

2017

Improving Staff Knowledge of Hypertension in Psychiatric, Homeless Patients

Maureen Ojose
Walden University

Follow this and additional works at: <https://scholarworks.waldenu.edu/dissertations>

 Part of the [Nursing Commons](#)

This Dissertation is brought to you for free and open access by the Walden Dissertations and Doctoral Studies Collection at ScholarWorks. It has been accepted for inclusion in Walden Dissertations and Doctoral Studies by an authorized administrator of ScholarWorks. For more information, please contact ScholarWorks@waldenu.edu.

Walden University

College of Health Sciences

This is to certify that the doctoral study by

Maureen Ojose

has been found to be complete and satisfactory in all respects,
and that any and all revisions required by
the review committee have been made.

Review Committee

Dr. Cheryl McGinnis, Committee Chairperson, Nursing Faculty

Dr. Dana Leach, Committee Member, Nursing Faculty

Dr. Deborah Lewis, University Reviewer, Nursing Faculty

Chief Academic Officer

Eric Riedel, Ph.D.

Walden University

2017

Abstract

Improving Staff Knowledge of Hypertension in Psychiatric, Homeless Patients

by
Maureen Ojose

FNP-C, University of Massachusetts Boston, 2016
PMHNP, California State University, Long Beach, 2012
MSN, California State University, Dominguez Hills, 2010

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

Walden University

December 2017

Abstract

Hypertension is a serious health problem in the United States. Clinical nurses may serve as facilitators in the screening, diagnosis, and treatment of hypertension. The purpose of this project was to evaluate the effectiveness of an education program on hypertension screening guidelines for nurses working in an outpatient psychiatric clinic. The project was supported by the health promotion model. The project used a pre- and post survey designed by the DNP student to collect data on nurses' knowledge, attitudes, and willingness to screen psychiatric patients for hypertension. Surveys consisted of 10 questions using a 5-point Likert-type scale. The results of the project indicated that the educational program was effective in changing the practice of nurses regarding the screening of patients for hypertension. Before administering the educational program, 9 nurses were not screening patients on a consistent basis. After the educational program, survey results indicated that 11 nurses would use a policy to screen each clinic patient for hypertension. It is recommended, based on the findings of this study, that the clinic develops a regular training and education program on hypertension screening for the staff. The implications for social change move beyond the study setting. Results may be used to improve screening for hypertension in the future. This could create social change in the way screenings are performed, which could affect the overall health of patient.

Improving Staff Knowledge of Hypertension in Psychiatric, Homeless Patients

by
Maureen Ojose

FNP-C, University of Massachusetts Boston, 2016

PMHNP, California State University, Long Beach, 2012

MSN, California State University, Dominguez Hills, 2010

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

Walden University

December 2017

Dedications

I dedicate this project to the memory of my Son Tejiri Ojose. May your soul continue to rest in Perfect Peace, I love you TJ. A special dedication to my husband Bobby Ojose who stood by me in supporting me through my education, my children Elohor, Kessiena, Ese and Ejiro for encouraging me and saying, mom, you can do it. My big Sister Queen Chijiutomi who brought me to the US to become what I am today, I say Migwo sister, (thank you in our Dialect) and to the rest of my family, my sisters and brothers who all supported me when I almost wanted to give up, thank you all with Love Maureen.

Acknowledgements

I give thanks to God almighty for giving me the opportunity to finish this program. I would like to give special thanks to my chair Dr. Cheryl McGinnis for assisting in completing this project. With her help in both editing, and proofreading. Dr. McGinnis contributed in no small measure to the success of this project. And also to thank my committee member Dr. Dana Leach for her support and guidance. And my preceptor Regina Umukoro for sharing her knowledge with me. Last but not the least Dr. Dolly Allison my manager thank you.

Table of Contents

List of Table.....	iii
Section 1: Nature of Project.....	1
Introduction.....	1
Problem Statement.....	3
Nature of the Doctoral Project.....	6
Significance.....	8
Section 2: Evidence-Based Education Plan Content.....	11
Introduction.....	11
Conceptual Models and Theoretical Frameworks.....	12
Literature Review.....	13
Definitions of Terms.....	15
Relevance to Nursing Practice.....	16
Local Background and Practice.....	18
Role of the DNP Student.....	20
Summary.....	20
Section 3: Collection and Analysis of Evidence.....	20
Evidence-Based Significance of the Project.....	26
Planning and Implementation.....	27
Ethical Considerations.....	26
Assumptions and Limitations.....	29
Analysis and Synthesis.....	30

Summary	32
Section 4: Findings and Recommendations	33
Introduction.....	33
Findings and Implications.....	33
Study Administration.....	31
Survey Instrument.....	32
Study Analysis and Results.....	33
Recommendations.....	40
Strength of the Educational Program.....	41
Implications for Social Change.....	42
Weaknesses of the Educational Project	42
Section 5: Dissemination Plan	45
Analysis of Self.....	45
Summary	46
References.....	44
Appendix A: Information Flyer	59
Appendix B: Lifestyle Modification for Hypertension (LMH)	60
Appendix C: Site approval documentation for Staff Education Doctoral Project	63
Appendix D: Consent Form for Anonymous Questionnaires.....	65
Appendix E: Survey Questions: Pre-Test	66
Appendix F: Survey Questions: Post-Test.....	68
Appendix G: Survey Results.....	70

List of Table

Table 1. An example of cassifications of HTN; Adapted from Go et al. (2013).....22

Section 1: Nature of Project

Introduction

Hypertension, known as a high blood pressure, is an unsafe elevation of a person's blood pressure, whether systolic, diastolic, or both. Hypertension is caused by various factors, including obesity, medication, smoking, and inactivity. For many patients, several factors contribute to the condition, and professionals must take all risk factors into consideration when proposing a solution to improve patient health.

Hypertension is not a problem that can be safely ignored, because it can worsen with time, especially as the patient ages. Eventually, hypertension can cause problems across a range of body systems, contributing to cardiovascular disease, vision loss, and kidney disease (American Heart Association [AHA], 2017).

Despite progress in prevention, detection, awareness, and treatment efforts, hypertension continues to be a major public health issue, affecting 1 in every 3 adults globally (Mozaffarian et al., 2016). In the United States, hypertension accounts for or is involved in more than 65% of premature deaths among adults in all age categories (AHA, 2012). Approximately 9.4 million deaths around the world each year are associated with hypertension.

MA, a pseudonym, exemplifies how the issue affects mental health patients. MA, a 60-year old female with manic depression (also known as bipolar), arrived at the clinic to receive her medication and complained loudly of tiredness and weakness. The nurse asked permission to take her vital signs, and after some struggle with layers of dirty clothing, the blood pressure cuff was removed. Her blood pressure was in a dangerous

range: 220/118. Normal blood pressure is approximately 120/80. The blood pressure was repeated twice as MA settled down in a chair, but after 15 minutes, the blood pressure was still high. Emergency services were called, and MA was taken to the county hospital.

When she was discharged a week later, and the clinic staff was told that their check of her blood pressure and quick action had saved her from a stroke. A stroke could have crippled MA and rendered her so helpless that she could not take care of herself for the rest of her life. Patients such as MA have no primary doctor to care for them, so the only opportunity for them to be screened for hypertension is when they come into the mental clinic and an intake nurse checks their blood pressure. For this reason, I envisioned the proposed project to educate and train staff members about the importance of checking every patient for high blood pressure, even those who refuse to remove enough clothing to place a blood pressure cuff on their arms.

In the United States, hypertension is the primary cause of premature death, and it contributes to other diseases and conditions that reduce the quality of life for millions of people. Hypertension affects approximately 74 million Americans, leading to excess morbidity, mortality, and direct and indirect health care costs (Centers for Disease Control and Prevention [CDC], 2013).

Hypertension is a major contributor to the development of cardiovascular disease in both men and women. Specifically, hypertension contributes to or exacerbates events and conditions such as heart failure, angina pectoris, myocardial infarction, and stroke. In addition, it can increase the risk of mental health disorders, such as anxiety and depression. Moreover, hypertension can be worsened by obesity, existing heart disease,

and chronic conditions. This constellation of factors requires a prompt and aggressive response to hypertension once detected in a patient. Medical professionals must monitor patients for hypertension and manage patients appropriately. An estimated 18.9% of Americans who have hypertension are unaware that they have the disease (AHA, 2012). Because of the severity of this public health problem, detection, prevention, and control of hypertension are a priority for health care providers. Hypertension can be prevented and managed if it is detected before it leads to complications such as stroke, heart disease, congestive heart failure, and kidney disease.

Nurses play a significant role in hypertension management owing to their involvement in patient health care and education. The effectiveness of hypertension patient education depends on the nurse's knowledge of current evidence-based practice (EBP) guidelines for hypertension. Specifically, nurses need to be able to recognize the signs of hypertension and provide information to patients about treatment strategies. I will focus on educating clinical nursing staff on EBP guidelines for hypertension that can be applied to patient care. The project will allow nurses to develop improved educational and screening practices to provide better support for patients who are at risk for hypertension.

Problem Statement

Identification of patients at risk for hypertension and providing proper diagnosis is the first step in educating nurses on the identification of HTN and the guidelines related to the problem. By the year 2030, approximately 41% of adult Americans will be diagnosed with hypertension (Li et al., 2012). As the prevalence of hypertension

increases, the cost of treating it also continues to rise. According to data for 2007-2010, an estimated \$50 billion was spent in treating hypertension (Kuzni, Mardekian, & Tarasenko, 2013). More than 78 million adults have hypertension in the United States, and approximately 47% of these individuals do not regularly take medication or engage in interventions to treat their condition (Go et al., 2013). From 2007-2010, 81.5% of those with hypertension were aware that they had the disease, and approximately 74.9% received treatment, according to the National Health and Nutrition Evaluation Survey (Kuzni et al., 2013). It is not clear, however, how many of those who received initial treatment continued the regimen. Among those known to have ceased their treatments, the prohibitive cost of medications is the most common explanation (Kuzni et al., 2013). Of those with high blood pressure, 52.2% had the disease under control (Kuzni et al., 2013). Hypertension is preventable and can be managed if it is detected early, but, without treatment, can lead to severe and life-threatening complications such as stroke, kidney disease, and heart problems (Bani, 2011).

Once a patient is diagnosed with hypertension, the patient is at increased risk of developing heart failure, angina pectoris, myocardial infarction, and stroke. In particular, hypertension is an underlying factor in 51% of stroke deaths and 45% of heart disease mortality (WHO, 2013a). The health consequences of hypertension reduce the quality of life for sufferers through increased risks of more serious health consequences. These consequences threaten every patient who has hypertension. This project will help to improve health outcomes for a group of local patients by providing clinic nurses the

proper tools to recognize hypertension and to respond to the condition appropriately through referrals and education.

The purpose of this project is to educate clinical nursing staff on the EBP guidelines for recognition and treatment of hypertension and the teaching of life style modifications to manage HTN. High blood pressure is currently being overlooked by the nursing staff evaluating patients who currently visit the clinic. Clinical nurses do not identify patients with hypertension due to lack of knowledge regarding blood pressure (B/P) parameters and the recognition of the importance of these parameters. Specifically, the nurses are not aware of the parameters for diagnosing hypertension, as outlined in Joint National Committee (JNC) 8 guidelines. The guiding practice-focused question for this project was: Will staff education improve nursing practice regarding the recognition and education of patients with hypertension?

In this doctorate of nursing (DNP) project, I will develop an educational program on hypertension for clinic staff. The goal of the project is to promote greater clinical nursing staff understanding of the causes and consequences of hypertension. The first step is to teach staff to properly screen patients for hypertension using the JNC 8 guidelines. Clinical nursing staff will be taught about hypertension and the causes, consequences, and need for lifestyle modifications. The clinical nursing staff should understand the importance of identifying and treating or educating patients on high blood pressure, regardless of the primary focus of the clinic's practice.

Clinical nursing staff can then educate the patient and refer for treatment if indicated. The clinical nursing staff will provide ongoing patient support through proper

identification of HTN and patient education. In collaboration with the care provider, patients will be provided education to assist with achieving their goals of blood pressure management. This project will help to fill the educational gap that exists between clinical nursing staff education, the recognition of HTN in patients, and teaching clinical nursing staff about healthy lifestyles to assist patients in the management of hypertension.

Nature of the Doctoral Project

The goal of this project is to develop a training module to educate clinical nursing staff at the local clinic to identify patients with high blood pressure, and to apply the JNC 8 guidelines. The JNC 8 guidelines will be a primary source of evidence for the development of nurse education on hypertension. The program will be based on a comprehensive literature review of hypertension in addition to the JNC 8 guidelines. Even though the clinic is primarily focused on the treatment of patients with mental illness, it is important for nurses to be able to identify signs of hypertension and to know how to educate patients on the complications of hypertension. As a relatively simple procedure, measuring a patient's blood pressure takes only moments and can make a significant and measurable life and death difference in patient care.

The problems in practice are the inability of the clinical nursing staff to monitor for hypertension, recognize safe B/P parameters, and educate on treatment modalities to prevent complications of hypertension. Just as the individual patient may not be able to recognize the symptoms of hypertension, even fully trained nursing staff may be unable to diagnose the problem upon visual inspection without the simple, noninvasive test to measure the patient's current blood pressure status. Moreover, hypertension often exists

as a comorbid condition in psychiatric patients and can be a side effect of certain psychiatric medications (Michigan State University, 2010).

Several possible reasons may explain why nurses at the clinic have thus far failed to identify individuals with hypertension. Nurses may lack knowledge about the signs and parameters of hypertension. For these nurses, an effective educational program may assist nurses in recognizing hypertension and obtaining assistance for the patient. For nurses who are aware of hypertension signs but are not currently taking appropriate actions, such as provider referral, in psychiatric patients, the implementation of an effective educational program would remind them of the importance of identifying and treating the condition. Nursing education can help staff to recognize blood pressure parameters indicating HTN in patients and refer for treatment, including lifestyle modifications.

The DNP project will involve the development and implementation of an educational program for clinical nursing staff at a local clinic. An educational program will be developed to train the clinical nursing staff at the clinic on the EBP guidelines for recognition and treatment of hypertension and the teaching of lifestyle modifications to manage HTN. This will include application of the JNC 8 guidelines to educate clinical nursing staff on measuring and responding to healthy and unhealthy blood pressure and lifestyle modifications. Lifestyle modifications, such as physical activity, DASH programs, diet changes, smoking cessation, and weight loss, are known to ameliorate or control hypertension (Go et al., 2013).

Nurses may be the first to interact with the patient and serve as advocates, mentors, and problems solvers. Nurses are professionally trained to use their practice, as well as that of their immediate colleagues and those who publish their findings, to generate EBPs that function as programs to guide improvements in practice and patient care outcomes (Terry, 2015).

Nurses recognize and manage chronic and acute patient conditions, as well as disease prevention and general wellness. For this reason, they need to be equipped with the knowledge and skills necessary to identify, teach, and refer patients for treatment of hypertension. The purpose of the project is to teach clinical nurses the sign/symptom of HTN, identify patients with HTN, and provide education on lifestyle modifications.

Significance

This DNP project identified a significant gap in practice within an outpatient mental health clinic. The identified gap in practice is that clinical nursing staff do not screen or identify patients with hypertension, which leads to the condition remaining undiagnosed in many patients. The clinical nursing staff require education regarding the application of EBP guidelines for the recognition of blood pressure parameters and the sign/symptom of hypertension. In the clinic setting, nurses often are the first to screen the patient for vital signs, including the B/P. Nurses should be knowledgeable about prevention, early detection, education, and lifestyle behavior modification for hypertension. The primary stakeholders for this project are the patients, because they will have a healthier lifestyle as a result of the program. Nurses are also stakeholders, because

they will gain knowledge that will help them to grow in their professional development regarding knowledge about hypertension.

Based on guidelines from the National Institutes of Health (NIH), the recommendations for management of hypertension should begin with lifestyle modification, which includes managing high blood pressure and educating the patient in preventive and lifestyle behavior changes (Margolius et al., 2012). These lifestyle modifications include changes to diet, exercise levels, and methods to reduce stress and anxiety. Medication and other options may be necessary in some cases, but they should be considered as adjuncts to behavior modification techniques. Lifestyle change requires replacing old practices and adjusting to a new action routine (WHO 2013a).

All health care providers should have the knowledge and skills to provide patients with information about lifestyle modifications that can be made to manage hypertension. The basic rubric of dietary and activity changes can be adapted readily to almost any patient's situation. Moreover, health care providers should also education patients who do not yet have hypertension, because healthy lifestyle practices could prevent 80% to 90% of all cases (Yates et al., 2012). In high-risk populations, Yates et al. (2012) also found that up to 60% can reduce their risk of progressing to hypertension with lifestyle interventions by promoting a healthy diet, moderate-vigorous physical activity such as exercise and weight maintenance. An increase in moderate physical activity, such as light daily exercise, can decrease the risk of hypertension by 58% in patients who already have a diagnosis of high blood pressure (Letassy et al., 2010); that is, even relatively small changes in behavior can have important effects. The clinical setting for this project will

involve clinical nurses at a local clinic that treats low socioeconomic status patients with mental health disorders.

Nurses can play an active role in the identification of hypertension through their direct contact with the patient. Hypertension, a growing public health threat, can be difficult for patients to detect on their own. Therefore, the clinical nursing staff needs to be educated about how to identify hypertension among mental health patients and provide them with strategies for management and treatment. In my DNP project, I created an effective educational program for the clinical nursing staff at a local clinic so that they have the knowledge and tools they need to recognize HTN in patients being seen for psychiatric conditions and to provide teaching on life style modification, including referral for treatment. The educational program will be founded on JNC 8 guidelines and staff teaching. In Section 2, I will explore the background and context of the problem further to understand how it fits into the existing body of research and into current clinical practice.

Section 2: Evidence-Based Education Plan Content

Introduction

The purpose of this project is to educate clinical nursing staff on the JNC 8 EBP guidelines, for the recognition and treatment of HTN and the teaching of life style modifications to manage HTN. In Section 2, I will develop the concepts, models, and framework for the project. I will explore the relevance of the research to the nursing practice. I will also examine the local background and context. I then examine my role as the study DNP project.

The number of patients with hypertension rose from 600 million in 1980 to 1 billion in 2008, according to a study published by the World Health Organization in 2013 (WHO, 2013a). Hypertension accounts for approximately 45% of deaths due to heart disease and 51% of deaths due to stroke (WHO, 2013). Almost one-fourth of all deaths worldwide will be due to cardiovascular disease (CVD) or its concomitant conditions by 2030 (WHO, 2013). Hypertension can be prevented and managed if identified in time to prevent complications. The purpose of this project is to educate clinical staff at the local clinic to identify mental health patients with hypertension and to provide patient education using the JNC 8 guidelines. In the second section of this project document, I will discuss the literature review on hypertension and the framework to support the DNP project and the risk of developing hypertension.

Conceptual Models and Theoretical Frameworks

I will create a teaching model for clinical nursing staff. The purpose of this project is to educate clinical nursing staff on the EBP guidelines relating to recognition of HTN and teaching of lifestyle modifications to manage HTN. The framework to guide this project is the Health Promotion Model (HPM). The HPM framework supports the research through the process of engaging patients in making healthy lifestyle choices through self-management skills. These skills assist the individual's functional ability and enhance the quality of life (Pender, Murdaugh, & Parsons, 2011). The HPM examines the many variables that might affect a person's health behaviors. The theory is based on the concept that human behavior is complex and cannot be explained by a single factor. The HPM model is often used as the basis for the development of protocols and practices to help patients choose healthier behavioral choices (Pender et al., 2011).

The HPM is useful in many different settings, including homes, health centers, clinics, and larger communities. It approaches the topic as a supporting philosophy of the discipline of nursing (Peterson & Bredow, 2009). Many studies have shown that using HPM in different settings has reliably demonstrated its ability to improve behavior outcomes and, thus health outcomes, for individuals with high blood pressure (Pender et al., 2011). Many types of research support HPM's capacity and support its rationale for the development. HPM is useful in the nursing practice because it adds more to nursing knowledge and practical application. It creates goal focuses for nurses to provide potential and competencies when working in their clinic setting and in improving the quality of care (Peterson & Bredow, 2009).

The HPM guides nurses with steps in achieving goals in health care that encourage and assists people toward health and wellness (Pender et al., 2011). The HPM model engages patients by helping them to adopt healthier lifestyle choices. The HPM will be applied to the patient population via the educational program, which includes factors that contribute to hypertension, what to do to reduce hypertension, and how to manage and lessen the risk of high blood pressure in the future. The actions include increasing physical activity, proper nutrition, and healthy diet, and decreasing the use of alcohol. HPM focuses on assisting people to achieve advanced levels of well-being. HPM describes a model framework that guides in developing and planning a project, which encourages individuals to modify their behavior to lead to the promotion of health care (Pender et al., 2011). Evidence has shown that teaching the patient lifestyle changes can improve a patient's hypertensive state. Per the JNC 8 Guidelines, these modifications include the following lifestyle changes: smoking cessation, controlling blood glucose and lipids, eating a healthy, moderating alcohol consumption, reducing sodium intake to no more than 2,400 mg/day, engaging in physical activity, and engaging in moderate-to-vigorous activity 3 to 4 days per week averaging 40 minutes per session.

Literature Review

Studies have demonstrated that behavioral changes related to diet and physical activity are essential for managing hypertension. For example, the Dietary Approaches to Stop Hypertension (DASH) initiative has shown blood pressure can be improved by developing a lifestyle approach to control the condition that focuses on a diet that is rich in vegetables, fruits, low-fat dairy, and lean protein, in addition to increased physical

activity and reduced sodium intake (Appel, 2011). Other recommendations have shown that when patients are trained and educated about hypertension, they are more likely to regularly check their blood pressure (Uhlir et al., 2012), which can remind them to take the actions necessary to improve their condition.

The DASH diet is one important component of the lifestyle modification for hypertension that was developed based on studies that showed most hypertensive patients had little previous knowledge on how diet affected their health in this regard. Furthermore, the same authors found that most hypertensive clients have little knowledge about healthy lifestyles in general and were unaware of behavior changes that would sustain a healthier lifestyle (Jansink et al., 2010). The guidelines by the NIH and WHO economy of expression with the JNC 8 guidelines that will be used in this project. I will use the JNC 8 guidelines for the management of hypertension in adults as the recommendations to be provided to patients in the educational process (American Academy of Family Physicians, 2014).

HPM is important in nursing research and practice as part of advancing the discipline of nursing through knowledge gained. I will use this theoretical model to develop guidelines for clinical nursing staff in the chosen clinical setting to assist mental health patients in overcoming the barriers to healthier behaviors. Clinical nursing staff will be able to utilize this model to identify the patient's strengths and weaknesses, thus helping them develop a plan for improving their healthy behaviors. Therefore, it will provide the framework for this project study. The purpose of educating nurses is that they

can provide education to their patients, thus encouraging healthy lifestyle changes in accordance to the HPM.

Definitions of Terms

In helping to understand this study, I define the following terms to provide the reader a better understanding of the terms referenced throughout the document.

Hypertension: Hypertension (HTN), also known as high blood pressure (HBP), is defined as a medical condition in which a patient's systemic systolic pressure is ≥ 140 mmHg and/or diastolic pressure is ≥ 90 mmHg (AHA, 2012). I did not consider specialized types of high blood pressure, such as pulmonary hypertension (PHTN), are in the immediate project due to the difficulty of measuring these values in the mental health clinical setting. In the event that such a concern arises, the clinic staff will be educated to refer the patient to a specialist in the appropriate field of practice.

Blood pressure: Blood pressure is the force of blood pushing against the walls of arteries as it moves through the body (Huntley et al., 2013).

Lifestyle modification: A set of prescribed changes in behavior performed to attain or to maintain good health and to prevent illness. Lifestyle changes are also health-promoting behaviors that can improve one's quality of life more generally and help in the lowering the severity of diseases such as hypertension (Hong, 2010). Even relatively minor changes in this area can have significant, measurable, positive effects in terms of patient health outcomes.

DASH diet: A DASH diet stands for Dietary Approaches to Stop Hypertension. It is a food or dietary plan for lowering blood pressure and may be used in conjunction with lifestyle modifications for physical activity and other life choices.

Relevance to Nursing Practice

The need for this project is supported by several of academic studies that indicate that patients are unaware of the factors involved in hypertension and lifestyle choices that could help to prevent it. Therefore, it is important to train clinical nurses to provide this information to patients. The following evidence of this gap in patient knowledge highlights the need for clinical nurses to screen patients for hypertension.

A study by Azubuike and Kurmi (2014) found that most of the hypertensive patients included had no information about hypertension due to a low level of educational resources. According to Li et al. (2013), approximately 77.3% of hypertensive patients were uneducated, and those who were educated had problems in receiving hypertension knowledge. In a da Silva Pires and Mussi (2012) study, most patients expressed that it was difficult for them to follow a healthy diet, and their prescribed food list was hard to adhere to because of lack of opportunity and challenging due to lack of money. According to Demaio et al. (2013), most risk factors for hypertension known to the participants were excessive salt intake (77.4%), family history (73.4%), and alcohol consumption (47.6%). Akter et al. (2014), who focused on knowledge about hypertension on treatment, risk factors, and diagnosis, showed that only 28% knew the correct definition of hypertension and 3% aware that etiology was unknown.

Furthermore, Sathish Kumar et al. (2015) reported that many of the patients with hypertension have no idea about the signs and symptoms or complications of hypertension. Also, Li. et al. (2013) stated that most of the patients were unaware of possible hypertension problems, whereas 18% of the hypertensive patients knew hypertension could cause kidney disease. Based on Awotidebe et al. (2014), information about lifestyle modifications, such as exercise and activity to control hypertension among the participants, was poor due to lack of awareness. Similarly, Okwuonu et al. (2014) found that up to 80% of hypertensive participants were unaware of the important of lifestyle modifications in controlling hypertension. These studies support the need for increased patient education on hypertension and how to prevent it.

This lack of patient knowledge about hypertension and how to prevent it highlights the need for greater emphasis on the risks of HTN and need to educate nurses on the guidelines to recognize and educate patients on HTN. Nurses are the contact point between the patient and the medical system. This interface makes them the obvious choice for providing this education. They have the perfect opportunity to fill in the gaps of patient knowledge about hypertension and lifestyle changes that could help to prevent it. Therefore, the staff educational program developed for this project will help nurses to provide patient education that will help to recognize the signs and symptoms of hypertension and ways to prevent or manage hypertension.

In the past, the approach to educating patients about hypertension has lacked a uniform strategy. Even though there was much known about how to prevent hypertension, there was no uniform system for making certain that the information

reached the patient. This is clear from the lack of knowledge that patients currently possess about hypertension and how to prevent it. This project will fill the gap between existing staff knowledge on hypertension and providing patient education.

Local Background and Practice

The goal of healthy life style behaviors for patients with hypertension and the importance of early detection to promote long term patient health. Early awareness of and interventions to prevent hypertension are crucial to the condition of people living with the disease, as these individuals have a high risk of developing cardiovascular diseases and other chronic illness. Young (2011) reported that inadequate control of hypertension could pose a dangerous effect for the patients, families, and communities. Staff education on hypertension, the signs and symptoms and treatment options may increase staff knowledge (Murray et al., 2011). The patients in the clinic are similar in their desire to decrease healthcare costs, live longer life spans, and have greater social cohesion. Thus, a relatively modest effort at patient education, accomplished through clinic staff education, can be a factor in a complex, dynamic real-world situation where nurses screen patients for HTN and provide education for life style modification.

Advance Practice Nurses (APNs) are trained to promote health and provide preventive measures to their immediate patients and to their communities at large. In the proposed educational intervention for clinical nursing staff, a learning tool will be used as a guide in teaching Lifestyle Modification for Hypertension (LMH) to clinical nursing staff (see Appendix B). The learning material will provide information on hypertension, including information on what contributes to the condition, how to reduce hypertension,

and how to manage and decrease the risk of developing high blood pressure. These guidelines will include recommended dietary modifications and exercise regimes.

According to Newhouse et al. (2011), Nurse Practitioner (NP) can help a patient manage chronic conditions such as hypertension and associated cardiovascular disease by promoting behavior change with the end goal of improved patient outcomes.

The context of the project will be in an outpatient mental health clinic. Many times, mental health patients have problems, such as hypertension, that are a result of unhealthy lifestyle choices. For instance, depression may prevent them from getting enough physical activity to prevent hypertension. Persons with addiction problems or anxiety might engage in excessive alcohol consumption, smoking, or be in a state of stress much of the time, all of which can contribute to the development of hypertension. In addressing the overall quality of life of the mental health patient, it is important to address all areas of their physical and mental health. Therefore, this project will help to improve the care and outcomes for mental health patients by addressing their risk for hypertension. In addition, certain medications might have a side effect of raising blood pressure. In addition, there are guidelines such as the JNC 8 and Healthy People 2020, which include hypertension in their guidelines, but there are no specific guidelines for addressing the specific needs of mental health patients in regard to hypertension. The JNC 8 Guidelines that will be used in this project are meant to be applied to the general patient population.

Role of the DNP Student

As a DNP student and NP at the clinical practice being used for this project, it is my duty to attempt to understand the major issues that occur in my practice setting and provide evidence based care to patients. My interest and motivation in this project stem from a history of familial hypertension and first-hand experience regarding the impact on the lives of the patient and their family. I have no prior relationship with the participants in the study, except my knowledge of the clinic through the University. I do not believe that I have any biases that will affect the outcome of the project, other than that I feel that hypertension is a serious problem and needs to be addressed aggressively through patient education and treatment by care providers.

Summary

This section of the DNP addressed the gap between rising hypertension rates and the knowledge level of patients regarding hypertension. A lack of uniform practice for educating patients about the lifestyle changes that would lead to lower hypertension rates in the general population, and in those seeking help for mental health conditions. The next section will address the methods that will be utilized to explore this project topic. It will include the introduction to Section 3, practice-focused questions, sources of evidence, analysis and synthesis, and summary of the section.

Section 3: Collection and Analysis of Evidence

I will cover the following areas via the content of the educational program. I have identified these areas through the evidence-based education plan content. Multiple search databases was used to evaluate relevant articles using the following key words: *high*

blood pressure, hypertension, lifestyle modifications, and intervention for high blood pressure, health promotion, hypertension prevention, hypertension management, hypertension knowledge, and hypertension risk reduction in JNC 8. The databases that I consulted were Google Scholar, PubMed/Medline, Ovid Pus, and CINAHL. I conducted the search using a Boolean search for the terms *hypertension, high blood pressure, and health behavior high blood pressure.* More information retrieved from peer-reviewed journals, the National Heart, Lung and Blood Institute, the AHA, the American Society for Hypertension, the National Institute of Health, Healthy People 2020, and the CDC.

The literature review provides an understanding of the effect of lifestyle modifications on reduction and management of hypertension. Some of the studies focus on the evidence of the lifestyle changes method, how to manage and decrease hypertension through the DASH program, physical activity, and a healthy diet. A DASH is a diet rich in fish, low-fat dairy, lean meat, fruits, whole grains, legumes, nuts, vegetables, and seeds. Based on a randomized controlled trial (RCT), DASH programs have been shown as effective in lowering blood pressure among individuals with hypertension (Rigsby, 2011).

Understanding Healthy Blood Pressure

According to the Go et al. (2013), a healthy blood pressure is a systolic blood pressure of less than 120 mmHg and diastolic blood pressure of less than 80 mmHg. The AHA recommends that hypertension can be diagnosed when a systolic blood pressure is ≥ 140 mmHg, and diastolic blood pressure is ≥ 90 mmHg. The importance of treating

hypertension is to reduce the blood pressure to lower levels. Hypertension is classified as prehypertension and then hypertension Stages 1, 2, and 3 (See Table 1).

Table 1

An example of classifications of HTN

Blood pressure category	Systolic mm Hg (upper #)		Diastolic mm Hg (lower #)
Normal	Less than 120	and	Less than 80
Prehypertension	120–139	or	80–89
High blood pressure (hypertension) Stage 1	140–159	or	90–99
High blood pressure (hypertension) Stage 2	160 or higher	or	100 or higher
Hypertensive crisis (emergency care needed)	Higher than 180	or	Higher than 110

Note. Adapted from Go et al. (2013).

Dietary Modifications

Borgi et al. (2016) conducted a cohort study that focused on the effects of fruit and vegetable consumption on the incidence of hypertension. The researchers measured the long-term intake of fruits and vegetables compared with hypertension risk. The participants consisted of the Nurses' Health Study (NHS), the Nurses' Health Study II (NHS II), and the Health Professionals Follow-up Study (HPFS). The researchers concluded that greater long-term intake and increased consumption of whole fruits might reduce the risk of developing hypertension (Borgi et al., 2016).

The potential growth in the incidence of the disease seen in statistics for hypertension indicates a need for prevention, early detection, education, and lifestyle behavior changes, which are a priority for this silent killer disease. Evidence has shown through research studies that lifestyle changes and education or knowledge can improve

the quality of life for those with hypertension. Research also shows that successful behavioral change can promote a healthier approach to diet and physical activity in high blood pressure. As Appel (2011) says, “Dietary Approaches to Stop Hypertension (DASH) have shown an improvement in developing a lifestyle approach to blood pressure control that focuses on a diet rich in vegetables, fruits, low-fat dairy and lean protein, including increased physical activity and reduced sodium intake” (p2)

Research has also shown that dietary modifications have been effective in preventing and controlling hypertension and in reducing weight. Based on research, it has been confirmed that by adhering to a diet of food in low sodium, high in fruits and vegetables, and low-fat overall is effective in preventing hypertensive disease (Rigsby, 2011). DASH includes a diet that focuses on reducing sodium in the diet to 2,300 mg per day, an increase in vegetables and fruits, and low in total saturated fat and cholesterol intake (Saneei, Salehi-Abargouei, Esmailzadeh, & Azadbakht, 2014). Lifestyle modification is a helpful way of controlling high blood pressure (Bunker, 2014). Healthy heart foods that are low in sodium and cholesterol are effective in lowering hypertension. The DASH diet is also known to reduce high blood pressure through its recommendations of regular exercise, weight loss, and moderation of alcohol intake. It is also known that lifestyle change prevents hypertension and lower the risk of high blood pressure (Petkeviciene et al., 2014). Lifestyle modification is the acknowledged first line of response for all individuals with high blood pressure (Mersal & Mersal, 2015).

Physical Activity

The need to promote prevention strategies for hypertension is urgent as prevalence of risk factors is high, and the maintenance of these risk factors is low. Lifestyle modification includes athletic events that can increase one's quality of life and help in managing hypertension. The lack of knowledge is critical to a way of life change as evidence supports inactivity and sedentary work among individual with high blood pressure (Tussing-Humphreys, 2013). Lifestyle modification has been useful in the control and prevention of hypertension through weight reduction, increase physical exercise; maintain a healthy diet, and lower alcohol intake (Go et al., 2013).

Physical activity has been shown to reduce the risk of hypertension. Lack of physical activity will lead to increased morbidity and mortality. Physical activity is suggested for all individuals, at least 30 minutes a day of moderate to intense exercise for most of the days of the week (AHA, 2012). The recommendations are also applied to hypertensive clients in engaging in regular aerobic exercises. The increase in physical activities reduces the chances of developing chronic disease and illness (CDC, 2011a). Engaging in daily physical activity has led to improvement in cardiorespiratory fitness and prevent the risk for development of high blood pressure (Kokkinos, 2014), and increasing physical activities is important in decreasing the risk of developing elevated blood pressure.

Alcohol Consumption

Clinical research studies showed that alcohol intake led to increased blood pressure and significantly raised the chance of developing hypertension among people that drink regularly (Briasoulis et al., 2012). Alcohol consumption accounted for over

300,000 hospital admissions in 2010 and 2011, causing hypertension to be the most common alcohol-related health issue (Briasoulis et al., 2012). Reduction of alcohol intake can decrease blood pressure by lowering it by 2 to 4 mmHg. It has been proven that reducing alcohol consumption reduces blood pressure and decreases the chance of developing hypertension. Alcohol intake is a preventable, modifiable risk factor related to hypertension, and lowering alcohol consumption lessens the likelihood of developing hypertension.

According to the AHA recommendation for patients with high blood pressure, men should limit their alcohol intake to a maximum of two standard drinks per day while women should limit their alcohol to one standard drink per day (AHA, 2012). Reducing alcohol drinking leads to benefits of lowering blood pressure, and thus indirectly to the decrease in the risk causing stroke, cardiovascular disease, or heart attack.

Smoking Cessation

Smoking is one of the risk factors for high blood pressure (AHA, 2012). Smoking destroys the walls of the pulmonary blood vessels and increases system-wide atherosclerosis, a narrowing of the arteries, and decreased oxygen flow to organs, including the heart (NHLBI, 2010). Atherosclerosis causes an increased risk of angina, strokes, heart attacks, and congestive heart failure. The relationship between atherosclerosis and hypertension is a positive feedback loop, with an increase in the one causing an increase in the other, thus beginning a spiral of morbidity and mortality (NHLBI, 2010). Smoking has been recognized as the leading cause of premature illness and a major factor of hypertension, contributing to stroke, respiratory disease and

coronary heart disease (WHO, 2013a). Smoking and its connection to hypertension make it essential in the assessment and treatment of hypertension.

Evidence-Based Significance of the Project

The projected growth found in the published statistics for hypertension, both domestically and globally; indicate that there is a priority need for prevention, early detection, education, and lifestyle behavior modification. Evidence has shown that lifestyle change and teaching on the topic can improve a patient's hypertensive state. Research demonstrated successful behavior change is always involved in promoting a healthier approach to diet and physical activity in the area of high blood pressure. The Dietary Approaches to Stop Hypertension (DASH) initiative has shown an improvement in blood pressure by developing a lifestyle approach to control the condition that focuses on a diet rich in vegetables, fruits, low-fat dairy, and lean protein, in addition to increased physical activity and reduced sodium intake (Appel, 2011). Other recommendations showed that when patients are trained and educated on hypertension, they show more involvement in monitoring their blood pressure by checking it regularly (Uhlrig et al., 2012). That is, frequent updates on one's physical status make one more conscious of actions needed to maintain or improve physical condition.

Based on guidelines from the NIH, the recommendations for management of hypertension should begin with lifestyle modification, which includes managing high blood pressure and educating the patient in preventive and lifestyle behavior change (Margolius et al., 2012). Medication and other options may be necessary in some cases, but they should be considered as adjuncts to behavior modification techniques. Lifestyle

change requires replacing old practices and adjusting to a new action routine (WHO 2012). The DASH diet is one important component of the lifestyle modification for hypertension that resulted from studies that showed most hypertensive patients had little previous knowledge on how diet affected their health in this regard. Further, the same authors found that most hypertensive clients have little knowledge about healthy lifestyles in general and were unaware of behavior changes at large that would sustain a healthier lifestyle (Jansink et al., 2010).

Lifestyle modification is one of the methods that can be created by any medical expert for the treatment of hypertension among patients affected by the disease. As a generalizable practice, the basic rubric of dietary and activity changes can be adapted readily to almost any patient's situation. Healthy lifestyle practices could prevent 80-90% of all cases of the diseases (Yates et al., 2012). In high-risk populations, Yates et al., (2012) also found that up to 60% can reduce their risk of progressing to hypertension with lifestyle interventions by promoting a healthy diet, moderate-vigorous physical activity such as exercise, and weight maintenance. An increase in moderate physical activity, such as light daily exercise, can decrease the risk of hypertension by 58% in patients who already have a diagnosis of high blood pressure (Letassy et al., 2010). Small changes in behavior and life style have been shown to have important effects on blood pressure and the treatment of hypertension.

Planning and Implementation

The setting for this clinical study and educational program is a standalone clinic that has been in business for 23 years. It is located in Southern California. The clinic

specializes in the care of adults with mental health diagnoses of various types. The staff is comprised of a psychiatrist, two nurse practitioners, five licensed vocational nurses, two medical assistants, two certified nurse assistants, one secretary, and two laboratory technicians. The clinic was chosen because the patients represent a multiethnic community that is high risk for the development of hypertension due to their lifestyle, mental health status, and potential side effects from medication. Approximately one third of them are uninsured or underinsured. Over 50% of the patients have such substance abuse histories that include alcohol abuse for duration of greater than 20 years. The patients are of low socioeconomic status and suffering from mental illness, which places them at a greater risk for developing hypertension, according to the evidence-based research presented earlier. The choice of location for this educational program and evaluation is based on a high population of patients that are high risk for having undiagnosed hypertension.

Permission to implement the education and evaluation program in the clinic was discussed with the medical director of the clinic. The nursing staff will implement and evaluate the program according to the parameters set by the researcher. The program will be conducted and evaluated at the mental health facility. The education and evaluation program will take place in the staff break room.

Ethical Considerations

The educational program and permission to conduct the described research meets with IRB approval guidelines, as indicated by IRB Approval # 09-27-17-0427366. The clinic provided a signed Site Agreement, included in Appendix C. All data collected was

anonymous and the staff signed a Data Questionnaire Consent, as provided in Appendix D, prior to the commencement of the educational program. Results of the study will be kept in a locked file cabinet for 5 years, as per IRB requirements. A working relationship was established with study participants through contact with the clinic used in the study as part of my university program requirements. The pre- and posttest will be identified by matching numbers only, so that the study participants will not be identified. This will safeguard the privacy of the participants. The permission signed by the participants will state that participation is voluntary, and they can withdraw at any time they choose without consequence.

Assumptions and Limitations

This DNP project is designed to promote hypertension awareness among the clinical nursing staff at a mental health clinic. The goal is that these efforts will lead to positive improvement or changes in the nursing staff's recognition and education for patients with hypertension. It is assumed that the project will improve clinical nursing staff awareness of the importance of measuring and tracking hypertension among their patients to promote a decrease in the incidence of hypertension in general, the severity of the condition in those who have it, and positively affect patient health outcomes. The clinical nursing staff will have a positive impact on decreasing hypertension among patients due to their ability to pass this information and knowledge to the patient, thus encouraging the patient to become aware of hypertension and to take measures to make healthy lifestyle changes in this regard. The nurses will provide patient education and

awareness, which will decrease hypertension through the adoption of healthy lifestyles in their patients.

Several limitations can affect the development and acceptance of the project. One of the significant limitations in a local clinic may be resistance to change. To most people, change is difficult and challenging, as it requires the abandonment of established practice or custom. Based on Kelly (2011), about 68% of the population expresses a character type that is resistant to change, while 32% express a character type that is accepting of change. Therefore, stressing the importance of the alteration of workplace culture to benefit patients will be emphasized. Educating the clinical nursing staff in identifying and capturing mental health patients with hypertension will assist in detecting early stage of hypertension, which has been shown to improve long term responses to the condition.

The WHO calls attention to the need for improving the health of patients that are struggling against high blood pressure. Healthcare professionals, mostly nurses, need to play significant roles in generating awareness among the society in which they live and work and take an active part in preventing hypertension (WHO, 2013a; Hong, 2010).

Analysis and Synthesis

Evaluation of the educational program will be achieved through conducting a pre-test and post-test survey that includes closed ended questions. The questions will address the effectiveness of the educational program and the effects on the nursing staff's understanding of how to diagnose and address hypertension in mentally ill patients who attend the clinic. A pre-test survey will be administered by the educator prior to the

delivery of the educational program. The pre-test will ask about staff knowledge and measurement practices regarding hypertension. A post-test will be given to explore their attitudes about hypertension testing after the delivery of the educational program. All staff who participate in the educational program will be asked to evaluate the effectiveness of the educational program. Their participation will be voluntary. However, it is expected that few, if any, will choose not to take the surveys at the beginning and end of the program. Surveys such as this are common after an in-service or training program and the staff is accustomed to them.

Prior to beginning the educational program, the educator will pass out surveys to the participants and will collect them prior to beginning the educational program. At the end of the educational program, the educator will pass out the questionnaires to the participants. All survey results will be anonymous. The participants will fill them out on-site and return them immediately to the evaluator. The evaluator will place both the pre-test and post-test results in a manila envelope that will be kept in a secure and private location until the researcher can pick them up. The researcher will then take possession of the survey questionnaires and begin the analysis and final report process.

The researcher will utilize descriptive statistical techniques to analyze the results of the research study. The number of sample participants in the study will be small, due to the small numbers of available staff at the clinic. A program such as Excel or SPSS will be utilized to form the final analyses on the research questionnaire. The results will then be summarized.

Summary

The DNP project is to create a teaching method for the clinical nursing staff in identifying and capturing hypertension information among mental health patients. Healthcare workers are necessary components in a plan for improving patient health outcomes based on their professional education and skills. Therefore, the clinical nursing staff at the local clinic needs to be educated on how to capture and identify hypertension among mental health patients. Hypertension is rightly known as a “silent killer,” so early detecting of hypertension by the clinical nursing staff will help in the early treatment and prevention.

Section 4: Findings and Recommendations

Introduction

In this study, I used a pre- and post survey design to examine changes in attitude and practice among nurses at a local clinic that specializes in the treatment of patients with psychological conditions. The study involved administering a pretest survey to the staff at the clinic. Next, an educational program was presented, with a posttest survey administered at the end. The results of the study depend on the differences between the pretest and posttest results. The posttest was identical to the pretest, but it had two additional questions that asked the participants their feelings and impressions of the educational program. In Section 4, I present the findings and recommendations derived from the analysis of the study results.

Findings and Implications

I conducted the study in the course of an afternoon in the break room of the clinic. I chose and set aside a time was chosen that is typically not during a busy time at the office. The training was presented to the two nurse practitioners, five licensed vocational nurses, two medical assistants, and certified nurse assistants. This provided a sample population of 11 study participants. The psychiatrist, secretary, and two laboratory technicians did not attend the presentation and training, or take part in the survey questionnaire.

Study Administration

The study participants gathered in the break room at 1:00 p.m. After an opening presentation, I explaining the purpose and procedure that would be followed, pretest questionnaires were given out to all participants. They were also given a consent form for anonymous questionnaires, as provided in Appendix B. The participants were asked to take note of the number on the right upper corner of their questionnaire, as they would place the same number on the posttest so that the two scores could be matched and compared at a later time. Once all of the participants had filled out the pretest, the educational program was present to the participants. The program included one 10-minute break at approximately the middle of the presentation.

At the conclusion of the presentation, posttest questionnaires was handed out to all participants. Participants was instructed to place the same number as was on their pretest in the upper right-hand corner of their posttest. No other identifying information is been asked on the questionnaire. This was only a way for me to perform a comparison of the pretest and posttest by sample participant. The participants was asked to fill out the questionnaire and return them to me. I matched the appropriate pretest and posttest as a pair and placed them in a manila envelope for later tabulation and analysis. Once the posttest was completed, the participants could return to their usual work duties.

Survey Instrument

The survey instrument was composed of a pretest and a posttest questionnaire. Both surveys used a 5-point Likert scale where the participants were asked to place an X in the appropriate box to indicate their chosen response to the statements. Both scales

used a five-response system where 1 = completely disagree, 2 = somewhat disagree, 3 = neither agree nor disagree, 4 = somewhat agree, and 5 = completely agree. The survey questions was derived from information found in the literature review about causes and treatment of hypertension, particularly in those that have psychiatric conditions as well. It also addressed the attitudes of nurses regarding the need to screen every patient for hypertension. The pretest survey determined participants' general knowledge and attitudes regarding current practices. The pretest contained nine questions and took approximately 15 minutes to complete.

The posttest was identical to the pretest for the first nine questions. This technique allowed me to determine if there have been changes in the knowledge level of the participant before taking the educational program and afterward. It also examines whether the nurses' attitudes toward screening for hypertension changed since the pretest administered and they received the educational program. The posttest included two questions that asked the participant whether they believe the educational program gave them any new knowledge, or had an effect on their attitudes towards screening for hypertension. The posttest also took approximately 15 minutes to complete.

Although participants was informed that participation in both the pretest, posttest, and educational program were voluntary, all of the nursing staff chose to participate in both surveys and the program. No one dropped out of the study and everyone completed the entire program. Even though the sample size was small due to the size of the staff and eligible sample participants, the results of the study reflect 100% of the nursing staff at the clinic.

Study Analysis and Results

Once I was ready to perform the study analysis, I made a spreadsheet that matched the pretest and posttest answer for each item on the questionnaires. Owing to the small sample size for the study, and the range of potential survey responses, the results of the study was determined by entering the individual survey results in a table format and observing the general trend with disagree or slightly disagree representing a negative answer and agree or slightly agree representing a positive answer.

I observed the trend in answers between the pretest and posttest to determine whether the answers had changed after the educational program were presented. The raw data used for this analysis can be found in Appendix G of this study. The following represents a presentation of the results and discussion of the findings of the research questions and the implications with regard to the conclusions and clinical practice.

Question 1

Before the educational program, only two of the respondents believed that psychiatric patients were at a higher risk than the average population or hypertension. The responses were equally split between positive and negative responses, and one neutral response. After taking the educational program, all respondents believe that psychiatric patients were at an increased risk for hypertension. It is not known if the two who were aware of the risk before the program represented nurse practitioners who must have the knowledge necessary prescribing medication and monitoring its effects. This may have affected the answers to this question.

Questions 2, 3, 4, 5, and 6

This range of questions asked about knowledge regarding specific risk factors. Based on categorical analysis, I found that, overall, responses to these questions indicated an improvement in knowledge about hypertension after attending the educational program. The nurses were prepared with more facts and certain myths were dispelled according to the findings of these questions.

In Question 4, respondents were more spread out in their answers after the educational program. This question asked about whether hypertension places the patient at risk for early death. This question may have been confusing, because it did not indicate whether hypertension was treated or untreated. If the nurse considered the question to mean untreated hypertension, it would have been likely to influence the question toward the side of agreement. However, after the educational program, nurses may have understood that if hypertension is treated, then the patient's risk for death is decreased and this was reflected in the range of answers. The responses to this question may have been a result of confusing wording of the question.

Questions 7, 8, and 9

Questions 7 and 8 asked the nurses about whether hypertension was easy to diagnose and treat, and about whether lifestyle screening could reveal clues that a patient is at increased risk for hypertension. Questions 7 and 8 asked about the role of the nurse in detecting and helping to prevent hypertension and the role of the nurse as a patient educator. The responses to these questions indicate that prior to the educational program, nurses agreed that lifestyle screening may help to detect hypertension, but seven of the nurses were neutral regarding to the ability of the screening to detect hypertension.

Before the educational program, nurses had mixed beliefs about whether hypertension is diagnosable and treatable. Approximately half did not feel strongly that this was the case. After the educational program, nurses strongly agreed that hypertension is easily diagnosed and treated, and that lifestyle screening can play a key role to reduce the risk of hypertension for patients. In terms of the nurses' role in the detection and prevention of hypertension, as well as the education of patients, responses indicated that nurses felt more strongly about their role in the prevention and treatment of hypertension after the educational program than before it.

Question 9 asked whether the staff planned to include hypertension screening as a part of every patient visit in the future. On the pretest, 9 of the participants indicated that they would not include hypertension screening for every patient. Only 2 of the nursing staff indicated that they would include hypertension screening as part of every patient visit. After the educational program, all 11 participants indicated that they would include screening for hypertension as a part of every patient visit. This marks a significant change in nursing staff attitude toward hypertension screening in patients.

Question 10

Question 10 was the only question that was different on the pretest and the posttest. On the pretest, these questions asked about current practice regarding screening for hypertension risk factors and the inclusion of hypertension screening as a part of every patient visit. On the posttest, the question asked about future intentions regarding the same topic. Results of the pretest indicate that prior to taking the educational program, it was found that nurses were not regularly screening patients for hypertension,

or hypertension risk factors. Only two of the nurses consistently screened patients for hypertension prior to taking the educational program. Once again, it is not known if this is a result of higher level nurses training, prior experience, or their reasoning. After the educational program all of the respondents agreed or strongly agreed that they would plan to include hypertension screening and screening for risk factors as a part of regular patient visits.

This question, in both its pretest and posttest forms, may be the most important questions on the survey because they reveal answers about current practice and about future intentions regarding the topic. This change between actual practice prior to taking the program and intentions after words, indicates that the educational program had an effect on the attitudes of the nurses toward screening for hypertension. It might also be noted that prior to taking the educational program, other factors may have influenced the willingness of the nurse to take time to screen for hypertension. They may not have felt it necessary because of a lack of information, or factors such as the time they spent with a patient may have been rushed and they did not feel that this information would benefit the patient. It may also be that the nurse did not know how to screen or take actions for a patient regarding hypertension during physicians' visits. These two questions are the strongest indicator that the educational program had an effect on changing the attitudes of nurses regarding the necessity of screening patients for hypertension.

On the posttest, questions 10 asked for a subjective evaluation of the value of the educational program. Nurses in general, felt that the educational program increased their knowledge about the detection and diagnosis of hypertension compared to their

knowledge level prior to taking the educational program. They also felt that it would change how they felt about screening patients for hypertension in the future. Only two of the nurses did not feel that they gained as much from the program or that it would change their attitudes and thoughts about screening for hypertension in the future.

Recommendations

The results of the questionnaires strongly indicate that the educational program had an impact on the knowledge level of the nurses and would make positive changes in their willingness to screen for hypertension as a part of regular clinical visits. It indicates that nurses more clearly understand their role and ability to help patients that may be at risk for hypertension. The results of the study suggest that an educational program such as the one conducted as part of the study would lead to positive patient outcomes regarding the ability of nurses to properly screen, detect, and make referrals regarding hypertension.

The research supports the supposition that once nurses are armed with proper education and knowledge, they will be willing to take actions regarding screening patients for hypertension. Increase screening increases the potential that previously undiagnosed hypertension will be discovered through the course of a regular office visit. This will lead to the ability of the nurse to refer the patient for proper treatment from a qualified physician. This will improve patient outcomes through the ability to obtain intervention and keep their hypertension under control. When the nurse takes the role of an educator, patients will benefit from the knowledge gained and the ability to take action on their own behalf in maintaining a lifestyle that is likely to prevent hypertension.

After conducting the educational program, a majority of the staff were in favor of conducting hypertension screening for all patients. It is recommended that positive action be taken on the part of the organization in changing clinical practice policy to include the screening of all patients for hypertension on any visit. A company policy that assures that screening is a part of the assessment is a way to make certain that any new employees who come on board will be made aware of the policy.

It is also recommended that in addition to policy changes that support screening patients for hypertension at every visit, that a policy and program to be initiated that will allow for the conduct of the program developed as a part of this research on a regular basis. It should become a part of the company training protocol. Each year the educational program could be improved by including new findings and information from credible sources as it becomes available. This would make certain that the nursing staff is up-to-date on new findings and how they will affect clinical practice. It will also assure that any new staff members have up-to-date information and a knowledge base that will allow them to execute the program with patients in the best way possible.

Strength of the Educational Program

The main strength of the project lies in the ability to apply the educational program to 100% of the staff. This means that the results are a true reflection of the attitudes and practices of nurses regarding hypertension in that setting. While the results of the study may only apply to clinical settings that are similar to the one in the study, the results indicate that the educational program was successful in improving attitudes towards screening for hypertension in all patients and as an indicator that hypertension

would become mandatory for all patients with the potential to change company policy in this regard.

Implications for Social Change

The main implication for social change of this project is that nursing staff will change their behaviors regarding screening every patient for hypertension. They will engage in better monitoring practices, which will lead to the discovery of hypertension in patients early, potentially preventing complications from hypertension in them. It will lead to a greater awareness among nursing staff about the importance of monitoring for hypertension in each patient that attends the clinic. The longer-term implication of the study is that more vigilant monitoring of hypertension in patients will lead to a reeducation in hypertension and better control of the condition in patients with a diagnosis of hypertension.

Weaknesses of the Educational Project

One of the weaknesses of the study is that no identifying information was included on the pretest and posttest. The participants were only identified by number and there was no way to match up the numbers with the participant. The office staff that participated in the study comprised of a wide range of experience, educational, and skill levels. In future renditions of the project, it might helpful to include a sheet that asks for such demographic information. It is not known if the skill level of the participant had an effect on the results of the study. For instance, it would be expected that a nurse practitioner would have more information and experience with hypertension than a medical assistant. However, it is not known if this experience was reflected in the

answers provided on either the pretest or the posttest. This is one of the limitations of the study and did not allow the researcher to determine if experience and educational level had an effect on the baseline as determined by the pretest or the differences between pretest and posttest scores. It is possible that for some participants, the information provided may have been a repetition of what they already knew. For others, this may have represented new material.

With such a small sample size, analysis using statistical means and traditional quantitative methods may provide misleading results that would lead to an error in the conclusions drawn. In addition, it is likely that the staff has certain biases that may affect their prior knowledge and practice prior to taking the posttest. Each clinic has certain procedures and organizational culture factors that may influence their attitudes towards hypertension screening and practice. A small sample size such as this might not be able to be generalized to the general population (Faber, & Fonseca, 2014). A small sample size also undermines the reliability of the study (Button, Ionnidis, Mokrysz, & Nosek et al, 2013).

Another weakness of the study is that the entire sample population was from a single office. Every office has specific procedures and organizational culture regarding what tests are performed and how they are performed. In addition, there may be procedures that are a result of practices recommended by pharmaceutical companies regarding screening of hypertension when a patient is taking a certain type of medication. It is possible that the participants may have worked for other clinics that have for procedures or protocols regarding the screening of hypertension. Determining this type of

influence is beyond the scope of the current research study. All of these factors could create bias in the study regarding practices and attitudes towards screening for hypertension. While this does not undermine the ability of the study to represent the attitudes and practices in the clinical setting understudy, it does limit the ability to transfer the results to clinics that have different cultural factors and procedures regarding the screening of hypertension (Faber, & Fonseca, 2014). For this reason, the results of the study will only be applicable to other clinical settings that are similar to the one understudy.

The final weakness of the study is that it has a low statistical power due to the small sample size (Button, Ionnidis, Mokrysz, & Nosek et al, 2013). This reduces the chance of detecting a true effect of the phenomenon. The researcher cannot determine that a result that is statistically significant reflects the true effect of the phenomenon (Button, Ionnidis, Mokrysz, & Nosek et al, 2013). This has the potential to cause the author to overestimate the effect of sample size. The ability to reproduce the results of the study under a different study setting is also reduced (Button, Ionnidis, Mokrysz, & Nosek et al, 2013). Studies in the medical field often suffer from the negative effects of small sample size. This means that improving the ability to reproduce the results is a priority in the field of medicine (Button, Ionnidis, Mokrysz, & Nosek et al, 2013). This study may suffer from the consequences of a small sample size. Repeating the study using different sample populations will improve the ability to generalize the results to different sample populations.

Section 5: Dissemination Plan

The results of the study are positive with regard to the need to establish a regular educational program for nurses at the clinic under study. I will schedule a meeting with the psychiatrist at the clinic to present the results, and I will then distribute the results to the staff. In this particular clinic, the psychiatrist is solely responsible for policies, training, and other programs. During the meeting, I will present the results of the findings, as well as the benefits of implementing the recommendations. I will address any concerns or questions that the psychiatrist may have regarding the recommended changes. During the meeting, I will ask for permission to formally present the results of the study to the nursing staff at a staff meeting.

Analysis of Self

My role in the distribution and dissemination of the knowledge will be to meet with the lead clinical psychiatrist at the clinic to present the research findings. If the psychiatrist wishes to engage the recommendations, I will offer to serve in a consulting capacity if needed. This may include the development of training materials based on the findings of the study and the educational program. My services will not be ongoing but limited to the development and initiation of the program.

One of the key challenges faced in the completion of this project was finding relevant information regarding the monitoring of hypertension. Although there studies have addressed the topic of hypertension in patients, few addressed monitoring from a nursing perspective. This is a procedural issue within various clinics, including the one

that I used in this study. Even though the nursing staff are aware of the dangers of hypertension, they do not conduct regular screening of at-risk patients. To resolve this problem, more research needs to be conducted on policies within clinics and resolutions regarding to how to encourage the nursing staff to conduct regular screenings.

Another challenge that I encountered when conducting this study was scheduling. The clinic is busy, and the educational program took time away that could have been spent seeing patients. In a clinic as small as this one, this may be an ongoing problem. In larger clinics, the staff who attend the educational program could be staggered so that the work would not be interrupted. The only other option in clinics with small staff sizes would be to hold the program before or after work hours.

Summary

I investigated the effectiveness of an educational program targeted toward nurses at a psychiatric clinic. Before initiating the educational program, the attitudes and knowledge level of the nursing staff varied. Screening for hypertension was inconsistent, or potentially nonexistent in some cases. The population served by the clinic is at high risk for the development of hypertension. This makes it essential that nurses understand how to screen for hypertension, and how to make referrals should the condition be discovered. After the educational program, nurses had the knowledge base and understood the importance of screening patients for hypertension. The research indicated positive results in terms of the willingness of the nursing staff to screen for hypertension at every clinical visit.

The results of the study indicate a need for policy change that mandates screening of hypertension on every patient at every visit. It also indicates the need for an ongoing educational program that will allow the staff to keep up to date regarding new information that may develop about hypertension were the screening process. The program also needs to ensure that any new employees are aware of the information and the clinic policies regarding it.

This research will form the foundation of solid clinical practice regarding the screening of hypertension in patients who are at increased risk due to their involvement in psychiatric care. The educational program will improve the consistency and professional development of the nursing staff at the clinic. It may also serve as a model program for the development of similar policies and programs and other clinics that are similar to the one under study.

References

- Akter, R., Assadi, R., Singh, H., Abaszadhezouri, M., Lamichhane, S. Ahadi, H., ... & Gopakumar, A. (2014). Sources of information and level of knowledge on hypertension among entry level university students in Ajman, UAE. *American Journal of Research Communication*, 2(5), 16-27. www.usa-journals.com, ISSN: 2325-4076.
- American Academy of Family Physicians. (2014). JNC 8 guidelines for the management of hypertension in adults. *American Family Physician*, 90(7), 506-504.
- American Heart Association. (2013). *Conditions: High blood pressure*. Retrieved from <http://www.heart.org/HEARTORG/Conditions/HighBloodPressure/High-Blood-Pressure>
- American Heart Association. (2012). Get Moving! Retrieved from <http://www.heart.org/HEARTORG/GettingHealthy/PhysicalActivity>
- American Heart Association. (2012). Understand your risk for high blood pressure. Retrieved from <http://www.heart.org/>
- Appel, L., Clark, J., Yeh, H.-C., Wang, N.-Y., Coughlin, J., Daumit, G., ... & Brancati, F. (2011) Comparative effectiveness of weight-loss interventions in clinical practice. *New England Journal of Medicine*, 365(21), 1959-1968. <http://dx.doi.org/10.1056/NEJMoal108660>
- Awotidebe, T., Adedoyin, R., Rasaanq, W., Adeyeye, V., Mbada, C., Akinola, O., & Otwombe, K. (2014). Knowledge, attitude, and practice of exercise for blood

- pressure control: A cross-sectional survey. *Journal of Exercise Science and Physiotherapy*, 10(1), 1-10. <http://dx.doi.org/10.18376//2014/v10i1/67243>
- Azadbakht, L., Fard, N., Karimi, M., Baghaei, M., Surkan, P., Rahimi, M., ... & Willett, W. (2011). Effects of the Dietary Approaches to Stop Hypertension (DASH) eating plan on cardiovascular risks among type 2 diabetic patients: A randomized crossover clinical trial. *Diabetes Care*, 34(1),55-57.
<http://dx.doi.org/10.2337/dc10-0676>
- Azubuiké, S. O., & Kurmi, R. (2014).Awareness, practices, and prevalence of hypertension among rural Nigerian women. *Archives of Medicine & Health Sciences*, 2(1), 23-28. <http://dx.doi.org/10.4103/2321-4848.133791>
- Bani, I.(2011). Prevalence and related risk factors of essential hypertension in Jazan Region, Saudi Arabia. *Sudanese Journal of Public Health*, 6(2), 45-50. Retrieved from [http://www.sjph.net.sd/files/Vol6N2/Original Article1.pdf](http://www.sjph.net.sd/files/Vol6N2/Original%20Article1.pdf)
- Barnes, A., & Kimbro, R. (2012).Descriptive study of educated African American women successful at weight-loss maintenance through lifestyle changes. *Journal of General Internal Medicine*, 27(10), 1272-1279. <https://doi.org/10.1007/s11606-012-2060-2>
- Borgi, L., Muraki, I., Satija, A., Willett, W., Rimm, E., & Forman, J. (2016). Fruit and vegetable consumption and the incidence of hypertension in three prospective cohort studies. *Hypertension*, 67, 288-293.
<https://doi.org/10.1161/HYPERTENSIONAHA.115.06497>

- Briasoulis, A., Agarwal, V., & Messerli, F. (2012). Alcohol consumption and the risk of hypertension in men and women: A systematic review and meta-analysis. *Journal of Clinical Hypertension*, *14*(11), 792-798. <http://dx.doi.org/10.1111/jch.12008>
- Bunker, J. (2014). Hypertension: Diagnosis, assessment, and management. *Nursing Standard*, *28*(42), 50-59. <https://doi.org/10.7748/ns.28.42.50.e8682>
- Button, K., Ioannidis, J., Morass, C., & Nosek, B. (2013). Power failure: Why small sample size undermines the reliability of neuroscience. *Nature Reviews in Neuroscience* *14*: 365-376. doi:10.1038/nrn3475
- Centers for Disease Control and Prevention. (2013). Death and mortality. *NCHS*. Retrieved from <http://www.cdc.gov/nchs/fastats/deaths.htm>.
- Centers for Disease Control and Prevention. (2014). Chronic diseases and health promotion. Atlanta, GA: US Department of Health and Human Services. Retrieved from <http://www.cdc.gov/chronicdisease/overview/index.htm>
- Centers for Disease Control and Prevention. (2011a). State-based nutrition and physical activity program to prevent obesity and other chronic diseases. Retrieved from <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm59e0803a1>
- Da Silva Pires, C., & Mussi, F. (2012). Health beliefs regarding diet: A perspective of hypertensive black individuals. *Revista da Escola de Enfermagem da USP*, *46*(3), 580-588. <http://dx.doi.org/10.1590/S0080-62342012000300008>
- Demaiio, A., Otgontuya, D., deCourten, M., Bygbjerg, I., Enkhtuya, P., Meyrowitssch D., & Oyunbileg, J. (2013). Hypertension and hypertension-related disease in

- Mongolia: Findings of a national knowledge, attitudes, and practices study. *BMC Public Health*, 13, 194. <http://dx.doi.org/10.1186/1471-2458-13-194>
- Drawz, P. E., Abdalla, M., & Rahman, M. (2012). Blood pressure measurement: Clinic, home, ambulatory, and beyond. *American Journal of Kidney Disease*, 60(3), 449-462. doi: 10.1053/j.ajkd.2012.01.026. Epub 2012 Apr 21.
- Faber, J., & Fonseca, L. (2014). How sample size influences research outcomes. *Dental Press Journal of Orthodontics*. 19 (4): 27-19.
- Go, A., Mozaffarian, D., Roger, V., Benjamin, E., Berry, J., Blaha, M., ...& Turner, M. (2014). Heart disease and stroke statistics—2014 update: A report from the American Heart Association. *Circulation*, 129(3), e28–e292. <http://dx.doi.org/10.1161/01.cir.0000441139.02102.80>
- Go, A., Mozaffarian, D., Roger, V., Benjamin, E., Berry, J., Borden, W., ...& Turner, M. (2013). Heart disease and stroke statistics—2013 update. *Circulation*, 127, e6–e245. <http://dx.doi.org/10.1161/CIR.0b013e31828124ad>
- Healthy People 2020. (2011). Topics and objectives index. Retrieved from <http://healthypeople.gov/2020/topicsobjectives2020/default.aspx>
- Hong, W. S. (2010). Evidence-based nursing practice for health promotion in adults with hypertension: A literature review. *Asian Nursing Research*, 4(4), 227-245. [http://dx.doi.org/10.1016/S1976-1317\(11\)60007-8](http://dx.doi.org/10.1016/S1976-1317(11)60007-8)
- Huntley, M., & Heady, C. (2013). Barriers to health promotion in African American men with hypertension. *American Journal of Health Studies*, 28(1), 21-26. Retrieved from

<https://www.thefreelibrary.com/Barriers+to+health+promotion+in+African+American+men+with...-a0347969669>

- James, P., Oparil, S., Carter, B., Cushman, W., Dennison-Himmelfarb, C., Handler, J., ...& Ortiz, E. (2014). 2014 evidence-based guideline for the management of high blood pressure in adults: Report from the panel members appointed to the Eighth Joint National Committee (JNC 8). *Journal of the American Medical Association, 311*(5), 507-520. <http://dx.doi.org/10.1001/jama.2013.284427>
- Jansink, R., Braspenning, J., van der Weijen, T., Elwyn, G., & Grol, R. (2010). Primary care nurses struggle with lifestyle counseling in diabetes care: A qualitative analysis. *BMC Family Practice, 11*(41), 1-7. <https://dx.doi.org/10.1186%2F1471-2296-11-41>
- Kearney, P., Whelton, M., Reynolds, K., Muntner, P., Whelton, P., & He, J. (2005). Global burden of hypertension: Analysis of worldwide data. *Lancet 365*(9455), 217–223. [http://dx.doi.org/10.1016/S0140-6736\(05\)17741-1](http://dx.doi.org/10.1016/S0140-6736(05)17741-1)
- Kelly, D. (2011). *Applying quality management in healthcare*. (3d ed.). Chicago: Health Administration Press.
- Kettner, P., Moroney, R., & Martin, L. (2013). *Designing and managing programs: An effectiveness-based approach*. (4th ed.). Thousand Oaks, CA: Sage.
- Kokkinos, P., Faselis, C., Myers, J., Kokkinos, J., Doulas, M., Pittaras, A., ...& Fletcher, R. (2014). Statin therapy, fitness, and mortality risk in middle-aged hypertensive male veterans. *American Journal of Hypertension, 27*(3), 422-430. <http://dx.doi.org/10.1093/ajh/hpt241>

- Kuznik, A., Mardekian, J., Tarasenko, L. (2013). Evaluation of Cardiovascular disease burden and therapeutic goal attainment in us adults with chronic kidney disease an analysis of National Health and Nutritional Examination Survey data, 2001-2010, 14: 132
- Letassy, N., Dennis, V., Lyons, T., Harrison, D., Burton, M.,& Kirkpatrick, A. (2010). Know your diabetes risk project: Student pharmacists educating adults about diabetes risk in a community pharmacy setting. *Journal of the American Pharmacist Association*, 50(2), 188-194.
<http://dx.doi.org/10.1331/JPhA.2010.09206>
- Li, C., Balluz, L., Ford, E., Okoro, C., Zhao, G.,& Pierannunzi, C. (2012). A comparison of prevalence estimates for selected health indicators and chronic diseases or conditions from the Behavioral Risk Factor Surveillance System, the National Health Interview Survey, and the National Health and Nutrition Examination Survey, 2007–2008. *Preventive Medicine*, 54(6),381–387.
<https://doi.org/10.1016/j.ypmed.2012.04.003>
- Li, X., Ning, N., Hao, Y., Sun, H., Gao, L., Jiao, M., ...&Quan, H. (2013). Health literacy in rural areas of China: Hypertension knowledge survey. *International Journal of Environmental Research and Public Health*,10(3), 1125-1138.<https://dx.doi.org/10.3390%2Fijerph10031125>
- Ma, W., Tang, J., Zhang, Y., Zu, Y., Lin, J., Li, J., ...& Yu, I. (2012). Hypertension prevalence, awareness, treatment, control, and associated factors in adults in

southern China. *American Journal of Hypertension*, 25(5), 590-596.

<https://doi.org/10.1038/ajh.2012.11>

Margolius, D., Bpodenheimer, T., Bennett, H., Wong, J., Ngo, V., Padilla, G., & Thom, D. (2012). Health coaching to improve hypertension treatment in a low-income, minority population. *Annals of Family Medicine*, 10(3), 199-205.

<http://dx.doi.org/10.1370/afm.1369>

Merai, R., Siegel, C., Rakotz, M., Basch, P., Wright, J., Wong, B., & Thorpe P. (2016). CDC grand rounds: A public health approach to detect and control hypertension. *Mortal Wkly Rep*, 18(45), 1261-126.

Mersal., F., & Mersal, N. (2015). Effect of evidence based lifestyle guidelines on self-efficacy of patients with hypertension. *International .Journal Current Microbiology and Applied Science*, 4(3): 244-263. <http://ijcmas.com/vol-4-3/Fathia%20A.%20Mersal%20and%20Nahed%20A.%20Mersal.pdf>

Michigan State University. (2010, June 14). Links between hypertension, bipolar disorders identified. *Science Daily*. Retrieved from www.sciencedaily.com/releases/2010/06/100610171716.htm

Mozaffarian, D., Benjamin, E., Go, A., Arnett, D., Blaha, M., Cushman, M., ... & Turner, M. (2016). Executive summary: Heart disease and stroke statistics—2016 update; A report from the American Heart Association. *Circulation*, 133(4), 447-454. <https://doi.org/10.1161/CIR.0000000000000366>

Murray, N., Abadi, S., Blair, A., Dunk, M., & Sampson, M.J. (2011). The importance of type 2 diabetes prevention: The Norfolk diabetes prevention study. *The British*

Journal of Diabetes & Vascular Disease, 11(6), 308-312.

<http://dx.doi.org/10.1177%2F1474651411429239>

National Heart Lung and Blood Institute. (2010). Systolic Blood Pressure Intervention Trial (SPRINT). Retrieved from <http://clinicaltrials.gov/ct2/show/NCT01206062>

Neuman, W. L. (2011). *Social research methods: Qualitative and quantitative approaches*. Upper Saddle River, NJ: Prentice Hall

Newhouse, R., Stanik-Hutt, J., White, K., Johantgen, M., Bass, E., Zangaro, G., ...& Weiner, J. (2011). Advanced practice nurse outcomes 1990-2008: A systematic review. *Nursing Economics*, 29(5), 230-251. PMID: 22372080 [PubMed – indexed for MEDLINE].

Okwuonu, C., Emmanuel, C., & Ojimadu, N. (2014). Perception and practice of lifestyle modification in the management of hypertension among hypertensive in south-east Nigeria. *International Journal of Medicine and Biomedical Research*, 3(2), 121-131. Retrieved from <http://www.ajol.info/index.php/ijmbr/article/view/105998>

Pender, N., Murdaugh, C. & Parsons, M. (2011) *Health promotion in nursing practice*. (6th ed). Boston, MA: Pearson.

Peterson, S., & Bredow, T. (2009). *Middle range theories: Application to nursing research*. (3rd ed.). Philadelphia: Wolter's Kluwer health/Lippincott Williams & Wilkins.

Petkeviciene, J., Klumbiene, J., Simonyte, S., Ceponiene, I., Jureniene, K., Kriaucioniene, V., ...& Lesauskaite, V. (2014) Physical, behavioral, and genetic

- predictors of adult hypertension: The findings of the Kaunas Cardiovascular Risk Cohort Study. *PLoS One*, 9(10), e109974. <http://dx.doi.org/10.1371/journal.pone.0109974>
- Poulter, N. R., Prabhakaran, D., & Caulfield, M. (2015). Hypertension. London, England: Lancet. doi:10.1016/s0140-6736(14)61468-9. PMID 25832858.
- Rigsby, B. D. (2011). Hypertension improvement through healthy lifestyle modifications. *Journal of the Association of Black Nurse Faculty*, 22(2), 41-43. Retrieved from: <http://ncbi.nlm.nih.gov/pubmed>
- Roger, V. L., Go, A. S., Lloyd-Jones, D. M., Benjamin, E. J., Berry, J. D., Borden, W. B., & Fullerton, H. J. (2012). Heart disease and stroke statistics—2012 update a report from the American heart association. *Circulation*, 125(1), e2-e220.
- Saneei, P., Salehi-Abargouei, A., Esmailzadeh, A., & Azadbakht, L. (2014). Influence of Dietary Approaches to Stop Hypertension (DASH) diet on blood pressure: A systematic review and meta-analysis on randomized controlled trials. *Nutrition, Metabolism, and Cardiovascular Diseases*, 24(12), 1253-1261. <http://dx.doi.org/10.1016/j.numecd.2014.06.008>
- Sathish Kumar, K., Singh, A., & Asem, P. (2015). Prevalence, awareness, treatment, and control of hypertension in urban communities of Impala, Manipur. *International Journal of Interdisciplinary and Multidisciplinary Studies*, 2(3), 61-70.
- Shackman, G. (2012). *What is program evaluation: A beginner's guide*. The Global Social Change Research Project.

- Sitterding, M., & Ebright, P. (2010, April). *Patient safety and the cognitive work of nursing: Advances in nursing science and implications for organizational support*. Session presented at the 43rd Annual Meeting. Indianapolis, In: American Organization of Nurse Executives.
- Terry, A. (2015). *Clinical research for the doctor of nursing practice*. Sudbury, MA: Jones & Bartlett Learning.
- Tussing-Humphreys, L., Fitzgibbon, M., Kong, A., & Odoms-Young, A. (2013). Weight loss maintenance in African American women: A systematic review of behavioral lifestyle intervention literature. *Journal of Obesity*, 2013, 437369. <http://dx.doi.org/10.1155/2013/437369>
- Uhlig, K., Balk, E., Patel, K., I, S., Kitsios, G., Obadan, N., ...& Iovin, R. (2012) Self-measured blood pressure monitoring: Comparative effectiveness. Rockville, MD: *Agency for Healthcare Research and Quality*. Retrieved from <https://www.ncbi.nlm.nih.gov/books/NBK84604/>
- Wahyuni, D. (2012). The research design maze: Understanding paradigms, cases, methods, and methodologies. *Journal of Applied Management Accounting Research*, 10(1), 69-80. Retrieved from <http://www.cmawebline.org/jma>
- World Health Organization (2013a). A global brief on hypertension: Silent killer, global public health crisis world health organization, Retrieved from http://apps.who.int/iris/bitstream/10665/79059/1/WHO_DCO_WHD_2013.2_eng.pdf?ua

- World Health Organization (2013b). High blood pressure - country experiences and effective interventions utilized across the European Region. *WHO Regional Office for Europe*. Retrieved from http://www.euro.who.int/__data/assets/pdf_file/0008/185903/e96816.pdf
- Yates, T., Davies, M. , Henson, J., Troughton, J., Edwardson, C., Gray, L., & Khunti, K. (2012). Walking away from Type 2 diabetes: Trial protocol of a cluster randomized controlled trial evaluating a structured education programmer in those at high risk of developing type 2 diabetes. *BMC Family Practice*, *13*(1), 46-56. <http://dx.doi.org/10.1186/1471-2296-13-46>
- Yoon, S. S., Fryar, C. D., & Carroll, M. D. (2015). Hypertension prevalence and control among adults: United States, 2011-2014. NCHS data brief, no 220. Hyattsville, MD: National Center for Health Statistics. Retrieved from <https://www.cdc.gov/nchs/data/databriefs/db220.pdf>
- Young, J. L. (2011). Educating staff nurse on diabetes: Knowledge enhancement. *Medsurg Nursing*, *20*(3), 143-146, 150. PMID: 21786491 [PubMed – indexed for MEDLINE].

Appendix A
Information Flyer

Information Flyer

Hypertension Program

Improving Staff Knowledge of Hypertension

Presented by

Overview

- What is Hypertension?
- Checking the ingredient label on packaged food
 - Reduce Hypertension
 - Reducing the risk of hypertension

Date: TBA

Location: Staff Break Room

Appendix B
Lifestyle Modification for Hypertension (LMH)

What is Hypertension?

Hypertension known as high blood pressure (HBP), is defined as the systolic pressure that is

greater or equal to 140 mmHg and diastolic pressure greater or equal to 90 mmHg.

- Normal blood pressure (less than 120/80)
- Prehypertension (120-139/ 80-89)
- Hypertension (140-159/90-99)

What contributes to HTN?

- Family history
- Advanced age
- Gender, race
- Lack of physical activity
- High sodium intake,
- Too much alcohol
- Being overweight or obese,
- Smoking and tobacco use
- Stress.

Non-modifiable risk factor

- Family history
- Age
- Race cannot be controlled.

Modifiable risk factor

- Overweight or obese,
- Lack of physical activity,
- Tobacco usage
- High sodium diet
- Excessive alcohol usage
- Stress

Risk Reduction

- ✓ Increase healthy eating
- ✓ Low-fat dairy products
- ✓ Limit food high in sodium
- ✓ Avoid table salt
- ✓ Be aware of the word “Na” which stand for salts
- ✓ Choose food that is unsalted
- ✓ Implement a regular daily exercise regime.
- ✓ Getting aerobic activities least 30 to 45min per day most days, 3-5 days in a week

Lifestyle Modifications

- ✓ Reduce weight--- Maintain healthy body weight (body mass index 18.5

24.9kg/m². CDC (2013)

- ✓ Adopt DASH eating plan --- Consume a diet rich in fruits, low-fat dairy, and vegetable
- ✓ Lower Sodium Intake --- Consume no more than 2,300mg of Sodium/day which is equal to one teaspoon or 6 grams of salt per day.
- ✓ Physical activity --- Engage in regular aerobic physical activity, such as brisk walking at least 30 to 45min per day most days, 3-5 days in a week
- ✓ Moderation of Alcohol consumption --- Limit consumption to no more than two beers per day for most men and no more than one beer per day for women.

Appendix C

Site approval documentation for Staff Education Doctoral Project

Partner Site

Contact Information

Date

The doctoral student, is involved in Staff Education that will be conducted under the auspices of our organization. The student is approved to collect formative and summative evaluation data via anonymous staff questionnaires, and is also approved to analyze internal, de-identified site records that I deem appropriate to release for the student's doctoral project. This approval to use our organization's data pertains only to this doctoral project and not to the student's future scholarly projects or research (which would need a separate request for approval).

I understand that, as per DNP program requirements, the student will publish a scholarly report of this Staff Development Project in ProQuest as a doctoral capstone (with site and individual identifiers withheld), as per the following ethical standards:

- a. In all reports (including drafts shared with peers and faculty members), the student is required to maintain confidentiality by removing names and key pieces of evidence/data that might disclose the organization's identity or an individual's identity or inappropriately divulge proprietary details. If the organization itself wishes to publicize the findings of this project that will be the organization's judgment call.
- b. The student will be responsible for complying with our organization's policies and requirements regarding data collection (including the need for the site IRB review/approval, if applicable).
- c. Via a Consent Form for Anonymous Questionnaires, the student will describe to staff members how the data will be used in the doctoral project and how the stakeholders' autonomy and privacy will be protected.

I confirm that I am authorized to approve these activities in this setting.

Signed,

Authorization Official Name

Title

Appendix D

Consent Form for Anonymous Questionnaires

To be given to the staff member prior to collecting questionnaire responses—note that obtaining a “consent signature” is not appropriate for this type of questionnaire and providing respondents with anonymity is required.

You are invited to take part in an evaluation for the staff education doctoral project that I am conducting.

Questionnaire Procedures:

If you agree to take part, I will be asking you to provide your responses anonymously, to help reduce bias and any sort of pressure to respond a certain way. Staff members' questionnaire responses will be analyzed as part of my doctoral project, along with any archival data, reports, and documents that the organization's leadership deems fit to share.

Voluntary Nature of the Project:

This project is voluntary. If you decide to join the project now, you can still change your mind later.

Risks and Benefits of Being in the Project:

Being in this project would not pose any risks beyond those of typical daily professional activities. This project's aim is to provide data and insights to support the organization's success.

Privacy:

I might know that you completed a questionnaire but I will not know who provided which responses. Any reports, presentations, or publications related to this study will share general patterns from the data, without sharing the identities of individual respondents or partner organization(s). The questionnaire data will be kept for a period of at least 5 years, as required by my university.

Appendix E
Survey Questions: Pre-Test

Please read each of the following statements and check the appropriate box that corresponds to your current level of knowledge and attitudes about hypertension screening among patients at the clinic. Please make note of the number at the top of your survey and make certain that you indicate it on the posttest survey for identification purposes.

Please use the following scale for your responses.

1= Completely Disagree 2= Somewhat Disagree 3=Neither Agree nor Disagree 4= Somewhat Agree 5= Completely Agree

Survey Questions: Pre-Test

		1	2	3	4	5
1	I feel that hypertension is poses a higher than normal risk for psychiatric patients.					
2	Certain psychiatric medications increase the risk for hypertension.					
3	Psychiatric patients are more prone engage in unhealthy behaviors such as smoking , drinking, poor diet, and lack of exercise, that increase their risk for hypertension than the general public.					
4	Hypertension places the patient at risk for early death.					
5	For the most part, hypertension is easily diagnosable and treatable.					
6	Lifestyle screening may reveal when a patient is at increased risk for hypertension.					
7	Nurses are the first line of defense in detecting and preventing hypertension in patients.					

8	Nurses can serve as educators and facilitators to help patients make lifestyle changes that will prevent hypertension and its complications.					
9	I include hypertension screening as a part of every patient visit.					

Appendix F
Survey Questions: Post-Test

Please read each of the following statements and check the appropriate box that corresponds to your current level of knowledge and attitudes about hypertension screening among patients at the clinic. Please place your pre-test number in the upper right hand corner of this questionnaire for matching purposes.

Please use the following scale for your responses.

1= Completely Disagree 2= Somewhat Disagree 3=Neither Agree nor Disagree 4= Somewhat Agree 5= Completely Agree

		1	2	3	4	5
1	I feel that hypertension is poses a higher than normal risk for psychiatric patients.					
2	Certain psychiatric medications increase the risk for hypertension.					
3	Psychiatric patients are more prone engage in unhealthy behaviors such as smoking , drinking, poor diet, and lack of exercise, that increase their risk for hypertension than the general public.					
4	Hypertension places the patient at risk for early death.					
5	For the most part, hypertension is easily diagnosable and treatable.					
6	Lifestyle screening may reveal when a patient is at increased risk for hypertension.					
7	Nurses are the first line of defense in detecting and preventing hypertension in patients.					
8	Nurses can serve as educators and facilitators to help patients make lifestyle changes that will prevent hypertension and its complications.					

9	I plan to include hypertension screening as a part of every patient visit in the future.					
10	Taking the educational program has changed the way I think about hypertension and screening among patients not previously diagnosed.					

Appendix G

Survey Results

		1- Pre	1- Post	2- Pre	2- Post	3- Pre	3- Post	4- Pre	4- Post	5- Pre	5- Post
1	I feel that hypertension is poses a higher than normal risk for psychiatric patients.	1		3		1		4	5	2	6
2	I feel that every patient should be screened for hypertension, even if they have had no prior history of it in the past.	4		4		2		1			11
3	Psychiatric patients are more prone engage in unhealthy behaviors such as smoking, drinking, poor diet, and lack of exercise, that increase their risk for hypertension than the general public.					5	4	3	2	3	4
4	Hypertension places the patient at risk for early death.	3	2		1	1	3	2	1	4	4
5	For the most part, hypertension is easily diagnosable and treatable.			3		3		4	8	1	3

6	Lifestyle screening may reveal when a patient is at increased risk for hypertension.				7		2	4	1	6	
7	Nurses are the first line of defense in detecting and preventing hypertension in patients.		1		4		4	4		6	1
8	Nurses can serve as educators and facilitators to help patients make lifestyle changes that will prevent hypertension and its complications.				4		8	6	2	5	
9	I plan to include hypertension screening as a part of every patient visit in the future.	4		5					3	2	8
10	Taking the educational program has changed the way I think about hypertension and screening among patients not previously diagnosed.				2				5		4