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Health Awareness of Hypertension in the African American Community

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Walden University

College of Nursing

This is to certify that the doctoral study by

Rosemond Nguiffo

has been found to be complete and satisfactory in all respects,
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the review committee have been made.

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2022

Abstract

Health Awareness of Hypertension in the African American Community

by

Rosemond Nunge Nguiffo

MSN, Walden University, 2016

Project Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Nursing Practice

Walden University

August 2022

Abstract

The practice problem this doctoral project addressed is the lack of clinical staff knowledge on self-care management of hypertension (HTN). Addressing this health crisis with current evidence-based patient education guidance that clinical staff can use to teach patients has the potential to increase nursing knowledge and confidence in providing patient education on self-care management of HTN. The purpose of this project was to explore the known nursing practice gap and answer the practice-focused question to determine if an evidence-based, standardized health literacy teaching guide for nurses would improve nursing knowledge and confidence in applying health literacy and teach-back methodology in patient education. The aim was to help nurses teach patients about self-care management of HTN with the goal of reducing complications and improving outcomes for African American (AA) population. The training leveraged Orem's self-care and Knowles's Adult Learning theories as frameworks to optimize learning outcomes. Evidence for this project included clinical guidelines, research reports, primary peer-reviewed publications, and a knowledge assessment. The pre-training knowledge assessment indicated 42.9% of the 14-nursing staff did not have adequate knowledge about self-care management for HTN. Post-training program, 71.4% of the nursing staff improved knowledge and confidence in providing patient education. An implication of this project is the potential to improve health literacy and outcomes for AA patients with HTN. A recommendation is to include a standardized and evidence-based health literacy teaching guide on self-care management of HTN in the AA population as a resource for nurses.

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Dedication

I would like to first thank my Almighty Lord and savior, Jesus Christ, for giving me the opportunity, guidance, strength, and staying focused to complete my DNP project despite the distractions/responsibilities.

To my dear husband, Alain Fotso Nguiffo, our five exceptional children, Yannick, Robert, Jordan, Kayla, and Benjamin, and my mother, Susanna Nunge, for their support and understanding throughout my college years. Thank you all for giving me the space when I needed to complete my research papers and this DNP project.

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Section 1: Introduction

Introduction

Hypertension (HTN) is a long-term medical condition in which the blood pressure (BP) in the arteries is persistently high. According to Arnett et al. (2019), the new guideline definition of HTN is any systolic BP measurement of 130 mmHg or higher or any diastolic BP measurement of 80 mmHg or higher. It should be treated earlier with lifestyle changes and in some patients with medication. There are crises in the African American (AA) communities with a high incidence of HTN. Statistics revealed that AAs are more likely to die of this preventative disease (HTN) because of obesity and morbidities, and they have a higher prevalence of physical inactivity than other ethnic groups (Fei et al., 2017).

The lack of participation in health education programs and the inconsistent and unhealthy lifestyle of HTN management in the AA community are the two significant challenges leading to uncontrolled, resistant, and complicated HTN. Research has shown that the self-efficacy of people with HTN can effectively be improved by implementing self-care management programs that promote lifestyle modifications and disease prevention (Moss et al., 2019). AAs with high BP experience difficulties due to a lack of self-care management of their HTN compared to non-Hispanic Europeans. The lack of studies in conventional programs to reduce unhealthy behaviors in the AA communities highlights the critical need for the project to emphasize and address this problem from the AA population's social outlook, which would result in a positive social change.

This Doctoral of Nursing Practice (DNP) project influenced a group of primary clinic nurses by offering education to nurses about AA HTN self-care and the tools for patient self-care management of HTN. The DNP project relied on an evidence-based and standardized health literacy teaching guide as a resource to teach nurses how to bridge the gap in nursing that is prevalent among the AA population. The Health Literacy Teaching Guide emphasizes the importance of using plain language tools such as the Flesch-Kincaid Grade Level Readability Formula to measure written patient information with a target to individualized reading levels. The teaching guide also includes how to apply teach-back methodology to assess patient understanding of content and plan of care with necessary healthy lifestyle modifications.

Problem Statement

Chronic HTN affects cerebral vessels, arteries, and functions, leading to worse functional outcomes such as stroke, end-stage renal disease (ESRD), dementia, and increased mortality. According to Maier and Kubis (2019), about 218 million people meet the definition of disabled with HTN as the primary cause. HTN also accounts for 10.4 million deaths in the United States. The prevalence of HTN is a public health challenge and is attributed to numerous risk factors such as physical inactivity, being overweight, alcohol intake, and poor nutrition (Motlagh et al., 2016).

AA men have the highest death rate from HTN, followed by AA women (Graham, 2015). According to the Centers for Disease Control Vital Statistics Reports, 40.5% of AA aged 20 and over are diagnosed with HTN and are taking antihypertensive

medications (Heron, 2019). The burden of this disease in the AA community remains high and is the primary cause of disparities in life expectancy (Carnethon et al., 2017).

HTN is responsible for 50% of the disparity in mortality between AA and their Caucasian counterparts in the United States of America (Musemwa & Gadegbeku, 2017). AAs develop HTN earlier in life and have higher average BP levels but lower control rates than other racial-ethnic groups. Hypertensive organ damage includes stroke, hypertensive nephropathy, ESRD, left ventricular hypertrophy, and coronary heart disease. This population increased cardiovascular morbidity and mortality due to insufficient health information, medication adherence, and poor BP control (Waldron et al., 2019).

The relevance of this local practice problem was approximately 85% of patients in a local private clinic in the northwest region of the United States are AA. Ninety percent of the patients in this clinic are diagnosed with HTN (Personal communication with the clinic director, July 2020). According to the nurses providing care for these patients, the local nursing practice problem was approximately 75% of the patients are inconsistent with treatment. Inconsistence and lifestyle modification of HTN management in the AA community are the two significant challenges that lead to uncontrolled, resistant, and complicated HTN. The literature further explained that AAs have low adherence to lifestyle recommendations and are engaged in unhealthy behaviors such as physical inactivity, high fat and sodium-containing food consumption, and tobacco and alcohol use (Adinkrah et al., 2020).

The nursing staff at the local site attributed patient non-adherence to the treatment plan to poor living conditions, non-adherence to physical activities, and lack of knowledge about disease management (personal communication with clinic nurses, July 2020). Many patients with HTN ignore treatments and regular follow-up visits, which negatively impacts their quality of life and self-efficacy (Khademian et al., 2020). Interventions with well-designed education plans and patient participation are necessary to increase HTN knowledge, self-monitoring, and control (Khademian et al., 2020). According to the clinical coordinator for the clinic (July 2020), they did not have a current evidence-based health literacy teaching guide for nurses. Previously, each nurse in the clinic educated patients about HTN based on the nurse's knowledge.

The practice problem for this project was the clinic nursing staff did not have a current evidence-based and standardized patient education guidance to teach the patients about self-care management for HTN. This DNP project is significant to nursing practice for this local private practice clinic by providing them with the evidence-based and standardized health literacy teaching guide to use as a resource for teaching AA with HTN about self-care management. Educating AA patients with HTN about the disease and evidence-based management of HTN can empower patients to implement self-care practices and decrease their chance of developing target organ damage. Research indicates that the self-efficacy of people with HTN can effectively be improved by implementing self-care management programs that promote healthy lifestyle behaviors and disease prevention (Moss et al., 2019). AAs with HTN experience difficulties maintaining ideal well-being due to the lack of studies in conventional programs to

reduce unhealthy behaviors, which highlights the critical necessity for projects to emphasize and address this problem from the perspective of the AAs populations, which results in positive social change.

The local nursing practice problem of lack of proper self-care management of HTN may be addressed by providing patients with appropriate patient education on self-care as a key to maintaining, restoring, and enhancing self-care practices and overall quality of life (Khademian et al., 2020). The DNP project could positively influence the field of nursing by providing the clinical staff with educational programs in the clinical settings that equip them with the correct information to train AA patients with the right tools, such as a portable BP machine. In addition to plain language and health literacy principles, the clinic staff was also taught the importance of demonstrating the BP machine and using teach-back methodology with patients to improve self-care management of their HTN.

Purpose

The significant gap in practice the doctoral project addresses was the need for a current evidence-based and standardized health literacy guide as a resource for the nurses working in a private clinic in the northwest region to teach patients with HTN about the disease and self-care practices. The lack of research on AAs and hypertensive self-care illustrates the well-being variations between AA populations and non-Hispanic European Americans involving a lack of autonomy in self-care management of HTN (Moss et al., 2019). There was a gap in nursing practice due to the lack of clinic staff knowledge specific to patient education and health literacy principles. Also, the clinic did not have

an evidence-based and standardized health literacy guide as a clinical staff resource to teach self-care management of HTN specific to AA patients.

The practice-focused question for this project was: *Will an evidence-based, standardized health literacy teaching guide for nurses improve nursing knowledge and confidence in applying health literacy and teach-back methodology in patient education?*

This project addressed this gap in practice by developing patient education materials using plain language and a health literacy education guide to effectively improve self-care practices related to diet and weight management among the vulnerable population with HTN (Waldron et al., 2019). With a higher level of knowledge from their healthcare providers regarding HTN self-care practices, AA would better adhere to medication and lifestyle recommendations such as weight management and healthy food choices (Adinkrah et al., 2020). Therefore, by improving nurses' knowledge about applying health literacy and plain language principles and following the standardized, evidence-based health literacy teaching guide could enhance patient knowledge about HTN self-care practices.

The project could further empower patients to implement strategies to decrease the associated complications from HTN (Waldron et al., 2019). Clear and plain language communication between the nurse and patient enhances patient-centered communication, improves medication adherence, and promotes chronic disease self-management, fostering patient health literacy (Higgins & Scott, 2019). Additionally, leveraging a teach-back methodology encourages the patient to restate in their own words what they have learned, allowing the nurse to assess the patient's understanding of the patient

educational content. The teach-back methodology increases patient knowledge, skills, and confidence to self-manage their HTN and improve health outcomes. Health education that leverages a teach-back method increases patients' understanding of their health needs and health literacy, promotes self-care management, and improves health outcomes for adults with chronic diseases (Yen & Leasure, 2019). Using plain language principles and applying teach-back methodology to patient education would potentially enhance quality outcomes for this patient population.

Nature of the Doctoral Project

The location of this DNP was a wellness center run by a physician who instills values for preventive health care in all his patients without regard to sex, race, or socioeconomic status. The evidence for this project was obtained from online databases, including CINAHL, MEDLINE, EMBASE, and Cochran. A more in-depth literature search was performed using the Walden Library with literature that summarizes the identified problem of HTN with key search terms, including:

1. African Americans and hypertension
2. hypertension
3. elevated blood pressure
4. staff knowledge of hypertension in African Americans
5. hypertension and lifestyle management
6. hypertension management
7. the role of educating nurses to improve consistency in the AA population and Eight Joint National Committee (JNC-8) management guidelines

The evidence collected from these sources used the Johns Hopkins evidence-based grading tool to identify the highest quality of evidence to support the development of the standardized health literacy teaching guide. It was based on plain language principles to allow patients and staff to handle HTN efficiently to avert target organ illnesses like cardiovascular diseases.

Through a collaborative discussion with the administrator, the goal was to develop an evidence-based and standardized health literacy teaching guide that leverages basic language principles, teach-back methodology, and the JNC-8 evidenced-based guidelines for the control and management of HTN. This new health literacy teaching guide was explicitly for the clinic nurses and nurse practitioners to reinforce the JNC-8 management of HTN and promote patient self-care and healthy behavior changes in patients. The anticipated outcome was improved knowledge of the nursing staff through the development, implementation, and training of the standardized health literacy teaching guide. Effective patient education to improve health literacy through applying plain language principles and teach-back methodology will improve patient outcomes.

The participants in this project completed a pre and post knowledge assessment using a password-protected free-online survey tool. The pre and post knowledge assessment data were organized in MS Excel from assessing and analyzing the staff knowledge of the literature on patient education, teach-back methodology, and self-care management of HTN data. The pre and post knowledge assessment scores were then compared using MS Excel through a descriptive statistic.

Significance

The stakeholders identified for the project were the clinic nursing staff working with the patients, nurse practitioners, physician assistants, administrative assistant staff, health educators, and medical assistants. Other stakeholders also include current and future patients in the clinic who may benefit from improved health literacy and health outcomes. The clinic leaders were also stakeholders in this project as they have a goal to reduce costs associated with poor patient outcomes, chronic disease, and avoidable clinic visits. HTN occurs more frequently in AA men and women than in other ethnic groups and is a primary cause of disparities in life expectancy (Carnethon et al., 2017). It is crucial to provide AA patients with information to increase their knowledge about HTN, self-monitoring practices to control their HTN, and techniques to enhance their life quality.

By providing a health literacy teaching guide, the clinical staff stakeholders increased both knowledge and confidence in using health literacy, plain language, and teach-back methodology to teach patients self-care and managing their HTN (see Tables 1 and 2). The patients as stakeholders in their health include increasing the AA population's understanding of modifiable risk factors related to HTN to promote healthy behavioral changes and decrease the public burden of HTN.

The potential contributions to nursing practice included the development of a standardized health literacy teaching guide for nurses to improve their patient education knowledge and confidence in using health literacy and plain language principles and teach-back methodology. The staff in this clinic received both in-person didactic training

and the health literacy teaching guide as a resource to support them in patient care for this specific population of patients.

Providing this resource positively impacted the nursing staff at this clinic through improved confidence and knowledge in HTN self-care and management and the importance of health literacy and patient education. Improving patient education that applies health literacy and plain language principles could positively impact social change for this patient population, potentially improve patient care outcomes and promote self-care for AA patients with HTN. This project could be successfully implemented and transferable to similar private practice clinics with a higher percentage of AA patients with HTN and comparable demographics and social determinants of health.

This DNP project increased staff knowledge about HTN management through training and providing the clinic staff with an evidence-based standardized teaching guide as a resource. According to the Walden University mission and statement, “social change is a deliberate process of creating and applying ideas, strategies, and actions to promote the worth, dignity, and development of individuals” (Walden University, 2021, par.1). The goal was to contribute to the advancement of nursing practice by providing the nursing staff with evidence-based standardized information. The ultimate goal was for the clinic staff to provide more robust patient education to AA patients to improve their own self-care and management of their HTN. The concepts and principles in this training may be applied to and benefit other patient populations with chronic health conditions. This level of impact to nursing staff and patients clearly reflects Walden’s mission and vision of

social change. This health literacy teaching guide and evidence-based patient education helped these clinic nurses to feel confident in their ability to provide more effective patient education. If they apply these training methodologies and guidelines consistently, they may also see improved patient outcomes and potentially reduce the adverse effects of chronic HTN and have a positive influence on the life quality for AA patients.

Summary

This section introduced the nature of the project to increase the knowledge of patient education and principles of plain language and health literacy in a population of nurses caring for AA patients with HTN. The significance of this project was its capacity to help address a known public health issue associated with the high rates of HTN in the AA population. The goal of improving health literacy through patient education was to improve self-care and self-management of HTN in this patient population in the selected local setting. The following section introduces the roles and purpose within this planned DNP project, including its significance to the nursing practice, and summarizes used definitions and theories.

Section 2: Background and Context

Introduction

The practice problem for the DNP project was the clinic nursing staff did not have the baseline knowledge and confidence to provide effective education for the AA population diagnosed with HTN. HTN often leads to other health diseases and comorbidities such as stroke, renal failure, or myocardial infarction (Commodore-Mensah et al., 2017). AA patients with HTN face many issues sustaining optimal health due to their perception of illness and lack of self-care management of HTN. Nurses in the clinical site for this project lacked confidence and a foundational understanding of health literacy, plain language principles, and teach-back methodology. The practice-focused question was: *Will an evidence-based, standardized health literacy teaching guide for nurses improve nursing knowledge and confidence in applying health literacy principles and teach-back methodology in patient education?*

This section covers the concepts, models, and theories used as a framework to guide the doctoral project. The relevance to nursing practice offers a brief history of the broader problem and addresses the gap in practice using evidence-based knowledge to improve practice. The local background and context section summarizes the local evidence used to answer the practice-focused question and the DNP student's role in this project.

Concepts, Models, and Theories

The staff education and health literacy teaching guide used Orem's self-care and Knowles's adult learning theories to provide a framework for developing and delivering staff and patient education.

Orem's Self-Care Theory

Dorothea Orem developed the foundation of Orem's self-care theory. A theorist who pioneered self-care focused on the practice of activities that individuals perform on their own to maintain quality of life (Khademian et al., 2020). Orem's self-care theory involves correcting a health condition by teaching and guiding individuals to promote self-care. Khademian et al. (2020) showed that training self-care based on Orem's theory could improve the quality of life of patients with HTN in the outpatient care setting. Patients with chronic diseases such as HTN need skill, experience, and motivation to carry out the behaviors required to improve and maintain their health.

Clinical evaluation of self-care management of HTN with AAs using educational programs based on Orem's nursing theory according to the needs of the patients was incorporated into nursing practice because it revealed improvements in BP. Khademian et al. (2020) conducted an 8-week quasi-experience randomized control study to determine the effect of self-care management of HTN education based on Orem's nursing theory on the quality of life of a patient with HTN. The Khademian et al.'s (2020) study concentrated on quality of life of hypertensive patients and strategies used by people to promote health questionnaires. Patients were selected using convenient sampling and divided equally into two control and experimental groups based on random allocation.

The results indicate training self-care based on Orem's theory could improve patients' quality of life with HTN (Khademian et al., 2020).

Knowles' Adult Learning Theory

American educator Malcolm Knowles introduced the concept of the Knowles's adult learning theory in 1968, which used the term *andragogy*, a Greek word synonymous with adult education, in other words, art and science of adult learning (Zeraatkar et al., 2016). According to Twaddell (2019), Knowles' adult learning theory guides the staff education, enhance the nurses' competencies in delivering quality nursing care, and increase the patients' knowledge. Zeraatkar et al. (2016) revealed that Knowles's adults learning theory guides adult learners on interesting subjects and topics that have the most immediate relevance and impact on their job, health, and personal life. Knowles's adult learning theory provided the basis for the development and delivery of the nursing staff education and resource guide for this project and enhanced their knowledge and confidence in health literacy how to promote self-care management of HTN in AA patients.

Using these two theories together complemented this project because they both focus on staff education to maintain and improve quality of life. Orem's self-care theory focuses on an individual's ability to manage self-care by incorporating healthy behaviors needed to maintain optimal care. In contrast, Knowles' adult learning theory focuses on providing the basis for the nurses to be aware of the learning activities to enhance their knowledge and increase their confidence.

Definition of Terms

African Americans: An ethnic group of Americans with total or partial ancestry from any of the racial groups of Africa. The term African American generally denotes descendants of enslaved Black people born in the United States. At the same time, some recent Black immigrants or their children may also come to identify as African American or even differently (Cherry et al., 2020).

Evidence-based practice: A set of recommendations that clinicians can use to outline treatments and care for specific medical conditions (AHA, 2020).

Health literacy principles: It refers to the capacity of a person to use, understand, process, and receive health information to make informed decisions concerning their health care (Casella, 2018).

Hypertension (also known as high BP): The excess force of blood against the walls of the arteries as the heart pumps blood to other parts of the body, resulting in disease (e.g., heart disease and stroke), which is a leading cause of death (CDC, 2003). The range is when a person's systolic BP is more than 140 mm Hg, diastolic BP is more than 90 mm Hg, or both (Arnett et al., 2019).

Lifestyle modification: Altering long-term habits, typically of eating or physical activity, and maintaining the new behavior for months or years. Lifestyle modification can treat various diseases, including HTN (Filippou et al., 2020).

Plain language principles: These principles focus on written information that is logically organized, concise, and clear (Casella, 2018). Individuals should be able

to meet their needs by using what they find, understanding things they see, and finding things needed.

The *teach-back methodology*: Is used to verify patients' understanding of their healthcare information (Yen & Leasure, 2019). Primarily, the strategy is recommended to take health literacy precautions universally.

Relevance to Nursing Practice

This doctoral project has relevance to nursing practice by providing in-person training and evidence-based and standardized health literacy guide to increase staff knowledge and confidence in teaching self-care management of HTN specific to AA patients. The project was designed to address a known gap in practice by providing staff education and an evidence-based and standardized health literacy education guide. The goal was to empower the clinic staff at this designated project site to educate AA patients more effectively to be proactive and manage their HTN.

According to Arnett et al. (2019), the new guideline definition of HTN is any systolic BP measurement of 130 mmHg or higher or any diastolic BP measurement of 80 mmHg or higher, which should be treated earlier with lifestyle changes and in some patients with medication. Chronic HTN affects cerebral vessels, arteries, and functions, leading to worse functional outcomes such as stroke, ESRD, dementia, and increased mortality. According to Maïer and Kubis (2019), about 218 million people meet the definition of disabled from HTN yearly, accounting for 10.4 million deaths in the United States. The prevalence of HTN is a public health challenge and is attributed to numerous

risk factors such as physical inactivity, being overweight, alcohol intake, and poor nutrition (Motlagh et al., 2016).

Inconsistency and lack of self-care management of HTN in the AA community are a challenge that leads to uncontrolled, resistant, and complicated HTN. The literature further explains that AAs have low adherence to lifestyle recommendations and are engaged in unhealthy behaviors such as physical inactivity, high fat and sodium-containing food consumption, and tobacco and alcohol use (Adinkrah et al., 2020).

The nurses at the local clinic site attributed patient non-adherence to the treatment plan to poor living conditions, low physical activities or a sedentary lifestyle, and a lack of knowledge about disease management (personal communication with clinic nurses, July 2020). Many patients with HTN ignore treatments and regular follow-up visits, negatively impacting their quality of life and self-care management of their chronic disease (Khademian et al., 2020). Interventions with well-designed education plans and patient participation are necessary to increase HTN knowledge, self-monitoring, and control (Khademian et al., 2020). According to the clinical coordinator for the clinic (July 2020), they did not have a current evidence-based health literacy teaching guide to use as a resource for nurses to use for providing patient education. Therefore, each nurse in the clinic educated patients about HTN based on their own knowledge versus using a standardized approach which applies health literacy, plain language principles, and teach-back methodology.

According to Treciokiene et al. (2021), the advantage of teaching AA's self-care management of their HTN through lifestyle modifications such as weight-reducing diets,

regular exercise, and restricted alcohol and salt intake showed positive effects on BP.

Health care professionals have an essential role in supporting patients in achieving such lifestyle alterations to improve BP control. Previous systematic reviews have shown that nurse-led interventions can successfully improve BP control. Still, those studies did not focus on interventions of self-care management of HTN with lifestyle modification (Treciokiene et al., 2021). Managing HTN is a significant concern for AA patients and their health care providers. AAs are disproportionately impacted by HTN, suffering earlier onset and greater disease severity and premature cardiovascular mortality than the general population (Moss et al., 2019). A better understanding of the self-care management of these populations will lead to the enhanced design of the culturally acceptable intervention.

The clinic site for this project did not have a current evidence-based and standardized patient education guide to use as a resource to teach AA patients with HTN about the disease and self-care practices. The clinic used a health risk assessment form given to patients with complex chronic diseases to fill and identify their clinical and non-clinical needs to refer them to specialized care. Still, patients were inconsistent because they lacked knowledge of their disease and the associated complications.

This doctoral project might advance nursing practice beyond this clinical site through improving nursing knowledge and confidence in using health literacy and plain language principles and applying teach-back methodology in patient education. It also advances nursing practice and ability to apply appropriate care for this specific AA patient population with HTN.

Local Background and Context

About 85% of patients at this project site, which is a private clinic in the northwest region of the United States, are AA. Ninety percent of the patients in this clinic are diagnosed with HTN (Personal communication with the clinic director, July 2020). According to the nurses providing care for these patients, the local nursing practice problem was approximately 75% of the patients are inconsistent with self-care and treatment. Inconsistency and lifestyle modification of HTN management in the AA community are the two significant challenges that lead to uncontrolled, resistant, and complicated HTN. Nurses at the clinic site lack the confidence and foundational knowledge in health literacy and plain language principles, applying teach-back methodology to provide evidence-based education to AA patients on self-care for HTN (see Tables 1 and 2).

The literature further explains that AAs have low adherence to lifestyle recommendations and are engaged in unhealthy behaviors such as physical inactivity, high fat and sodium-containing food consumption, and tobacco and alcohol use (Adinkrah et al., 2020). According to Warren-Findlow et al. (2020), AAs with HTN encounter significant challenges in the activities contributing to self-care management of their HTN.

The administrator at the selected site provided their mission statement: “To provide the best care to every patient through integrated clinical practice, staff education and research” (Personal communication with the clinic director, September 2020). The clinic’s mission statement aligned with this project to an evidence-based, standardized

health literacy teaching guide that increased nurses' knowledge and ability to provide more effective patient education, which will improve quality patient care and outcomes. The administrator at the project clinic site further explained that there was a need in this clinic to enhance nursing staff knowledge of health literacy using plain language principles. The objective was to equip the clinic nurses to educate patients and improve self-care management of their HTN and the overall quality of life for AA patients with HTN more effectively. Research indicates that self-care management of people with HTN can effectively be improved by implementing a health literacy teaching guide that promotes self-care and healthy behavior changes (Moss et al., 2019). This DNP project influenced nursing at this clinic and has the potential for a greater influence in the nursing field by providing nursing training, information, and resources essential for AA patients to improve self-care management of their HTN.

There are few studies concerning self-care management of HTN in the AA population. Therefore, the plan was to provide an evidence-based standardized health literacy and patient education guide. It might help increase nursing knowledge and confidence in teaching self-care and management of HTN in this targeted population using plain language, health literacy principles, and teach-back methodology. To promote the equal and appropriate treatment of HTN, the state and federal governments should articulate techniques to validate research in handling HTN in AA and all ethnicities.

The State of California has 28% of Black adults with HTN, higher than Whites at 22% and Latinos and Asians at 15% (CDC, 2022). OMH (2020) implemented a national HTN control initiative to address disparities among racial and ethnic minority

populations. It happened by integrating remote BP monitoring technology into the treatment of HTN. High BP has continued to be the leading risk factor for heart diseases, including a lack of social determinants of health such as health literacy of HTN self-care management. Healthy People's 2020 goals are to improve the health of all individuals, and it is congruent with the nurse's role to educate and empower patients to adopt a healthy lifestyle.

Role of the DNP Student

As a student (DNP), I am passionate about making a difference in my nursing practice. My primary duty was to ascertain the significant issues in my selected private clinical practice site, provide staff instruction, and develop an evidence-based and standardized health literacy patient and education guide. The evidence suggests this did increase clinic staff knowledge and confidence to teach self-care management of HTN-specific to AA patients.

My motivation and interest stemmed from extensive research on managing AA patients with HTN and self-care management of the illness. Ideally, there is a lack of evidence-based research on staff education and self-care management of HTN in this targeted population. During the project, I also realized there was a high incidence of HTN diagnoses among the AA patients in the selected clinic. The nurses report that they did not have a current evidence-based and standardized patient education guide to use as a resource to teach patients with HTN about the disease and self-care practices.

I developed a staff education program to enable the nurses to gain more knowledge and confidence in educating these patients on self-care management of their

HTN. The focus was on supporting the management of a healthy lifestyle, including a healthy diet, adherence to their medication regimen, exercise, sleep, and smoking cessation. My DNP education provides me with the knowledge, skills needed to be a change agent and the ability to fill the identified gap in nursing practice at this clinical site. My focus on staff training on health literacy, plain language, teach-back methodology, and management of HTN with evidence-based and standardized practice guidelines in this population would bridge the gap in education within health care.

A potential bias included my concern that staff may become resistant to change and prefer to adhere to their current and familiar processes and tools for patient education. My plan to overcome the bias was to understand any staff resistance and apply adult learning principles to educate staff on the importance of increasing knowledge on health literacy, plain language, and teach-back methodology to improve the overall quality of care. I overcame this bias was to become an expert in the care and management of patients with HTN so I could effectively communicate my knowledge of best practices and guidelines to enhance their baseline knowledge of HTN. My other personal bias was that this type of patient education leveraging plain language and teaching back methodology is effective. According to the research, leveraging plain language in patient education will improve patient care outcomes. I believed going into this project that the staff would adopt and apply these new tools to their own practices in patient education.

Summary

Section 2 explored Orem's self-care and Knowles' adult learning theories to guide staff education and health literacy teaching development. Orem's self-care theory

provided the framework for developing and delivering self-care management skills to improve lifestyle choices and quality of life of patients with hypertension. At the same time, Knowles' adult learning theory guided the staff education and enhanced the nurses' competencies in delivering quality nursing care while increasing the patients' knowledge. Additionally, this section connected the project's significance to the local background, nursing practice, content, and my responsibility as a student (DNP) in this proposed project for staff education. Finally, the DNP project might contribute to advancing nursing practice by providing nursing care (socially based) that would empower the patients through modification of lifestyle and self-management of their HTN.

Section 3: Collection and Analysis of Evidence

Introduction

The DNP project problem was the lack of nursing knowledge and confidence in health literacy, plain language, and applying the teach-back methodology in patient education. There was a high need for specific patient education for AA HTN patients to increase their self-care and management of HTN. The intervention was to develop and deliver staff education and an evidence-based and standardized health literacy teaching guide that leverages the JNC-8 evidenced-based guidelines for the control and management of HTN for staff to use as a resource. The aim was to increase nurses' knowledge and confidence in how to apply health literacy and plain language principles and to follow the standardized, evidence-based health literacy teaching guide. Using the information from the training and teaching guide and leveraging the health literacy and plain language principles in patient education would potentially lead to improved health care outcomes for this patient population.

Orem's self-care and Knowles's adult learning theories served as a framework for the development and delivery of in-person staff education and health literacy standardized teaching guide for staff to use as a resource for management (self-care) skills to improve lifestyle choices and life quality of patients with HTN. Incorporating Knowles's, adult learning theory guided the development of the clinic staff education and competency in delivering quality nursing care while increasing the patients' knowledge on their disease management and self-care. Implementing the staff education would

promote staff's knowledge and skills and address the challenges of self-care management of HTN in the AA communities and other ethnic groups.

In addition, this section covers the sources of evidence, practice-focused question, and details of the literature review, analysis, synthesis, and summary conclusion within this planned DNP project.

Practice-Focused Question

The local nursing practice problem for this private clinic established that the nurses did not have the knowledge or confidence in health literacy and plain language principles for patient education (Personal communication with the clinic director, July 2020). They did not have the training or a current evidence-based and standardized patient education guide to use as a resource to teach AA patients with HTN about the disease and self-care practices.

The practice-focused question for this local private practice clinic was, *Will an evidence-based, standardized health literacy teaching guide for nurses improve nursing knowledge and confidence in applying health literacy and teach-back methodology in patient education?*

The nursing staff increased their knowledge and confidence in how to educate the patient about self-care management for HTN. Also, it included a corresponding evidence-based standardized health literacy teaching guide for AA patients with HTN. Patient education materials and methods using plain language and health literacy principles effectively improved self-care practices related to diet and weight management among the vulnerable population with HTN (Waldron et al., 2019).

AAs with a higher level of knowledge gained from their health care providers regarding HTN self-care practices adhere more to medication and lifestyle recommendations such as weight management and healthy food choices (Adinkrah et al., 2020). The plan was to increase the nursing staff's knowledge and confidence in patient education through developing a custom staff education program and teaching guide. This project used the framework of Orem's self-care and Knowles's adult learning theories to develop the content and included health literacy and plain language principles in both the staff education and in the standardized, evidence-based health literacy teaching guide.

Sources of Evidence

These sources were obtained from online databases, including CINAHL, MEDLINE, EMBASE, and Cochran. A more in-depth literature search was performed using the Walden Library with literature that summarized the literature on patient education and adult education theory to develop my staff education. Key words during the search terms included *hypertension management, lifestyle management and hypertension, staff knowledge about hypertension of the African Americans, elevated blood pressure, hypertension and African Americans, the role of educating nurses to improve consistency in the AA population, and JNC-8 management guidelines*. Resources such as PlainLanguage.gov, AHRQ, and other published patient education resources assisted in developing and delivering the staff education and teaching guide. The goal was to use the evidence gathered from these sources to develop staff education and the evidence-based standardized teaching guide to improving staff knowledge specific to

patient education on self-care management of HTN specific to AA using plain language principles.

Effective patient education using plain language and health literacy principles is essential in improving patient outcomes when providing information based on scientific evidence and recommendations to reduce health disparities (Amuta-Jimenez et al., 2019). Current data from the clinic showed that effective nurse-patient communication must incorporate health literacy and plain language principles. The goal of this clinic was to engage the clinicians and patients in shared decision making, to establish patient goals, and to assess patient self-care knowledge and health literacy of their chronic HTN diagnosis (Personal communication with the clinic director, March 2020).

To assess an increase in staff knowledge before and after the scheduled in-person training and delivery of the teaching guide as a resource, they received a 12question pre and post knowledge assessment using a Likert-type scale. Ten of the questions focused on staff knowledge of HTN, health literacy, and teach-back methodology. The other two questions were self-assessment of their own knowledge and confidence in these topics. Collecting data from the pre and post knowledge assessment allowed for the descriptive analysis of the efficacy of the staff education and the evidence-based standardized health literacy teaching guide. The project goal was to increase clinic staff knowledge and confidence with the ultimate goal to improve patients' health literacy, closing a gap in nursing practice and if the skills and guidelines are consistently applied, will lead to positive changes in health promotion behaviors, which would improve outcomes for this patient population (Walters et al., 2020).

Evidence Generated for the Doctoral Project

The evidence generated for the DNP project was graded using Johns Hopkins EBP tool to demonstrate the highest-quality evidence to support the development of the teaching guide. The evidence was acquired through a database search using CINAHL, MEDLINE, EMBASE, and Cochran, extracting scholarly peer-reviewed articles restricted to adult participants above 18 years of age who participated in adult education on self-care management of HTN. These articles summarized the literature on patient education on self-care management of chronic diseases, specifically HTN, and on adult education theory to develop staff education.

Additional evidence was collected from the literature, published and reputable sites such as PlainLanguage.gov, AHRQ, and other patient education resources to support the development of the staff education and patient teaching guide. The project used an education kit from the evidence gathered via literature review, including patient care and treatment guidelines from the JNC-8 on HTN management, to develop and implement a health literacy teaching guide for the nurses. The in-person education and standardized guide include effective strategies based on the latest research and the highest-quality evidence on self-care management of HTN in the AA population.

The staff education and health literacy teaching guide leveraged Orem's self-care and Knowles's adult learning theories to provide a framework for developing and delivering staff and patient education. The project aligned with the American Association of College of Nursing's Doctoral Essentials, such as Organization and Systems

Leadership for Quality Improvement and Health Care Policy for Advocacy in Health Care (American Association of Colleges of Nursing, 2006).

Before developing the Health Literacy Teaching Guide, the nursing staff received a pre knowledge-based assessment. The goal was to evaluate their baseline knowledge of health literacy and plain language principles in patient education and their baseline knowledge of patient self-care and management of HTN. The knowledge-based assessment assessed nurses' baseline knowledge of the relationship between health literacy in patients and their adherence to self-care management of HTN to improve health outcomes.

My aim was to improve nursing staff knowledge of health literacy principles, effective teaching methodologies, and basic self-care information for this patient information. The project included a pre and post knowledge assessment of the effectiveness of the training and health literacy teaching guide and a final summative evaluation provided to the leadership sponsoring the training. The same pre and post knowledge assessment was administered before and after staff training on the health literacy teaching guide. The pre and post knowledge assessment used multiple choice and Likert-type scales to evaluate knowledge and confidence. The assessment was administered through a password-protected and anonymous web-based survey. The results were anonymously compiled into MS Excel, comparing pre and post learning outcomes to provide a descriptive analysis and summative evaluation.

The pre and post knowledge assessment data were compared using MS Excel and summative and descriptive analysis tools. The DNP student developed and paid for any

staff education materials for this project, whereas the clinic administrator allowed the staff the time to participate in the training.

The training and the guide were delivered in person upon completing the staff education program and served as a resource to nursing staff on optimizing patient health literacy, self-care, and promoting and maintaining health for AA patients with HTN. The guide included the basic health promotion guidelines from JNC-8 guidelines on HTN.

Participants

The clinic educator identified and selected learners who attended this staff education program. The participants (learners) in the staff education for this project were composed of four advanced practice registered nurses, four licensed vocational nurses, and six medical assistants. There was a total of 14 team members who attended the 30-minute clinic-approved staff education.

Procedures

The Health Literacy Teaching Guide covered the various aspects of the project. Orem's self-care and Knowles's adult learning theories served as the framework for staff education development. Health literacy and plain language principles functioned as the foundation for developing the evidence-based and standardized health literacy teaching guide.

I emailed the clinic administrator and the selected clinical staff participants the agenda and overview of the staff education before the planned educational activity. The planned 30-minute in-person educational activity included case studies and role-play that promoted learning through personal engagement, visual aids, and written materials

printed and handed to each participant, with more copies given to the administrator for future reference.

The evidence-based and standardized health literacy teaching guide stressed the importance of using plain language tools such as the Flesch-Kincaid Grade Level Readability Formula. This knowledge assessment tool measured written patient information with a target at or below the 4th-grade reading level. The health literacy teaching guide reviewed ways to apply teach-back methodology to assess patient understanding of content and plan of care or necessary healthy lifestyle modifications.

The Flesch-Kincaid Grade Level analysis tool helped to grade the literature evidence and evaluate the nursing staff's knowledge and skill assessment. It included the pretestpre test to assess staff knowledge concerning the diagnosis of HTN at an early stage, patient self-care management, lifestyle modification of the illness, patient education, and medication adherence. Others included intervention measures and a posttest that measured the staff's confidence and knowledge in educating patients on self-care management of HTN using plain language principles. Increased staff knowledge and skills via education projects led to increased confidence and comfort with the content and its use (Ogawa & Nakatani, 2020).

In summary, the agenda and overview of the staff education before the planned educational activity were emailed to the clinic administrator and the 14 participants (four advanced practice registered nurses, four licensed vocational nurses, and six medical assistants). The project procedure included the development of content to educate the clinic nursing staff about self-care management for HTN. The content was delivered to

the fourteen participants in person at the designated clinic facility. The clinic administrator allowed the participants the requisite time to attend the education program. The training took place in a clinic site conference room. The clinic staff at the site responded to the pre and post knowledge assessment in a written tool that was then evaluated. Each participant was provided with a blank sheet of paper, a blue pen, and the pre knowledge assessment questions before the start of the training. The post knowledge assessment questions were administered after the training concluded. The pre and post knowledge assessment questions were assigned random numbers for each participant who provided alignment during descriptive analysis.

Protections

The project remained ethically sound and did not include any patient information, and to protect the confidentiality of clinic staff, no personal identifiers or information was collected for this project. The pre and post knowledge assessment data were kept anonymous by assigning random numbers to the pre and post knowledge assessments. Staff did not provide their names or personal identifiers on the pre and post knowledge assessments. Participants were notified of the anonymous and confidential nature of this project and the protection of their personal information and identification through an informed consent disclosure at the beginning of the training prior to the administration of each pre and post knowledge assessment. All the targeted participants (n=14) took part in the study willingly despite the option to opt-out of participating or completing the staff education and pre post knowledge assessment without personal or professional consequences since this was not mandatory training required of their employer.

The project protected human subjects by exclusion of any patient information, ensuring staff anonymity and confidentiality through unidentified pre and posttest data collection and aggregated and summarized data. The project did not include direct client contact throughout the education and training process.

Analysis and Synthesis

The systems for organizing the data included MS Excel software containing the pre and post knowledge assessment data. The same 12-question pre and post assessment was administered to participants to assess the knowledge and confidence of the staff (nurses) in patient education, health literacy, plain language principles, and the basics of patient self-care and management of HTN before and after the staff training.

The procedures to assure integrity for each learner during the training and education prompted them to create their private log-in and password into the online survey tool. The pre and post knowledge assessment data was transferred to the MS Excel software and did not collect personal identifiers such as IP addresses or email addresses. The individual scores were evaluated based on the descriptive analysis and improvement of individuals and collective scores from the pre and post knowledge assessment (see Tables 1 and 2). The pre and post knowledge assessment scores were compared and analyzed using the MS Excel program through descriptive analysis to assess the learner's knowledge confidence self-assessment scores before and after an educational intervention (See Figure 1).

The collected data were analyzed using MS Excel software through descriptive statistics to determine the effectiveness of the education and the evidence-based

standardized health literacy teaching guide. The pre and post knowledge assessment included 12 assessment questions:

- a. Two questions focused on self-assessment of their confidence in delivering patient education on self-care and management of HTN for AA populations.
- b. Seven questions focused on baseline knowledge of self-care and management of HTN in this patient population
- c. Three questions focused on baseline health literacy knowledge, plain language, and teach-back methodology related to effective patient education.

Summary

Section 3 of this DNP project introduced the problem and purpose of this doctoral project with the plan to develop an evidence-based and standardized health literacy teaching guide that leverages the JNC-8 evidenced-based guidelines for the control and management of HTN. Increasing nurses' knowledge about applying health literacy and plain language principles and following the standardized, evidence-based health literacy teaching guide could enhance patient knowledge about HTN self-care practices. The health literacy guide included hypertension information from peer-reviewed evidence-based practice articles and other evidence sources.

The plan was to use the evaluation of evidence gathered to address the gap-in-practice of the health literacy teaching guide effectively. It used the Likert Scale Questionnaire survey of 12-pre and post questionnaires to assess nursing staff knowledge and confidence in using plain language principles in educating hypertensive patients. The DNP student also evaluated the learner's baseline knowledge of the pre and post tests,

knowledge acquired through the educational materials provided using an MS Excel software program through descriptive analysis. In section 4, the DNP student elaborated on the project's findings, implications, recommendations, and strengths and limitations.

Section 4: Findings and Recommendations

Introduction

The objective of the project (DNP) was to solve the local problem identified where AA patients were inconsistent with self-care management of their HTN and treatment. As a result, lifestyle modification and inconsistency with the HTN management among AAs pose two considerable hurdles resulting in complicated, resistant, and uncontrolled HTN. Also, the gap identified in the nursing practice, particularly at the site, was the lack of well-designed education plans, including patient participation that is essential for nurses to teach them about the control, self-monitoring, and knowledge of the HTN. Therefore, the practice-focused question related to the research project was: *Will an evidence-based, standardized health literacy teaching guide for nurses improve nursing knowledge and confidence in applying health literacy and teach-back methodology in patient education?* The purpose of the doctoral project was to improve the nursing staff's confidence and knowledge in using teach-back, plain language, and health literacy methodologies to teach patients about the management and self-care for HTN. The goal is to lessen the mortality of the AA from HTN due to morbidity and overweight and reduce the prevalence of physical inactivity among them.

The sources of evidence for the project included thirty-two scholarly and peer-reviewed journal articles that were retrieved from MEDLINE (PubMed), CINAHL, EMBASE, and Cochran databases. The John Hopkins Evidence-Based Practice Model for Nursing and Healthcare Professionals was the hierarchy guide used to appraise the evidence of every journal article used in the project (see Appendix B). The strategy

identified the level of evidence, with Level V being the least and Level I being the highest. In essence, there were four Level 1 article, three Level II articles, five Level III articles, four Level IV articles, and two-Level V articles (see Appendix B). The data collected supported the project findings by exploring the 12 pre and post knowledge-based assessment questions. The project participants comprised six medical assistants, four licensed vocational nurses, and four advanced practice registered nurses. The participants' responses to pre and post knowledge assessments are presented.

Findings and Implications

The findings that resulted from analysis and synthesis of the collected evidence through descriptive statistics determine the effectiveness of the staff education for nurses to improve their knowledge and confidence in applying health literacy and teach-back methodology in patient education using evidence-based standardized health literacy teaching guide. To accurately gage the knowledge and confidence level of the nurses and clinical staff, a pre and post knowledge assessment Likert Scale Questionnaire survey included 12 assessment questions was created. The clinic staff at the site responded to the pre and post knowledge assessment in a written tool that was then evaluated and analyzed using MS Excel software through descriptive statistics. Each participant was provided with a blank sheet of paper, a blue pen, and the pre knowledge assessment questions before the start of the training. The post knowledge assessment questions were administered after the training concluded. The pre and post knowledge assessment questions were assigned random numbers for each participant who provided alignment during descriptive analysis.

The data collected from the pre and post knowledge assessment questions was analyzed using MS Excel software through descriptive analysis that showed a general improvement in the collective scores after the staff education training, which demonstrate increase knowledge and confidence of the staff education (Figure 1).

Table 1

Confidence Self-Assessment

| Question | Responses | Pretest | Posttest | Percentage change |
|--|-------------------|---------|----------|-------------------|
| Q1. I feel confident using the teach-back methodology for patient education | Strongly disagree | 0 | 0 | 0 |
| | Disagree | 0 | 0 | 0 |
| | Agree | 10 | 1 | -64.3 |
| | Strongly agree | 4 | 13 | +64.3 |
| Q2. Rate your current skills and knowledge on self-care management of HTN? Select the most correct response: | No knowledge | 0 | 0 | 0 |
| | Minimal knowledge | 6 | 0 | -42.9 |
| | Solid knowledge | 4 | 1 | -21.4 |
| | Expert knowledge | 4 | 13 | +64.3 |

Table 2*Knowledge Assessment*

| Question | Pretest | Posttest | Percentage change |
|---|---------------------|---------------------|-------------------|
| | # Correct responses | # Correct responses | |
| Q3. What are the major challenges which lead to uncontrolled resistance and complications of HTN in the African American community? | 4 | 14 | +71.4 |
| Q4. Applying plain language principles to patient education: | 4 | 13 | +64.3 |
| Q5. HTN is associated with excess consumption of which mineral? | 10 | 14 | +28.6 |
| Q6. If left uncontrolled, which of the following complications may occur? | 6 | 14 | +57.1 |
| Q7. A 50-year-old man came to your clinic. He reports to you that he has both headaches and palpitations and is worried because both his parents had “high blood pressure.” You take his blood pressure, which is 155/98 mm Hg. Which of the following are appropriate self-care instructions for your patient? | 4 | 13 | +64.3 |
| Q8. What is health literacy? | 10 | 14 | +28.6 |
| Q9. Which of the following healthy lifestyle habits will enhance self-care management of HTN? | 10 | 14 | +28.6 |
| Q10. Which of the following statements about HTN is CORRECT? Select all that apply. | 4 | 14 | +71.4 |
| Q11. Why is teach-back methodology effective in delivering patient education? | 14 | 14 | 0 |
| Q12. The most common symptoms of HTN include which of the following? | 10 | 14 | +28.6 |

The first two questions focused on the confidence self-assessment of the participants (see Table 1). Ten out of 14 participants agreed with the statement, “I feel confident using the teach-back methodology for patient education,” and four out of 14 strongly agreed with this statement. After the training, 13 out of 14 strongly agreed and one agreed with this statement. This indicates an increase in confidence through their responses to this self-assessment question. This translates to an increase of 64.3% from the pre-training confidence self-assessment.

In the self-assessment, six of 14 participants indicated they had minimal knowledge related to self-care management of HTN, while eight of 14 felt they had solid or expert knowledge before the training. After the training, this number increased to 13 of the 14 participants who thought they now had expert knowledge in self-care management of HTN. This demonstrates a 64.3% increase over the pre-training self-assessment. However, one participant reported solid knowledge after the training, which was still an improvement from the pre-training assessment because this participant reported minimal knowledge before training. Overall, the participants improved on their self-assessment of confidence because of the positive percentage change over the pre-training.

Questions 6, 7, and 12 focused on the symptoms and complications related to HTN. Six of 14 participants answered correctly about likely complications that might occur when HTN is left uncontrolled in the pre test, and 14 of 14 respondents answered correctly in the posttest. This translates to a 57.1% increase from the pre-training knowledge assessment. Four out of 14 participants answered self-care instructions for the 50-year-old patient in the pre test correctly, and 13 of 14 participants responded with the

correct answer in the posttest. However, one of 14 participants identified food as the most appropriate instruction to the patient because monitoring diet is crucial to managing BP (see Appendix C). Overall, this translates to a 64.3% improvement from the pre-training knowledge assessment. Ten of 14 participants gave the correct responses on the common symptoms of HTN in the pre test, and 14 of 14 respondents answered correctly in the post test. This translates to a 28.6% increase from the pre-training knowledge assessment.

Questions 5, 9, and 10 focused on diet and self-care management of HTN. Ten of 14 participants presented sodium as the correct mineral whose excess consumption is associated with HTN. After the training, 14 of 14 cited sodium minerals, which translate to a 44.4% increase in pre-training knowledge assessment. Ten of 14 participants answered the healthy lifestyle habits that enhance self-care management of HTN correctly in the pretest, and 14 of 14 respondents answered correctly in the posttest. This translates to a 28.6% increase from the pre-training knowledge assessment. Four of 14 participants had correct responses to the statements about HTN in the pretestpretest, and 14 of 14 respondents answered correctly in the posttest. This translates to a 71.4% increase from the pre-training knowledge assessment.

Question 3 focused on the AA community's uncontrolled resistance and complications of HTN. Four of 14 participants answered correctly in the pre test, and 14 of 14 participants responded perfectly in the posttest. This translates to a 71.4% increase in pre-training knowledge assessment.

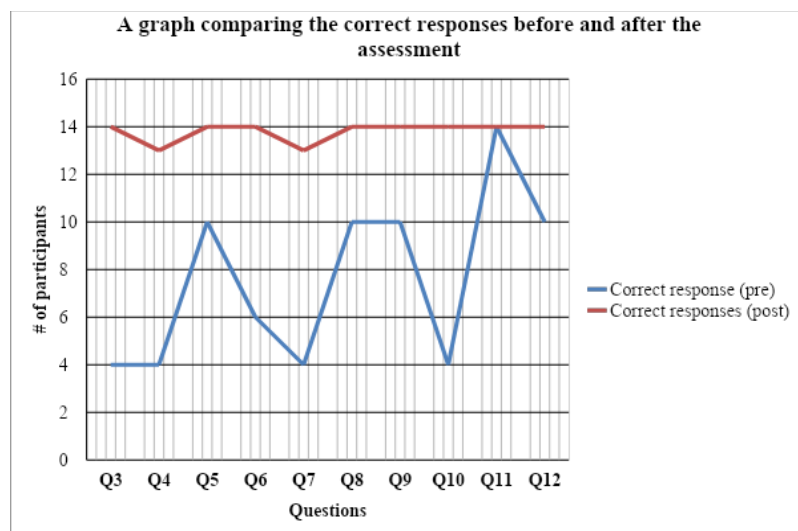
Questions 4, 8, and 11 focused on baseline health literacy, plain language, and teach-back methodology related to effective patient education (see Table 2). Question 4

focused on baseline knowledge of plain language principles. Four out of 14 participants answered this question correctly in the pre test, and 13 out of 14 answered correctly in the posttest. This indicates a 64.3% overall baseline understanding of plain language principles. Question 8 focused on baseline knowledge of health literacy. Ten out of 14 participants answered this question correctly in the pretest, and 14 out of 14 answered correctly in the posttest. This indicates an increase of 28.6% in overall baseline health literacy knowledge. Question 11 focused on the use of teach-back methodology and its effectiveness in patient education, where 14 out of 14 participants answered this question correctly in both pretestpretests and the posttest.

The general improvement in the participants' collective scores after the training indicates the effectiveness of the education program about health awareness and self-care management of HTN among the AA community (see Figure 1).

Figure 1

Comparing the Correct Responses Before and After the Knowledge Assessment



The “minimal knowledge” response when the participants were asked to rate their current skills and knowledge about the self-care management of HTN was unanticipated. The nurses are known to be professional practitioners. They are highly likely to be experienced in the self-care management of HTN. Still, their current level of confidence reflected varied outcomes in their ability to teach patients self-care and management of HTN. Therefore, consistent staff education using the evidence-based guidelines is essential to increase the confidence in the nurses’ self-assessment about the self-care management of HTN among the AA community. Ideally, the requirement is based on the favorable implications associated with the education program in the facility.

The implications for nurses in the facility can now train the AA patients and families about the need for self-care management for the DNP project. Therefore, nurses self-reported increased confidence when asking AA patients questions about HTN, lifestyle modification, and observation of the diet. The practice change is geared towards the AA, especially the ones at high risk of contracting HTN.

Many attempts were carried out to bridge the gap concerning the ability of the nurses to educate the AA communities about self-care management because of the knowledge gained after the education training exercise. The findings also had positive implications on the institution because the adoption of the education ensured the implementation of the principles in various health modules. The health care system is beneficial in terms of enhanced effectiveness in developing solutions to address problems intended to close the gap witnessed during nursing practices while attending the AA with HTN. The general improvement in the respondents’ collective scores after the training

demonstrates the success of the training program about health awareness and self-care management of HTN among the AA community

The results of the post-knowledge assessment indicate that the education program for the nursing staff had positive implications since the nurses experienced an enhancement in an understanding of HTN, including the role played by AA patients. Besides, improving the nurse's knowledge of health literacy, plain language principles, and teach-back methodology can potentially enhance the engagement of the AA patients to adhere to medication and improve self-care management of HTN through observing their diet to prevent HTN comorbidities. The quality health practice-based implementation was the vital implication that succeeded the educational program.

Recommendations

There are three themes for recommendations as a result of the findings in this project, which include a) new hire and ongoing staff training, b) additional nursing research, and c) evaluating patient outcomes specific to this change in patient education practice. A standardized and evidence-based health literacy teaching guide for the nursing staff is recommended as a suitable resource for educating the AA about self-care management of the HTN. The recommended solution is likely to address the gap in practice as informed by the practice guidelines focused on the confidence self-care assessment and knowledge assessment of the nurses on the self-care management of HTN by the AA community. However, I recommend the facility management take additional actions to create policies comprising the adoption of consistent education based on the JNC-8 guidelines linked to HTN. Periodic education of the nursing staff would equip

them with the most current information about lifestyle modification, patient intervention, and generally appropriate techniques that AA patients and their families could embrace to ensure effective management of HTN. Another recommendation for staff development would include expansion, additional or ongoing training, or even training newly hired staff in orientation.

An additional recommendation would include promoting or supporting further nursing research or doctoral projects (DNP) specific to HTN self-care and management in this patient population to promote clinical innovation and excellence. A recommended project would be to implement this training and patient education guide with a larger group of clinical staff at a similar facility with similar patient populations and demographics to measure the efficacy of the training and teaching guide. Future studies might assess how often the staff apply teach-back methodology along with this teaching guide to patient education and to measure the prospective and longitudinal health outcomes for this patient population. These recommendations could further bridge the gap in practice to curb the HTN that has previously posed havoc among AA patients, most of whom lack self-management knowledge, resulting in increased mortality rates (Maier & Kubis, 2019).

Strength and Limitations of the Project

The strength of this project was the demonstration of the improvement in both nursing knowledge related to self-care and management of HTN as well as baseline knowledge of the importance of plain language, health literacy, and use of the teach-back methodology in patient education. The training and the evidence-based teaching guide

improved the self-reported confidence of the participants in offering operative patient education based on plain language and health literacy strategies. In addition, the education was rolled out to various clinical staff with diverse backgrounds, including medical assistants, licensed vocational nurses, and advanced practice registered nurses. Overall, the willingness of staff to learn is what made this project a success. The staff indicated a desire to learn and was actively engaged throughout the training.

The project was not without some limitations, including the small sample size of only fourteen participants (n=14) since an n of 14 is not enough to demonstrate statistical significance. Another limitation of this project would be the lack of ability to measure staff application of the teach-back methodology and use of the teaching guide with this patient population. Another limitation is the ability to determine if the change in practice to use their training and teaching guide to improve their patient education skills and whether or not there is impact on improved patient care outcomes.

In summary, the DNP project's primary objective was to create an educational program to train the staff (nurses) at a local clinic facility about the self-care management of HTN among the AA. The focus was on patients suffering from chronic HTN and those at high risk of contracting the illness, particularly AAs. However, the project goal was attained because the post-knowledge assessment responses from the nursing staff demonstrated improved confidence and knowledge to train the AA patients about self-care management of the HTN. Besides, the education relied on evidence-based practice guidelines to equip the nurses at the facility with the requisite skills and knowledge to address the problem with self-care management of HTN among the AA. Therefore,

Section 5 intended to illustrate the dissemination plans associated with the project, including my participation as a student (DNP).

Section 5: Dissemination Plan

The dissemination of the DNP project is crucial to the institution experiencing the problem in practice since the nursing staff experiencing insufficient staff knowledge on self-care management of HTN and insights on its association with the AA community could benefit the most. The training will be disseminated through on-the-job training and incorporated in the future through expansions and orientations to equip the newly hired staff with the knowledge of the self-care management of HTN. Based on the nature of the results, the audiences would involve participants in a heart failure meeting, or nursing practice council as appropriate avenues for disseminating the project to the broader nursing profession. The findings will be presented to the staff at the clinic and their leaders. In addition, the project could offer links to websites like the JNC-8 guidelines to disseminate the information and allow other institutions to use them. The findings will be presented at my current employer and during a local heart failure meeting or nursing practice council.

Analysis of Self

As a practicing family nurse practitioner, I feel a personal obligation to engage in continuous research and learning opportunities to help address the gap in care for patient with chronic diseases such as HTN and to enhance self-care management of their HTN. The DNP program and the DNP project has enabled me to hone my knowledge and research skills. It means that I am now molded into a scholar because of the ability to establish essential knowledge through the project and analyze the findings for educational purposes and related areas of practice in my future endeavors. I desire to lead a team of

nurses and plan similar or related projects to achieve the short-term and long-term goals as embedded through this project's experience. The factors that molded me into a scholar are self-discipline, willpower, sacrifice, and structure.

As a practitioner, I have mastered the art of bridging the knowledge gaps and successfully training the nursing staff about self-care management of patients with HTN, focusing on the AA. Subsequently, I managed to educate the nursing staff to master the skill of educating the AA about self-care management of the HTN and collaborating with them through using plain language and health literacy principles. In essence, the skill learned during the DNP project forms a component of the learning process that is essential for a DNP student.

The presentation of the project as a DNP scholar has enabled me to integrate my clinical knowledge and research skills to educate the nursing staff. The feedback I received from my chair and committee member helped me to structure and compile ethically sound evidence. It reflected a DNP-level writing project. Analyzing and appraising the evidence was challenging due to hours of researching and thoroughly inspecting the information to complete a systemic review table. The importance of the systematic review in my future role is to help guarantee the reservation of the challenges, arguments, and concepts presented at the start of decision-making after thorough evaluation.

As the project manager, the DNP project goal was to center on strategies to deliver consistent nursing staff training prospects. I am committed to performing my professional role through collaboration with other nursing staff to create educational

materials on evidence-based practice guidelines that are updated to attain the primary care objectives. The commitment is likely to play a crucial part in my future role as a project manager to sustain excellent communication with other nurses and inform them of the project progression and targeted date for implementation.

I would consider completing this DNP project a success, although this doctoral project has been time-consuming. The solution to the challenges was self-discipline, determination, sacrifice, and structure, which contributed immensely to my scholarly journey.

Summary

In conclusion, a standardized, evidence-based education program will improve the knowledge gap associated with nursing and clinical staff knowledge of self-care and managing HTN in AA patients. The objective of this project was to improve the confidence and knowledge of the nursing staff using the JNC-8 and up-to-date, evidence-based guidelines and applying to patient education. Through the administration of a pre and post knowledge assessment, there was an increase in clinic staff confidence and knowledge specific to self-care and management of HTN and the importance of using plain language to improve health literacy. The education and standardized teaching guide improved the clinic staff's confidence in providing education to patients. Future studies are recommended to target clinics with similar patient demographics using a larger sample size with similar patient demographics of the AA community. Another recommendation is to carry out a study in future that tracks the patient care outcomes

after the nursing staff has started applying the patient education to determine the effectiveness of the training on self-care management of HTN among AA patients.

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Appendix A: Systematic Review Table

| Authors, Year | Aim/Purpose of Systematic Review | Search Databases | Types of Studies Included | No. of Studies Included | Review Dates | Summary of Results | Geographic Location of Studies Included | Level |
|-------------------------|---|------------------------|--|-------------------------|--------------|--|---|-------|
| (Adinkrah et al., 2020) | To establish the adherence to lifestyle recommendations and HTN medications among the older and middle-aged adults of underserved AAs | MDPI | Cross-sectional survey (community-based) | 338 | 2015-2018 | There are fewer medical, cognitive, behavioral, social, and demographic factors that illustrate adherence to lifestyle recommendations compared to medication among the older and middle-aged AA adults with HTN | South Los Angeles | III |
| (AHA, 2020) | The facts about high blood pressure | Healthy living article | A summary of the facts of HTN | N/A | 2020 | HTN occurs when the systolic and diastolic pressure is above 140/90mmHg | N/A | III |
| (Arnett et al., 2019) | The 2019 AHA/ACC guideline on the primary prevention of | MEDLINE | Evidence-based guidelines | N/A | 2019 | Most ASCVD occasions are preventable through primordial | N/A | I |

| Authors, Year | Aim/Purpose of Systematic Review | Search Databases | Types of Studies Included | No. of Studies Included | Review Dates | Summary of Results | Geographic Location of Studies Included | Level |
|-----------------------|--|-------------------------|--|-------------------------|--------------|---|---|-------|
| | cardiovascular illness | | | | | prevention and control for the risk factors associated with traditional cardiovascular | | |
| (CDC, 2003) | Good nutrition and physical activity as essential aspects of avoiding obesity and chronic illnesses | MEDLINE | Article review | N/A | 2003 | Cardiovascular illnesses, alongside other diseases with adverse effects, are preventable | N/A | IV |
| (CDC, 2022) | The impact of public health with a focus on the behavioral risk factor for a surveillance system for HTN | Americas heart rankings | Facts on the public health impact of HTN | N/A | 2022 | The objective of healthy people 2030 is to lessen the number of adults with HTN and escalate the regulation of the illness among adults | N/A | IV |
| (Cherry et al., 2020) | To determine the intervention and assessment through | N/A | Assessment and intervention | N/A | 2020 | Biological variations, environmental control, time, | N/A | II |

| Authors, Year | Aim/Purpose of Systematic Review | Search Databases | Types of Studies Included | No. of Studies Included | Review Dates | Summary of Results | Geographic Location of Studies Included | Level |
|---------------------------------|--|------------------|--|-------------------------|--------------|---|---|-------|
| | transcultural nursing of the AAs | | | | | social organization, space, and communication are some of the cultural phenomena that ought to be evaluated when dealing with clients from diverse, multicultural populations | | |
| (Commodore-Mensah et al., 2017) | The variations in social determinants for diabetes and HTN comprising the Afro-Caribbeans, African immigrants, and the African Americans | Scopus | Evidence from the National Health Interview Survey | 40,838 | 2010-2014 | Social-economic aspects of income and health insurance were linked to the disparate prevalence of HTN by ethnic group | The United States | III |
| (Filippou et al., 2020) | To explore the dietary strategies to prevent HTN and | Cochrane | A Systematic Review And Meta-Analysis of | 5545 | 2020 | The utilization of the DASH diet prevents blood | N/A | I |

| Authors, Year | Aim/Purpose of Systematic Review | Search Databases | Types of Studies Included | No. of Studies Included | Review Dates | Summary of Results | Geographic Location of Studies Included | Level |
|---------------------------|--|------------------------|-------------------------------------|-------------------------|--------------|---|---|-------|
| | the blood pressure and diet reduction among adults with and without HTN | | Randomized Controlled Trials | | | pressure among individuals with or without HTN | | |
| (Healthy People, 2020) | To determine consumer information, community interventions, and clinical recommendations related to heart illness and stroke | Healthy living article | Predictions for healthy people 2030 | N/A | 2020 | It is possible to assess the sets of data that are driven by national objectives to enhance the well-being and health | N/A | IV |
| (Khademi an et al., 2020) | To explore the impact of self-care education based on Orem's nursing theory focused on the self-efficacy and life of hypertensive patients | MEDLINE | A Quasi-Experimental Study | 80 | 2015 | Training based on self-care (Orem's theory) could enhance the quality of life for patients with HTN | Mamasani, Iran | II |
| (Maier & Kubis, 2019) | To determine the impact of | Scopus | Review article | N/A | 2019 | It is recommended to consider | N/A | V |

| Authors, Year | Aim/Purpose of Systematic Review | Search Databases | Types of Studies Included | No. of Studies Included | Review Dates | Summary of Results | Geographic Location of Studies Included | Level |
|------------------------|---|------------------|---------------------------|-------------------------|--------------|---|--|-------|
| | HTN on stroke | | | | | vascular risk factors like HTN in preclinical models of IS | | |
| (Moss et al., 2019) | To evaluate the HTN from a self-management viewpoint with a focus on the AA adults | SAGE | Descriptive study | 31 | 2018 | Community-based settings have the potential to impact self-management by using community health nurses as primary change agents to improve HTN outcomes among the AA adults | N/A | I |
| (Motlagh et al., 2016) | To establish the factor and self-care behaviors associated with hypertensive patients | MEDLINE | Research article | 1836 | 2014 | It was established that it was essential to implement educational programs that are well-designed to improve self-care | Kohgiluyeh Boyer-Ahmad Province in southern Iran | I |

| Authors, Year | Aim/Purpose of Systematic Review | Search Databases | Types of Studies Included | No. of Studies Included | Review Dates | Summary of Results | Geographic Location of Studies Included | Level |
|----------------------------|--|------------------|--------------------------------------|-------------------------|---------------------------|--|---|-------|
| | | | | | | behaviors for HTN | | |
| (OMH, 2020) | To determine the national HTN control strategy that addresses disparity among ethnic and racial minority populations | N/A | An HHS website article | N/A | 2020 | The health center program offers primary and preventive care services to many people across the nation | N/A | IV |
| (Treciokiene et al., 2021) | To explore the healthcare professional-led interventions associated with lifestyle modification for HTN patients | CINAHL | A systematic review and metaanalysis | 22419 | 18 th May 2020 | The healthcare interventions (professional-led) were effective and widespread implementation is suggested | N/A | III |
| (Twaddell, 2019) | To educate parents concerning vitamin K in the newborn using Knowles Theory using the framework for the adult | N/A | Review article | N/A | 2019 | The use of the principles of Knowles Theory of Adult learning is likely to enhance the ability of parents to make an | N/A | V |

| Authors, Year | Aim/Purpose of Systematic Review | Search Databases | Types of Studies Included | No. of Studies Included | Review Dates | Summary of Results | Geographic Location of Studies Included | Level |
|-------------------------------|---|------------------|-----------------------------------|-------------------------|--------------|---|---|-------|
| | learning principles | | | | | informed decision | | |
| (Warren-Findlow et al., 2020) | To explore the cumulative and relative self-care behaviors for HTN on blood pressure | SAGE | A cross-sectional study | 79 | 2020 | The overall index for H-SCALE linked to adherence to self-care behavior is a valuable and valid measure for establishing the impact of adherence to self-care on blood pressure control | North Carolina | III |
| (Zeraatkar et al., 2016) | To evaluate the Andragogy (adult learning theory) for Malcolm Knowles in appraising clinical practice guidelines to manage type 2 diabetes mellitus | MEDLINE | A systematic review of a protocol | N/A | 2016 | Nurse educators should engage and understand the e-learning spaces since technology is the primary influencer on learning and education | N/A | II |

Appendix B: John Hopkins Evidence-Based Practice Model (Dang et al., 2022)

| | Evidence Level |
|-----------------------|----------------|
| Research Evidence | Level I |
| | Level II |
| | Level III |
| Non-research Evidence | Level IV |
| | Level V |

Appendix C: Pre-and Post-Knowledge Assessment

| Question | Responses | Pretest | Posttest | Percentage change |
|--|---|---------|----------|-------------------|
| Q1. I feel confident using the teach-back methodology for patient education | Strongly disagree | 0 | 0 | +0 |
| | Disagree | 0 | 0 | +0 |
| | Agree | 10 | 1 | -64.3 |
| | Strongly agree | 4 | 13 | +64.3 |
| Q2. Rate your current skills and knowledge on self-care management of HTN? Select the most correct response: | No knowledge | 0 | 0 | 0 |
| | Minimal knowledge | 6 | 0 | -42.9 |
| | Solid knowledge | 4 | 1 | -21.4 |
| | Expert knowledge | 4 | 13 | +64.3 |
| Q3. What are the major challenges which lead to uncontrolled resistance and complication of HTN in the African American community? | Lack of patient participation or availability of health education programs for HTN management | 3 | 0 | -21.4 |
| | Unhealthy lifestyle of HTN management in the African American community | 4 | 0 | -28.6 |
| | Lack of understanding and adherence to a medication plan | 3 | 0 | -21.4 |

| Question | Responses | Pretest | Posttest | Percentage change |
|---|---|---------|----------|-------------------|
| | All the above | 4 | 14 | +71.4 |
| Q4. Applying plain language principles to patient education: | Supports patient understanding by minimizing the effort required to understand key messages | 5 | 0 | -35.7 |
| | Increases patient and family knowledge about medical conditions and treatment plan | 3 | 0 | -21.4 |
| | Increases effective communication between medical providers and patients | 2 | 1 | -7.1 |
| | All the above | 4 | 13 | +64.3 |
| Q5. HTN is associated with excess consumption of which mineral? | Iron | 0 | 0 | 0 |
| | Sodium | 10 | 14 | +44.4 |
| | Potassium | 2 | 0 | -14.3 |
| | Magnesium | 2 | 0 | -14.3 |
| Q6. If left uncontrolled, which of the following complications may occur? | Cerebral infarction | 0 | 0 | 0 |
| | Cerebral hemorrhage | 0 | 0 | 0 |
| | Renal failure | 8 | 0 | -57.1 |

| Question | Responses | Pretest | Posttest | Percentage change |
|---|---|---------|----------|-------------------|
| | All the above | 6 | 14 | +57.1 |
| Q7. A 50-year-old man came to your clinic. He reports to you that he has both headaches and palpitations and is worried because both his parents had “high blood pressure.” You take his blood pressure, which is 155/98 mm Hg. Which of the following are appropriate self-care instructions for your patient: | Teach the patient how to check and record his BP at home and return to the clinic with a log of his daily/weekly blood pressures | 3 | 0 | -21.4 |
| | Identify any physical limitations and offer examples of physical activity for the patient to engage in for at least 30 minutes three times a week | 1 | 0 | -7.1 |
| | Identify the foods in the patients’ diet which are healthy and rich in vegetables, fruits, and whole grains, including fat-free or low-fat dairy products, fish, poultry, beans, and nuts | 6 | 1 | -35.7 |

| Question | Responses | Pretest | Posttest | Percentage change |
|------------------------------|---|---------|----------|-------------------|
| | All the above | 4 | 13 | +64.3 |
| Q8. What is health literacy? | Health literacy is the degree to which individuals have the capacity to obtain, process, and understand basic health information and services needed to make appropriate health decisions | 10 | 14 | +28.6 |
| | Health literacy is determined by the age of the individual, their last successfully completed grade in school, and ability to understand medical terminology | 0 | 0 | 0 |
| | Health literacy is most prevalent in minority populations, is determined by age, reading level, and last | 0 | 0 | 0 |

| Question | Responses | Pretest | Posttest | Percentage change |
|---|---|---------|----------|-------------------|
| | successfully completed grade in school | | | |
| | Health literacy is the ability for patients to fluidly converse with their health care team about their care, and the ability to read at or above the 8th-grade reading level | 4 | 0 | -28.6 |
| Q9. Which of the following healthy lifestyle habits will enhance self-care management of HTN? | Health literacy is the ability for patients to fluidly converse with their health care team about their care, and the ability to read at or above the 8th-grade reading level | 0 | 0 | 0 |
| | Take all medications exactly as prescribed even if they start to feel better | 2 | 0 | -14.3 |
| | Limit the use of high-salt condiments and replace traditional high-salt food | 2 | 0 | -14.3 |

| Question | Responses | Pretest | Posttest | Percentage change |
|---|--|---------|----------|-------------------|
| | with low-salt products | | | |
| | All of the above | 10 | 14 | +28.6 |
| Q10. Which of the following statements about HTN is CORRECT? Select all that apply. | The use of a correct blood pressure cuff size will give an accurate blood pressure reading, and the diagnosis of HTN is confirmed after at least three elevated readings above 140/90 mm Hg at three different times | 4 | 14 | +71.4 |
| | Hypertension can either be symptomatic or asymptomatic | 4 | 14 | +71.4 |
| | About 30% of people diagnosed with hypertension are unaware that they have the disease | 4 | 14 | +71.4 |
| | Hypertension self-care management behaviors exclude Medication adherence, blood pressure monitoring, a | 0 | 0 | 0 |

| Question | Responses | Pretest | Posttest | Percentage change |
|---|--|---------|----------|-------------------|
| | healthy diet, and exercise | | | |
| Q11. Why is teach-back methodology effective in delivering patient education? | Teach-back allows the nurse/provider to address patients' uncertainty about the plan and clarify any misunderstanding | 14 | 14 | 0 |
| | The Teach-back methodology does not help the provider to engage in a more collaborative relationship with the patients | 0 | 0 | 0 |
| | Teach-back can be assessed effectively by using closed-ended questions | 0 | 0 | 0 |
| | Patients understand better when the concept is explained using medical jargon | 0 | 0 | 0 |
| Q12. The most common symptoms of HTN include | Dizziness | 1 | 0 | -7.1 |
| | Headaches | 2 | 0 | -14.3 |
| | Heart palpitations | 1 | 0 | -7.1 |

| Question | Responses | Pretest | Posttest | Percentage change |
|-------------------------|------------------|---------|----------|-------------------|
| which of the following? | All of the above | 10 | 14 | +28.6 |