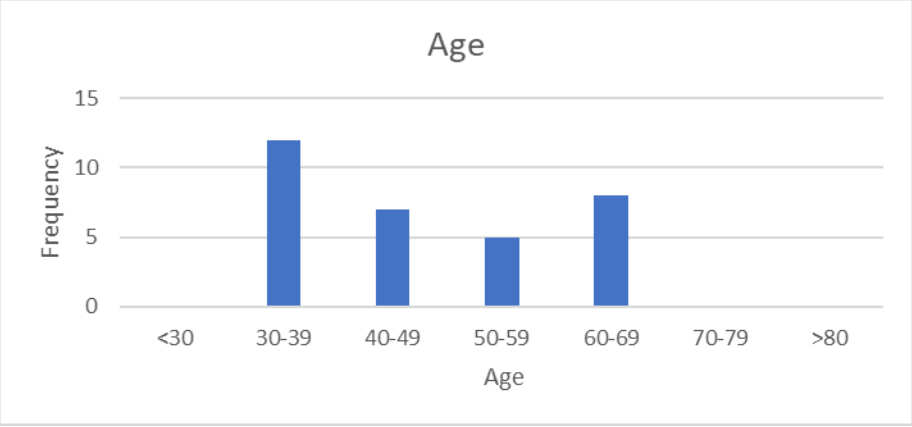
CHAPTER 4: RESULTS

The focus of the study was on implementing educational intervention using storytelling approaches to improve knowledge about hypertension among African Americans suffering from this condition and subsequently allow them to adopt healthier habits. This educational intervention was used to inform those individuals suffering from hypertension. This chapter includes analyses of the survey results. The study included 32 African American participants between the ages of 30-80 that met the inclusion and exclusion criteria. Data was collected from September to December 2020. The project aimed to recruit 100 participants, but due to the COVID-19 pandemic, the sample size was limited.

The study subjects include 12 people (37.5%) representing the 30-39 age group, 7 people (21.9%) representing the 40-49 age group, 5 participants (15.6%) representing the 50-59 age group, and 8 people (25%) in the 60-69 age group. There were no participants younger than 30 years, and none was in the 70 to 79 years group or over 80 (Figure 1).

Figure 1

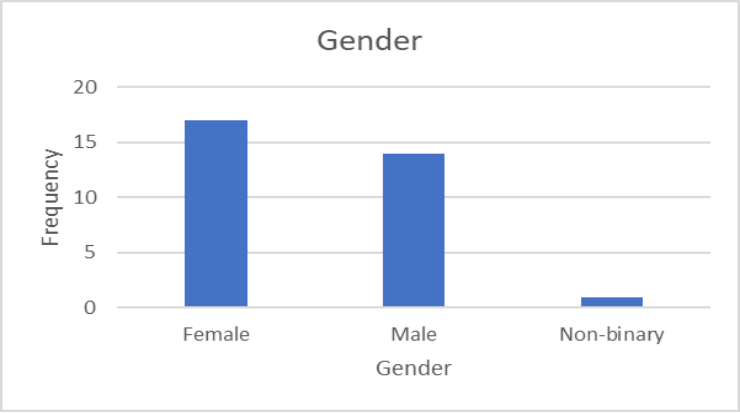
Frequency of distribution of age among participants.



There were 17 female participants (53.1%) and 14 male participants (43.8%). One study participant (3.12%) represents the non-binary group.

Figure 2

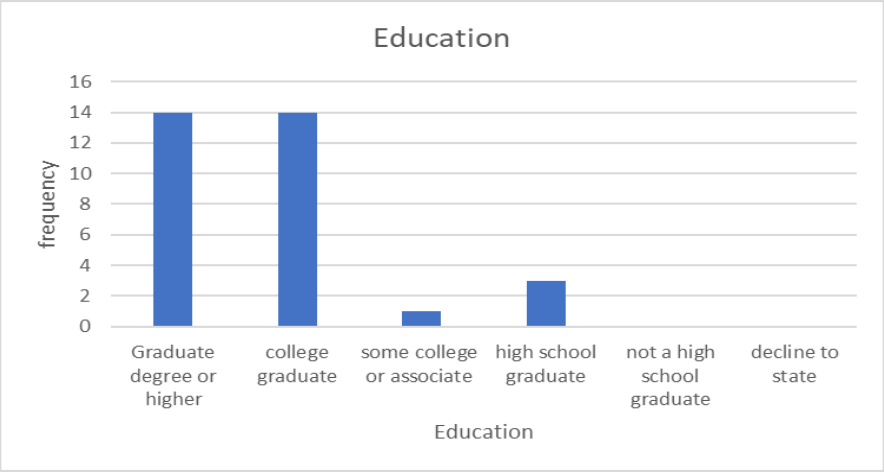
Frequency of Different Gender Distribution Among Participants



Fourteen (43.7%) of the participants had a graduate degree or higher, another 14 (43.7%) of the participants had attained at least a college degree, 1 individual (3.2%) had a college or an associate degree, 3 participants (9.4%) were high school graduates, and none reported as non-high school graduates.

Figure 3

Frequency of Different Educational Levels Among Participants



Quantitative Results

The survey data was analyzed using the Statistical Package for the Social Sciences (SPSS). A paired sample t-test was conducted to determine whether implementation of storytelling has an impact on African Americans' knowledge related to hypertension. As such, there was a comparison of knowledge related to the pre-test and post-test.

Survey Results

Overall, the participants displayed a significant improvement in knowledge related to hypertension from pretest to posttest (n=32, m=6.16, SD=3.21, t=10.835, p=<.001), indicating that storytelling seems to have an impact on knowledge related to hypertension. Knowledge gains were evident as average scores increased from pre-survey (6.25) to post-survey (12.4; Table 1, Figure 4). Major sources of differences across pre/post comparisons arise from responses to Question 2 (M =.72, SD=.46) and Question 12 (M=.72, SD= .46).

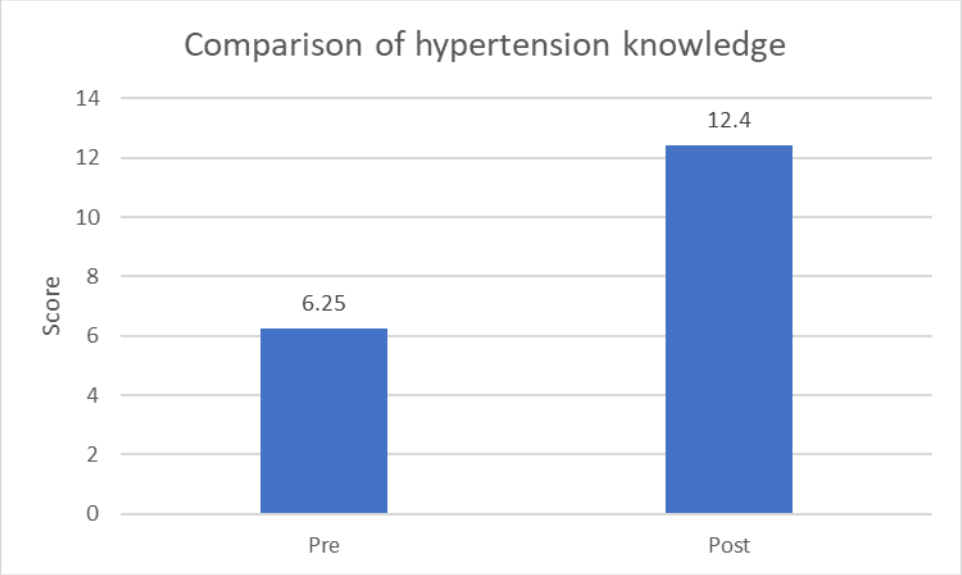
Table 1

Comparison of Hypertension Knowledge

	Mean (SD)	Mean difference (SD)	t	p
Pre	6.25 (2.35)			
Post	12.4 (2.02)	6.15 (3.21)	10.835	<.001

Figure 4

Graphs Representing the Pre- and Post-Intervention Hypertension Knowledge



The number of participants with a pre-blood pressure reading of systolic less than 120/80 mm Hg was 8. Pre-blood pressure measurements prior to the intervention indicated 25 people had systolic blood pressure readings between 150mm Hg to 160/90 mm Hg. These pre-intervention readings, when compared to post-intervention readings, showed a slight difference between systolic blood pressure readings. Twelve participants had a systolic BP reading less than 120/80 mm Hg. Furthermore, 20 participants had a systolic reading greater than 150 mm Hg to 160/90 mm Hg. Blood pressure measurements during the pre/post surveys indicated a variation in the number of people that had high blood pressure. The post blood pressure measurements had fewer participants (n=20) having high blood pressure in comparison to the pretest (n=25). Knowledge gains evident through pre- and post-comparisons of hypertension knowledge may have impacted participants' blood pressure. Therefore, this study reveals how culturally relevant

education using storytelling will improve hypertension knowledge among the African American population suffering from hypertension (Table 2).

Table 2

Participants' Blood Pressure

	Pre	Post
Normal (<120/80 mm Hg)	8	12
High (150 mm Hg to 160/90 mm Hg)	25	20

Qualitative Results

The post-test survey questionnaire asked participants how the storytelling was helpful. Given the participants' responses (Appendix C), the following themes emerged: being proactive, awareness of blood pressure, and real-life experience. Using the Braun and Clarke (2006) step-by-step process for thematic analysis, themes were developed through a six-step process. The first step involved familiarization with the data, then coding was conducted, then potential themes were developed, the fourth stage involved reviewing of the themes, the fifth step involved defining the themes, and the last step involved producing the step. A second researcher followed the same process and results were comparable.

Being Proactive

At the end of the post-test, the researcher asked one question to ascertain the participants' perception of storytelling's usefulness. The participants found that the storytelling helped increase their knowledge related to hypertension. For example, one participant stated the following:

> The storytelling was helpful because it allowed me to see a real-life experience. I was easily able to identify the issues that came with hypertension. The woman shared her direct experience and provided useful insights into how to address it, and the story made one want to be proactive about mitigating any risk. Personal stories helped me better understand the gravity of situations, which made this health issue real. It will also help me remember the issues more clearly. Now when I think about hypertension, this story will help me remember the key facts.

The participants' comments about the storytelling show an increase in knowledge, helping them become more proactive. Furthermore, the storytelling presents a captivating illustration that made the participant more aware of issues related to high blood pressure. The storytelling seems to have had a high impact, given the participant's statement that she will remember the facts associated with the hypertension storytelling. Similarly, other participants were able to develop insights related to hypertension that may help them become more proactive in monitoring their own blood pressure. The storytelling intervention motivated participants to think about taking an active role in engaging in positive lifestyle change activities that will help control their blood pressure, thereby engaging in more lasting behavioral change.

Awareness of Blood Pressure

In addition, participants noted a greater awareness of interventions to help monitor their own blood pressure. For example, a male participant stated, "I will exercise every day, eat a lot of vegetables, walk every day, eat, less salt, and consume less alcohol." Here, the participant says that he will make a variety of healthy life changes to prevent complications associated with high blood pressure.

Principally, storytelling related to healthy eating habits resonated with this participant, as he states that he will incorporate many healthy eating habits into his lifestyle.

Real-life experience

The last theme that was prominent among participant responses was that storytelling was impactful through its portrayal of a real-life experience. For example, a male participant stated: “The story was helpful because it gave me some insight into struggles of hypertension while also providing strategies on how to manage it.”

During storytelling there was an instance in which a female participant talked about having a friend who suffered from a stroke due to uncontrolled high blood pressure. Because of further complications associated with the onset of the stroke, the friend passed away. Such stories seem to have shed light on real-life experiences that participants want to avoid and encouraged other participants to talk about the strategies they will implement within their own lives.

CHAPTER 5: DISCUSSION AND CONCLUSION

This study aimed to implement an educational intervention utilizing storytelling approaches to improve the knowledge about HTN among African Americans suffering from this medical condition. In addition, the study attempted to facilitate learning and skill development in self-care, understanding of disease trajectory, and the self-management habits that allow adoption of healthier habits to decrease the risk and impact of poorly managed hypertension.

Analysis of the data indicated that African Americans' knowledge of HTN significantly improved after the intervention. Most of the participants reported that the storytelling method was very helpful in promoting a healthy lifestyle. The study supported that educational intervention using storytelling improves hypertension knowledge among African Americans suffering from hypertension.

This project has definite positive implications for healthcare delivery. Potentially, it can have a significant impact because it can provide insights and strategies for education and promote healthy lifestyle changes necessary to control hypertension using the storytelling education format. A better understanding of the disease process may inspire individuals to engage in activities to improve their health. Culturally solid narrative storytelling is compelling to African Americans. Using this tool, healthcare providers and nurses can play an essential role in patients' health education. While being culturally sensitive, they can instruct their patients on hypertension, the importance of regular monitoring of blood pressure, and adopting lifestyle changes. To accomplish this, nurses must educate their patients using culturally relevant materials that increase awareness of the HTN disease process. The patient with this kind of appropriate support and education

could have their hypertension controlled early and prevent the severe consequences of uncontrolled hypertension.

The comparison of the pre- and post-survey results indicated that the participants' initial knowledge of HTN was minimal but improved after the intervention. Most of them were not aware of their existing hypertension until this study was conducted. These findings suggest the need for healthcare workers and nurses to provide education to their patients on hypertension and the importance of regular monitoring of blood pressure. With appropriate education, patients can control their hypertension at an early stage and prevent more serious consequences. More access to education on hypertension, the use of home monitoring devices, and adopting a healthy lifestyle are necessary for prevention and treatment of HTN.

Limitations

One of the limitations of the study was the small sample size. The sample only included 32 individuals, since COVID-19 restricted our access to a larger number of participants. In addition, the participants were selected from a convenience sample of African American adults attending the Santa Clara church. Hence, the obtained results might not be representative of the target population.

Future Research

Future research could focus on more extensive studies over an extended period to see if storytelling improves blood pressure and adherence to the treatment plan. A future study along these lines would address the limitations of this study by having a larger sample to draw conclusions from. The feasibility of conducting such a study would be more manageable given that a researcher may be able to conduct this study without COVID-19 restrictions. Further research can

be done to explore the effects of storytelling on younger African American adults. Future studies can consider providing online education and collecting post-intervention data through online surveys to make the surveys more accessible and increase the sample size.

This study displays how educational intervention through storytelling positively impacts knowledge related to hypertension. Given that this study involves a rather proactive approach towards helping African Americans implement positive lifestyle changes, it would be interesting to see how storytelling can also help prevent African Americans' development of other diseases, such as lung cancer, liver disease, or sexually transmitted diseases. African Americans remain an underserved population throughout the United States, and a cost-effective intervention such as educational storytelling can provide the support needed to prevent the onset of life-threatening.

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APPENDICES

APPENDIX A: HYPERTENSION EVALUATION OF LIFESTYLE MANAGEMENT (HELM)

HELM Questionnaire

Most people can tell when their blood pressure is high because they feel bad. ☐ Y ☐ N

Uncontrolled high blood pressure can cause which of the following

☐ Lung Cancer ☐ Kidney Failure☐ High Cholesterol ☐ Diabetes

Which of the following changes to your diet is most likely to lower blood pressure?

☐ Eat more fruits, vegetables, whole grains and low-fat dairy products

☐ Eliminating spicy food

☐ Drink one glass of red wine daily

☐ Drink herbal tea instead of coffee

Most people with hypertension need more than one kind of blood pressure medicine to control their blood pressure

☐ Y ☐ N

5)Most of the salt Americans eat is added with a saltshaker

☐ Y ☐ N

6) A person is considered to have hypertension if either their systolic blood pressure is 140 or higher or their diastolic is 90 or higher on two separate occasions

☐ Y ☐ N

7) People with hypertension do not need to take medicine if they exercise regularly

☐ Y ☐ N

8) The person reports that the blood pressure (BP) is 148/78 when they check it using the BP machine in the pharmacy, 144/66 in the family doctor's

office, and 132/74 when they check it at home. *W*hich of the following statements is TRUE?

It is common for blood pressure readings to vary like this.

The highest blood pressure reading is the correct one.

The lowest blood pressure reading is the correct one.

He can be reassured that his blood pressure is normal.

9)Which one of the following increases your risk of having hypertension?

Weightlifting.

Drinking more than 2 cups of coffee a day.

Smoking a pack of cigarettes daily.

Gaining 15 pounds.

10) Blood pressure is measured with two numbers, an upper number and a lower number. It is usually written as upper/lo*w*er. If someone is told that their goal blood pressure is 126/76, when have they reached that goal?

When the upper is below 126 and the lower is below 76.

When the upper is below 126, even if the lower is over 76.

When the lower is below 76, even if the upper is over 126.

When the average of the upper and the lower is less than 100.

11) An overweight 60-year-old person has hypertension. They drink one bottle of beer and 4 cups of regular coffee a day. They add regular table salt to their food at most meals. Which one of the following changes is the most likely to lower their blood pressure?

Lose 10 pounds.

Stop drinking alcohol.

Switch to decaffeinated coffee.

Switch to sea salt.

12) Which of the following statements about taking blood pressure medicine is TRUE?

Blood pressure medicine should always be taken with food.

More than one type of blood pressure medicine can be taken at the same time.

Blood pressure medicine works best if it is taken at bedtime.

Blood pressure medicine should not be taken if a person drank alcohol that day.

13) When measuring your blood pressure at home, you should:

Always take your reading before you take your blood pressure medicine.

Take several readings, a minute or two apart, and record the lowest one.

Take your blood pressure right after exercising and at least two hours after a meal.

Take two readings, a minute or two apart, and write down the average value.

14) Which one of the following statements about exercise and blood pressure is TRUE?

People who are on their feet most of the day will not benefit from more exercise

Exercising for 30 minutes everyday lowers blood pressure more than exercising for 30 minutes, 3 days a week.

Weightlifting should be avoided by people with high blood pressure.

When exercising, you must raise your heart rate to at least 100 beats a minute to improve blood pressure.

Additional Questions

1) High blood pressure is caused by (mark all that apply)

☐ Smoking

☐ Stress

☐ Sodas

☐Fried food

☐Walking regularly

☐ Genetics

☐Age

☐ Overweight

2) Have you been diagnosed with high blood pressure?

☐ Y ☐ N

3) Do you know what high blood pressure is?

☐ Y ☐ N

4) Are you taking medications to control your blood pressure?

☐ Y ☐ N

5) Are you taking medication consistently?

☐ Y ☐ N

6) Do you monitor your blood pressure at home?

☐ Y ☐ N

7) Have you received education previously about high blood pressure?

☐ Y ☐ N

8) Does regular exercise help you control your high blood pressure?

☐ Y ☐ N

9) Do you know that salty food has an impact on high blood pressure?

☐ Y ☐ N

10) High Blood Pressure is

☐ High Blood pressure occurs when the force of blood flowing through the blood vessels remains elevated over time.

☐ Remedied to reduce blood pressure

☐ Salt in the blood

☐ Caffeine in the blood

11) Should I be limiting my salt intake or increasing my salt intake?

☐ Y ☐ N

12) Was the story telling helpful

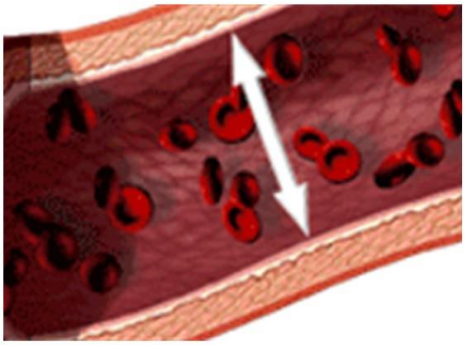
☐ Y ☐ N

If yes tell us how it will help you

APPENDIX B: POWERPOINT EDUCATION ON HYPERTENSION

Story of a 59y/o African American woman

What is blood Pressure?



- Blood pressure is the force your blood exerts on the artery walls.
- Blood pressure changes throughout out the day and night.

Source: American Heart Association,2016

What is high Blood Pressure?

- Hypertension, also known as high blood pressure occurs when the force of blood flowing through the blood vessels remains elevated over time.

American heartAssociation,2016

Facts on African Americans and High blood Pressure

- African Americans develop high blood Pressure earlier in life
- African Americans respond differently to high blood pressure medications
- African Americans are more sensitive to salt (½ teaspoon of salt can raise one's blood pressure by 5 mm Hg)
- Approximately more than 40% of African Americans in the United States have high blood pressure in comparison to approximately 33% in non-Hispanic white

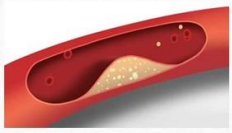
AHA, 2016

Facts on Hypertension

- 1 in 3 Americans have high blood pressure

What do the numbers of Blood Pressure mean?

- Blood Pressure is recorded as two numbers separated by a slash, For example 120/80 mm Hg
- The first number is called the systolic, is the pressure as the heart beats
- The second number ,diastolic ,is the pressure as the heart rests



Blood Pressure guideline

Normal is less than 120/80 mmHg

Blood Pressure Categories

BLOOD PRESSURE CATEGORY	SYSTOLIC mm Hg (upper number)		DIASTOLIC mm Hg (lower number)
NORMAL	LESS THAN 120	and	LESS THAN 80
ELEVATED	120 – 129	and	LESS THAN 80
HIGH BLOOD PRESSURE (HYPERTENSION) STAGE 1	130 – 139	or	80 – 89
HIGH BLOOD PRESSURE (HYPERTENSION) STAGE 2	140 OR HIGHER	or	90 OR HIGHER
HYPERTENSIVE CRISIS (consult your doctor immediately)	HIGHER THAN 180	and/or	HIGHER THAN 120

Risk factors of hypertension

- Family history
- Age
- Gender
- Race- African Americans
- Genetic
- Chronic Kidney disease

HA,2016

Modifiable Risk factors

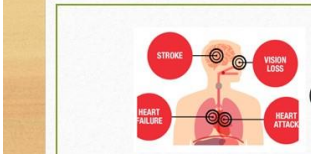
- Lack of physical activity
- Unhealthy increase in sodium
- Overweight/obesity
- Drinking too much alcohol
- Smoking and Tobacco use
- Stress

Symptom of Hypertension

- The symptoms of hypertension are very subtle hence, it is called a silent killer.

Symptoms

- Headache
- Nosebleed
- shortness of breath
- dizziness and fainting



Complications of hypertension

Brain

- Stroke: Damage caused by bleeding or blood clot
- Transient Ischemic Attack(TIA) Temporary artery blockage
- **Eyes**
- Bleeding from a burst blood vessel
- Obscured vision or blindness

Heart

- Heart Attack: When the heart muscle is damaged due to stoppage of blood flow in the coronary vessel
- Angina: When the heart does not get enough blood, often leading to chest pain

Arteries (blood vessels)

- Less flexible over time
- More stress on the kidneys and the heart

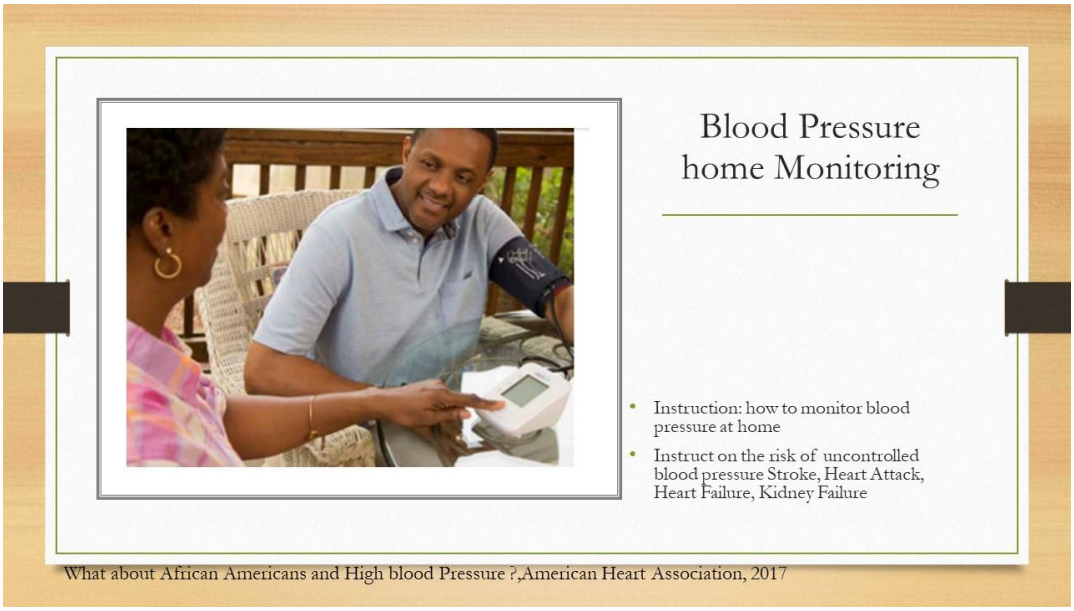
Kidney damage

SourceAHA,2017

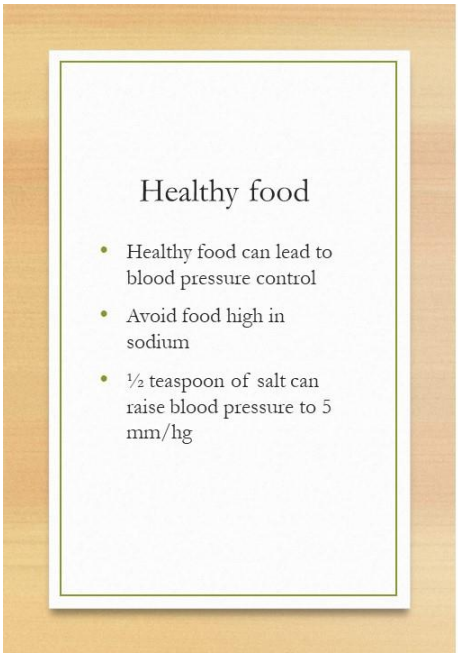
Healthy behaviors to prevent and control high blood pressure

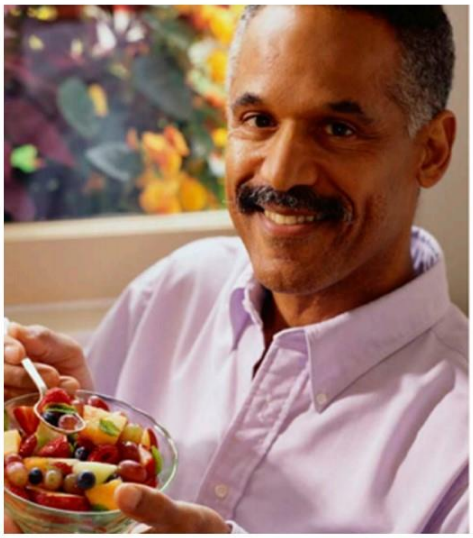
- Stay active and exercise at least 30 minutes a day
- Maintain healthy weight
- Limit alcohol intake
- Avoid smoking and tobaccos
- Reduce the amount of sodium
- Follow Dietary Approaches to Stop Hypertension (DASH)
- Maintain a healthy BMI

CDC Centers for Disease Control and Prevention
CDC 24/7: Saving Lives, Protecting People™



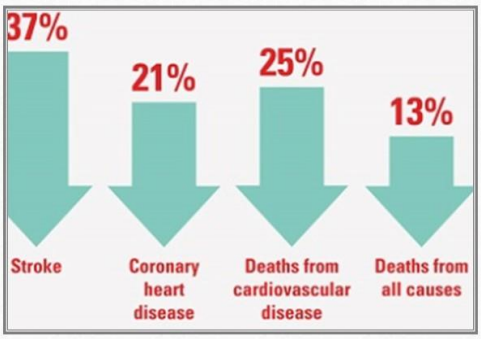
What about African Americans and High blood Pressure ?,American Heart Association, 2017





Blood Pressure Control

- Reducing the blood pressure by 12-13mmhg will reduced the risk of stroke by 37%,
- Coronary heart disease by 21%,deaths from coronary disease by 25% and 13% from all deaths.



Center for Disease Control and Prevention
CDC 24/7: saving Lives, Protecting Peoples TM

Medication

- There are different types of medication to treat high blood pressure
- Communicate with your health care provider to discuss medication that fits your need
- Take your medication as directed by your healthcare provider
- Do not discontinue your medication without talking with your doctor

National health lung and blood institute American heart Association, 2017

Reference

American Heart Association (2016). Heat disease and Stroke statistics Retrieved from

- http://www.heart.org/en/health-topics/high-blood pressure/the facts

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- https://cdc.gov/bloodpressure/measure.htm
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- http://www.heart.org/en/health-topis/high-blood pressure/the facts
- National health lung and blood institute American heart Association, 2017

APPENDIX C: PARTICIPANTS' RESPONSES

Narrative	Theme 1	Theme2
The storytelling was helpful because it allowed me to see a real experience. I was easily able to identify the issues that came with hypertension. The woman shared her direct experience and provided useful insights into how to address it. The story made one want to be proactive about multiagency any risk.	real experience, proactive	relatable experience
It painted an extreme example of the reality of unchecked blood pressure and brought awareness of how to manage it.	extreme reality, awareness	reality of risk of unchecked BP
Good Information. Helps me to understand better about high blood pressure.	helps me to understand better	better understanding
A reminder that high blood pressure is a silent killer. To exercise healthy eating habits, exercise (physical activity) and monitor blood pressure daily.	reminder that high BP is a silent killer	silent killer
Personal stories help me better understand the gravity of situations. This story made this health issue real. It will also help me remember the issues more clearly. Now when I think about hypertension this story will help me remember the key facts.	personal stories help me better understand the gravity, made health issues real; this story will help me remember the facts	better understanding
Yes, it did increase my knowledge. Found it to be helpful.	increase my knowledge, helpful	better understanding
I found the story to be very helpful. By humanizing the experience, it allowed me to connect. It was both personal and easy to understand.	humanizing the experience, allows me to connect and easy to understand.	better understanding
It helps increase my knowledge about hypertension and the food to eat and avoid.	increase my knowledge about hypertension.	proactive

Reminding me that hypertension is a silent killer and that I should monitor my blood pressure daily.	reminding me that hypertension is a silent killer.	silent killer
It is educative. Now I discover that some of the food in my diet are risk to my blood pressure – salt, canned and packed food. I also discover the great benefit of exercise.	foods in my diet are risk to my BP; benefit of exercise	Understanding of effect of salt on hypertension
Exercise every day. Eat a lot of vegetable, daily walking, less salt, less alcohol.	proactive	Lifestyle adoption
The story was helpful. It gave some insight into struggles of hypertension while also providing strategies.	story was helpful, insight into struggles with strategies	
Help think on how to control my blood pressure.	helps me think on how to control my BP	
Great information		
It helps me understand hypertension and better.	helps understand.	better understanding
It uncovers most of the things I did not know about high blood pressure, like causes and how to control it.	I did not know things like causes and how to control.	better understanding

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Josephine N. Okafor

Type full name as it appears on submission

5/18/2021

Date