Spring 5-12-2022

THE IMPACT OF SOCIAL DETERMINANTS OF HEALTH ON HYPERTENSION

Lakenya Forthner

THE IMPACT OF SOCIAL DETERMINANTS OF HEALTH ON HYPERTENSION

by

Lakenya Forthner

A Doctoral Project
Submitted to the Graduate School,
the College of Nursing and Health Professions
and the School of Leadership and Advanced Nursing Practice
at The University of Southern Mississippi
in Partial Fulfillment of the Requirements
for the Degree of Doctor of Nursing Practice

Approved by:

Dr. Lisa Morgan, Committee Chair
Dr. Carolyn Coleman, Committee Member

May 2022

Published by the Graduate School

ABSTRACT

Nearly 43% of African American men have Hypertension (HTN). HTN is a major reversible health problem for young adult, African American males. Identifying health behaviors to enhance longevity is essential due to the “excess burden of preventable, chronic diseases and premature death among African American men. The “role of social determinants of health (SDOH) on outcomes, and the possible role these determinants play in disparities have largely been ignored” (Haggart, 2018, pp. 2, 8).

Interventions that address SDOH must take a multicomponent approach. Evidence has been established that adhering to a healthy lifestyle reduces the burdens and risks associated with uncontrolled chronic disease (Hong & Manious, 2020). The purpose of this DNP project was to assess provider interaction at a Federally Qualified Health Clinic (FQHC) with addressing unmet social needs at routine health visits for African American males, ages 18-39.

A retrospective chart review was conducted of the period 6 months prior to the start of the intervention. After the chart review, during triage, with the patients that met criteria, the nurses assessed the questions on the SDOH tool. The healthcare providers, later during the visit, utilized the tool to select or modify an appropriate treatment plan. At the completion of the project, another chart review was conducted to assess whether the SDOH tool was utilized.

Delivering quality care must be the foundation to which healthcare services are provided to each individual or population served. Through assessment of SDOH with every patient encounter, the FQHC can clear the way for desired health outcomes and decrease adverse outcomes. Providing a concise, standard tool to assess SDOH for

utilization at every patient visit will ensure that the patients receive adequate treatment; as well as increase the FQHC's ability to deliver quality care.

ACKNOWLEDGMENTS

The University of Southern Mississippi provided a review of the project and IRB approval. A special thanks to Dr. Lisa Morgan, DNP, FNP-BC, PMHNP-BC who served as the chair and Dr. Carolyn Coleman, DNP, FNP-BC, PMHNP-BC who served as a committee member for this DNP project. A FQHC in the rural counties of Clarke and Jasper counties were utilized. The FQHC allowed access their daily operational structure, electronic health records, and any other resources needed to successfully complete this project.

DEDICATION

I would like to thank God above for providing me with the strength and knowledge needed to complete this doctoral project. I would also like to thank my family and friends for their support and continued encouragement. Lastly, I would like to dedicate all the work and efforts put forth to complete this project to the true angels of my eyes, Lakendrea and Desmond Forthner Jr.

TABLE OF CONTENTS

LIST OF ABBREVIATIONS

CDC	Center for Disease Control
CCM	Chronic Care Model
EHR	Electronic Health Record
FNP	Family Nurse Practitioner
FQHC	Federally Qualified Health Center
HHS	Health and Human Services
HP2020	Healthy People 2020
HTN	Hypertension
SDOH	Social Determinants of Health

CHAPTER I - INTRODUCTION

Hypertension is a significant health problem for African American males aged 18-39. Inadequate diet, lack of a regular primary care provider, and knowledge deficit regarding the diagnosis of hypertension are all factors that contribute to the problem. As a result, these patients eventually develop cardiovascular disease and metabolic syndrome. The lack of a primary healthcare provider may be linked to knowledge deficits regarding the importance of regular doctor appointments, medication compliance, maintaining healthcare insurance, or other financial restraints. The aim of this project was to assess whether providers consider the impact of social determinants of health on hypertension when providing treatment to African American males, ages 18-39, with hypertension.

Background and Significance

"Hypertension is the most common reversible risk factor for cardiovascular disease. Young adults have the lowest hypertension control rates among adults with hypertension in the United States" (Johnson et al., 2017, p. 1). In young adults with uncontrolled hypertension, an increased risk of cardiovascular complications later in life exist. Young adult males who are not aware of the signs and symptoms, risk factors, and serious health consequences associated with uncontrolled hypertension do not have the information they need to seek medical help and change their behaviors.

A study by Watson (2014), concluded that African American males perceive three factors that contribute to their barriers to healthcare services. These factors include "the negative impact on the environment or community, lack of finances or no insurance, and distrust of medical practices associated with race history resulting in accessing health care as a last resort" (Watson, 2014, p. 1004). For these reasons, assessment of the young

adult male's knowledge regarding hypertension and the dangers associated with uncontrolled hypertension is essential for healthcare providers.

Problem Description and PICOT

What is the impact of social determinants of health (SDOH) on managing hypertension among young adult African American males with hypertension? African American males, "compared to non-Hispanic Caucasian men, go to fewer preventive health visits, are less likely to know their numbers, have worse blood pressure control, and face greater infirmity and premature expiration from conditions potentially responsive to early interventions" (Watson, 2014, p. 1004). An increasing recognition exists related to the difficulty of treating patients' chronic diseases when their overall well-being is shaped by underlying SDOH. Uncontrolled hypertension is a leading risk factor for increased morbidity and mortality. Among young adults, uninsured persons are more likely to have no contact with a physician or no usual source of care. Young adults tend to delay or miss medical appointments, and do not fill a prescription because of cost (Johnson et al., 2017).

Problem of Interest

Despite decades of public health education, hypertension remains problematic (Everett & Zajacova, 2015.) Hypertension is a leading risk factor for cardiovascular and cerebrovascular disease and mortality. Approximately 20% of young adults (ages 18-39) have hypertension and an increased risk for heart failure, stroke, and chronic kidney disease. Hypertension control reduces morbidity and health care costs in young adults (Johnson et al., 2017). Engaging in behaviors that increase the risk of hypertension, including insufficient fruit and vegetable consumption and smoking. In general, males

tend to possess low levels of literacy and “are less likely to access, interpret, and apply information to maintain and improve their health” (Gavarkovs et al., 2016, p. 146).

Population of Interest

African American males are significantly affected by health disparities characteristic of stroke and cardiovascular disease which includes hypertension. In impoverished, rural communities, African American males are greatly disadvantaged. This population may be less likely to seek preventive and secondary preventive care because of personal perception of manhood and strength as a result of being male, which contrasts with the inferior role assigned to them by society. Deaths related to chronic diseases, such as hypertension, are contributory to the many disparities faced by this population. African American males die four years earlier than Caucasian males (Kennard, 2020).

The health status of males is linked to the nature of a social organization and economic opportunity in society. African American males face obstacles related to education, socioeconomic status, and safety, all of which have a direct impact on health. Health disparities among African American males are striking. African American males are 60% more likely to die from stroke and 30% more likely to die from heart disease than non-Hispanic white men. (U.S. Department of Health and Human Services [USHHS], 2021).

In the United States, males greater than 20 years are more likely to experience issues with hypertension than females. In comparison with other ethnic groups, African American males continue to experience an excessive amount of health disparities. African American males, ages 18-39, can expect to live a shorter time frame than

compared to any other ethnic minority or racial group (Johnson et al., 2017). An evaluation of the impact of SDOH on African American males, ages 18-39, with uncontrolled hypertension is needed to decrease the incidence of morbidity and mortality within this population.

Available Knowledge

According to Russell et al. (2019), SDOH account for 80% of modifiable variations in health care. SDOH are key to improving healthcare resources and health outcomes. Three out of four Americans have two or more chronic diseases, such as diabetes, hypertension, or cancer. Unmet social needs are not typically detected or addressed by clinicians during healthcare visits which increases risk of chronic diseases, reduces the risk the ability to adequately manage health conditions, and increases the risk of institutionalization, morbidity, mortality. In an article by Hong and Manious (2020), evidence has been established that adhering to a healthy lifestyle, having good access to care, and living in a neighborhood with health-promoting resources can reduce the burdens and risk associated with uncontrolled chronic disease.

Needs Assessment

The medical community has known for more than 50 years that hypertension increases morbidity and mortality from cardiovascular and cerebrovascular disease. For the past 30 years or longer, improved hypertension awareness, diagnosis, and treatment have significantly reduced the incidence of stroke, heart failure, and kidney failure; however, young African American men have reaped little benefit from these advancements. According to the CDC, over a span of 3 years, from 2015 to 2018, 56.8% of African American men aged 20 and over have hypertension (measured high blood

pressure and/or taking antihypertensive medication). Concerns about the lives of African American men frequently take precedence over hypertension care for these men, especially given the asymptomatic nature of hypertension (Thorpe et al., 2015).

When compared to men and women of other racial and ethnic groups, African American males have the lowest life expectancy and the greatest death rate from certain causes. In the United States, this population tends to suffer worse health conditions than any other racial group in America. In the Report on the Burden of Chronic Diseases in Mississippi (Short, 2014), 4 out of 10 adults in Mississippi reported high blood pressure. Short (2014) reported that 43.3% of those adults with self-reported high blood pressure were African American males. The prevalence of high blood pressure increased as poverty increased. African American males had the highest death rate due to heart disease (321.9 per 100,000). The death rate related to heart disease was about 1.5 times higher for males than females. The death rate related to heart disease was nearly 20% higher for African Americans than Caucasians (Short, 2014).

Hypertension affects nearly 43% of African American men, and it can lead to stroke, cardiovascular disease, and kidney disease. Historically, "young African American men have low rates of hypertension awareness, treatment, and control. For a variety of social, psychological, and financial reasons, this group is less likely than any other age, race, or sex population group to seek care, remain in care and adhere to prescribed treatment. Young African American men are more likely to have severe hypertension and increased target organ damage at an early age as a result of these behavior patterns, which exist both before and after diagnosis" (Thorpe et al., 2015, p. 8s,

9s). In order to provide appropriate interventions for this population, it is imperative that adequate assessments of SDOH occur.

Young adults have a higher lifetime risk for cardiovascular disease, premature heart failure, stroke, and other chronic diseases. Unfortunately, in the United States, only a small portion of young adults achieve control of their chronic disease. According to Thorpe et al. (2015), although improvements have occurred in mortality rates over the past five decades, African American men continue to have the highest mortality rate among all racial/ethnic and gender groups. Some predictors of mortality among African American males include low socioeconomic status, access to and quality of care, health behaviors, and social and environmental conditions where African American males live and work. Health care professionals need to be skilled in assessing social determinants of health and taking them into consideration in clinical care.

Due to the fact of access to health care, financial instability, and illiteracy existing as issues within rural health communities, it is imperative for African American young adult males to be educated in regard to the dangers associated with uncontrolled hypertension and wellness interventions to manage and prevent further complications. The implementation of interventions to assist with the management of hypertension within the population of African American males is essential. In an effort to address the unmet needs for African American, young adult males, education is needed related to hypertension self-management programs. Interventions such as home blood pressure monitoring as well as lifestyle modifications should be tailored to the unique needs of young adults to assist them with the management of hypertension. Better management of

uncontrolled hypertension will reduce morbidity and mortality associated with future healthcare costs, and the risks of cardiovascular disease and other complications.

Synthesis of Evidence

Evidence-Based Practice Search

A literature search was conducted through the University of Southern Mississippi's online university libraries. Databases such as *PubMed*, *Cochrane Library*, *Medline*, and *CINAHL* were searched. Keywords were synthesized from the PICOT question. Keywords included were young adults, African American males, chronic disease, minority men, wellness, hypertension, and social determinants of health were all used as keywords.

Critical Appraisal

The literature explores social determinants of health and their impact on an individual's health, attitudes of young adults related to hypertension, and the importance of wellness interventions that will assist in better managing hypertension. A study by Thorpe et al. (2013), states that identifying health behaviors to enhance longevity is essential due to the excess burden of preventable, chronic diseases and premature death among African American men. The article explains some predictors of mortality among African American men to include quality and access to care, socioeconomic status, health behaviors, and social and environmental conditions where African American men live and work.

An article by Walker et al. (2016), suggests both race/ethnicity and social determinants of health significantly impact outcomes for patients with chronic illness.

The article explained that the role of social determinants of health on outcomes, and the possible role these determinants play in disparities have largely been ignored.

> Substantial progress has been made in the U.S., including substantial reductions in cardiovascular mortality. However, the prevalence of other chronic diseases and conditions, such as diabetes and obesity, continues to increase, threatening to offset the gains. Additionally, chronic diseases and their key risk factors tend to co-occur leading to complex interactions across diseases, risk factors, and treatments. Interventions that address them cannot be discrete and targeted but need to address many conditions, take a multicomponent approach, and include several sectors to create environments that support and reinforce health and healthy behaviors. (Bauer et al., 2014, p. 47)

An overview of the literature revealed a lack of knowledge regarding the treatment of chronic diseases and other social determinants of health that affect controlling that chronic illness.

Impact on Patients, Families, and Communities

Young African American males can expect to live the least amount of time when compared to any other ethnic minority or racial group (Watson, 2014). Minority men experience especially high levels of chronic disease, including cardiovascular disease, diabetes, and cancer, and experience higher mortality rates due to cancer, heart disease, and stroke (Gavarkovs et al., 2016). Hypertension originates from several factors including genetic, environmental, and other social determinants. Some of these factors may include overweight/obesity, unhealthy diet, excessive dietary sodium, insufficient physical activity, and consumption of alcohol. Young adults miss follow-up visits due to

co-payments, transportation barriers, and longer than desired wait times for brief visits. Prevention and control of hypertension can be achieved through targeted and population-based strategies.

Impact on Healthcare Systems and Organizations

Hypertension affects approximately one billion individuals worldwide. Hypertension, by nature, requires patients to have the capacity and stamina to manage their treatment effectively. Performance indicators should be regularly evaluated at the healthcare organization level to assess progress in improving hypertension and to identify care gaps where changes to ongoing interventions may be required. Healthcare system and community-level interventions that increase awareness have a significant impact on hypertension management. Interventions to improve the management of hypertension among young adults must become essential within the healthcare system.

Healthy People 2020

The Healthy People initiative is designed to guide national health promotion and disease prevention efforts to improve the health of the nation. Released by the U.S. Department of Health and Human Services (HHS) every decade since 1980, Healthy People identifies science-based objectives with targets to monitor progress and motivate and focus action. Healthy People 2020 (HP2020) is the fifth iteration of the initiative and continues in this tradition with about 350 core objectives to be tracked over the decade (Centers for Disease Control [CDC], 2022).

HP2020 features a framework that includes its mission, vision, overarching goals, and foundational principles. A goal for this decade includes eliminating health disparities, achieving health equity, and attaining health literacy to improve the health

and well-being of all. In relation to this project, HP 2020 encourages creating social, physical, and economic environments that promote attaining full potential for health and well-being for all. Progressing forward and in alignment with HP 2020, assessing SDOH will promote healthy behaviors and well-being across all life stages (CDC, 2022).

Rationale

Theoretical Framework

The Chronic Care Model (CCM) will serve as the framework for this scholarly project. Through the use of the evidence-based practice, the CCM establishes a holistic approach to chronic disease management. The main emphasis of the model is health promotion in which the opportunity exists to integrate population health promotion into the prevention and management of chronic disease. The CCM consists of six components that include the healthcare delivery system, community, patient self-management support, decision support, delivery system design, and clinical information system (Curley, 2020).

Specific Aims

The aim of this scholarly project was to assess the impact of social determinants of health on the management of hypertension at a Federally Qualified Health Center (FQHC) in Jasper and Clarke counties of Mississippi. FQHCs provide treatment and wellness information that will assist in the management of chronic diseases. In order to improve the incidence of uncontrolled hypertension among young males, SDOH must be identified and considered by providers. Once SDOH are identified and discussed with clients, improvement in managing hypertension in young males at risk for cardiovascular disease, metabolic syndrome, and other co-morbidities can begin to take place. The overall goal was to identify SDOH and how they may have a negative impact on males,

ages 18-39, in the management of hypertension. The identification of these barriers will decrease health ramifications and improve health maintenance and outcomes.

Doctor of Nursing Practice Essentials

Advanced practice nurses must seek to understand the values, beliefs, and ideas that shape our daily practice which includes examining the art of nursing science itself (Zaccagnini & White, 2017). The understanding is that hypertension occurs as a result of the narrowing of blood vessels which causes an abnormally large amount of blood to exert pressure along the walls of the heart. If untreated, hypertension leads to cardiovascular disease, metabolic disorders, and other co-morbidities. A few of the DNP Essentials are emphasized in relation to this project. The project focused on the effects of the social determinants of health on wellness and managing hypertension, Essential VII is more closely related than others.

Essential I: Scientific Underpinnings

SDOH has a direct impact on an individual's well-being which is directly related to the foundational principles of DNP Essential I. The foundational concepts of Essential I address nursing in its many facets to include human behavior, health, and human interaction with the environment, as well as the actions and processes that affect health (Zaccagnini & White, 2017). This essential includes the "patterning of human behavior in interaction with the environment in normal life events and critical life situations" (Chism, 2019, p. 13).

Essential II: Organizational and Systems Leadership for Quality Improvement and Systems Thinking

In order to improve healthcare delivery and patient care outcomes, organizational and system leadership is essential in every aspect. Essential II includes utilizing scientific findings in nursing and other disciplines to develop and evaluate care delivery approaches that meet the current and future needs of patient populations. When developing a new tool to assess SDOH for use within the EHR, this form of communication aligns directly with delivering an approach to support the current and future needs of the patients. Implementation of a tool to assess SDOH supports organizational structure for quality improvement (Chism, 2019).

Essential III: Clinical Scholarship and Analytical Methods for Evidence-Based Practice

Essential III includes designing and evaluating methodologies that improve quality in an effort to promote effective patient-centered care. This essential directly relates to evaluating the current means utilized by the FQHC to assess SDOH and analyzing this data to assess whether or not there wa s a need for a new means of assessment. Working collaboratively with the healthcare providers of the FQHC facilitated better patient outcomes.

Essential IV: Information Systems Technology and Patient Care Technology for the Improvement and Transformation Healthcare

Essential IV includes evaluating and monitoring outcomes of care and quality-of-care improvement by designing, selecting, and evaluating programs related to information technology (Chism, 2019). A comprehensive tool to assess SDOH was created that included the use of technology for the improvement and transformation of

health care. The implementation of the SDOH screening tool facilitated a different thought process for healthcare providers when developing a treatment plan for the patients they serve.

Essential V: Healthcare Policy for Advocacy in Healthcare

Essential V includes factors that influence healthcare policy and advocating for such changes. A beneficial tool was developed for healthcare providers to assess SDOH prior to developing treatment plans facilitated further discussion regarding policy changes within the clinic and possibly at other levels as well. The tool influences healthcare financing and foster more revenue for the FQHC.

Essential VI: Interprofessional Collaboration for Improving Patient and Population Health Outcomes

Communication is essential at all levels within the healthcare system. In the FQHC, collaboration among all healthcare disciplines must exist to achieve appropriate patient outcomes. Through the processes of effectively communicating, cooperating, and coordinating with the other healthcare providers regarding SDOH, positive patient and population health outcomes occurred. Effective communication protects patients from further disease and injury (Zaccagnini & White, 2017).

Essential VII: Clinical Prevention and Population Health

Nursing, in general practice, is an integral component of primary care and chronic disease management in the U.S. Nursing leadership is needed in developing, implementing, and evaluating clinical prevention and population health interventions that address SDOH. Evaluation of the impact of SDOH and cultural beliefs on health status is necessary to formulate an intervention that will be successful for the target population.

Leadership in addressing social determinants of health that are adversely affecting empowerment in health status in the areas of health promotion and disease prevention delivered another way in which the DNP improves health status (Zaccagnini & White, 2017).

Essential VIII: Advanced Nursing Practice

Advanced nursing practice includes the ability to provide leadership in the clinical arena. Advanced nursing practice also includes the ability to evaluate evidence-based care to improve patient outcomes. Advanced clinical decision-making skills are utilized to create an appropriate tool to assess SDOH which resulted in better patient outcomes.

Summary

Identification of SDOH and better management of hypertension reduces an individual's risk for morbidity and mortality related to chronic disease. An important step to develop effective interventions to assist with hypertension management is understanding the barriers that are specific to the population of young males (Haggart et al., 2018). The major objective in this scholarly project was to identify the social determinants of health and how they impact the management of hypertension in young adult males. Although multiple initiatives exist that foster hypertension management, barriers to achieving this goal continue to exist. Further research must be conducted to identify barriers unique to young adults achieving hypertension control.

CHAPTER II - METHODS

Process

A discussion was held with the chief operating officer, medical director, and the quality improvement coordinator of the FQHC to discuss plans for the project. Without any hesitation, approval to complete the project was granted and the chief operating officer of the FQHC provided the researcher with a letter of approval. An application was submitted to the Institutional Review Board at the University of Southern Mississippi for approval of project titled, The Impact of Social Determinants of Health on Hypertension. Over a period of several weeks of communicating, modifications were made to the project as requested. The project was assigned protocol number 21-208. After a period of 12 weeks, the project was approved.

Social determinants of health have a significant impact on health status. SDOH are conditions within the environment in which each of us work, live, worship, and play. Consider SDOH when providing care to the populations served is extremely important. In this project, an evaluation of the impact of SDOH on young adults with hypertension was evaluated.

Context

African American males are expected to live the least amount of time in comparison with any other racial/ethnic group related to the impact of SDOH on their health. Evidence has reported SDOH do, in fact, affect the health status of each individual. However, little evidence exists on effective strategies utilizing SDOH data at the system level to identify individuals at higher risk. Within this project, an evaluation of

the impact of SDOH provided insight to healthcare providers within the healthcare system.

Population

The FQHC provides services to patients aged 9 months and older. The clinic covers both primary and dental needs. The largest portion of the population of the clinic lives at or below the poverty level and access to care is limited. Only a small portion of the clinic has employment and insurance. Therefore, acquiring adequate healthcare can be an issue. Only a small portion of the population of the clinic has private health insurance. Many of the patients utilize Medicaid and Medicare services, but these federal programs will often limit office visits.

Professionals

The FQHC provides services to patients aged 9 months and older. The clinic covers both primary and dental needs. The largest portion of the population of the clinic lives at or below the poverty level and access to care is limited. Only a small portion of the clinic has employment and insurance. Therefore, acquiring adequate healthcare can be an issue. Only a small portion of the population of the clinic has private health insurance. Many of the patients utilize Medicaid and Medicare services, but these federal programs will often limit office visits.

The FQHC has four other nurse practitioners and a family physician; three of the nurse practitioners are considered full-time and work four days per week, and the family physician and the other nurse practitioner work two days per week. The FQHC has two dentists on staff. The full-time dentist works ten hours-four days per week and the other dentist works 2 days per week. The clinic has one full-time dental assistant that works 4

days per week and one part-time dental assistant that works 3-4 days per week. The remaining staff members include one chief executive officer (CEO), one clinic coordinator, 4 licensed practical nurses (LPN), 2 lab technicians, one licensed social worker, 3 receptionists, one manager of billing and coding, one compliance officer, 1 human resource director, and three custodians.

Setting

Data was collected at a Federally Qualified Health Center (FQHC) in rural Mississippi in the counties of Jasper and Clarke. The combined clinics have approximately twenty-five employees, of which includes one family physician and four family nurse practitioners. Hours of operation are Monday thru Friday, 0800-1830, and Saturdays, 0800-1400. The population of patients within the clinic are primarily low-income multi-racial Americans. The clinic provides a sliding scale (income-based) option for individuals with no insurance.

Intervention

A discussion of SDOH and the SDOH tool was discussed with healthcare providers (3 FNPs) for quality improvement within the FQHC. A retrospective chart review was conducted, by the doctoral student, to assess the current practice behaviors of providers in reference to consideration of SDOH when developing the patient's treatment plan. The charts were assessed utilizing a screening tool developed by the doctoral student. The same screening tool was implemented in the EHR over a period of 2 weeks. At the end of the 2-week cycle, the charts were reassessed to evaluate whether or not the providers utilized the tool to develop a treatment plan specific to that patient's SDOH.

Documentation was monitored to assess whether or not the providers recognized the significance of the tool.

Measures

A retrospective chart review of African American, young adult males with Hypertension was completed. A comprehensive screening tool was created by the researcher to effectively evaluate SDOH based on findings from the chart and literature reviews. A meeting was held with health care providers to discuss SDOH and the purpose of the doctoral project. During the meeting, the screening tool was discussed with the health care providers. The providers were informed of the purpose of the tool, which was to assist them to better evaluate SDOH to assist each young adult male with managing their chronic disease.

Analysis

At the completion of the project, data was analyzed and presented to the health care providers at the FQHC. Data from the EHR revealed the number of patients that were young adult, African American males that visited the clinic for healthcare and how many received care based on a consideration of the patient's SDOH. Data revealed exposed whether or not SDOH were screened according to the new tool.

Between January 19, 2022, and February 19, 2022, a retrospective chart review was performed of African American males with HTN, ages 18-39 that were patients at the FQHC. The chart review revealed from July 19, 2022, thru January 19, 2022, a total number of 289 patients were seen that met the criteria specified above. When reviewing these charts, there was no consideration of SDOH before providing treatment to the patients. During the 4-week interval of the project, 149 patients were African American

males with hypertension. Of the 149 patients, only 5 patients met the criteria. Among these 5 patients, the tool was utilized, but no mention of a change in the treatment plan of the patient in relation to the tool (See Appendix C).

Ethical Considerations

Many things to consider ethically existed regarding this project. An area of consideration included privacy and confidentiality. All content of the project was handled in a professional, confidential manner. The researcher considered the role of all staff members that assisted in implementing the project and each individual's input was respected. The researcher considered both the risk and benefits of implementing the new tool with all staff members. It was also considered that some staff members may view it as more work on the individual versus a benefit to the patient.

Summary

Assessing SDOH among African American, young adult males with hypertension, ages 18-39 was allowed at the FQHC. The methods utilized to complete the project were straightforward and centered toward the common goal of completing the project successfully. Appropriate ethical views related to the project in its entirety were considered. Access to the population of patients at FQHC, the EHR at the FQHC and the approval of the project allowed the project to be a success.

CHAPTER III – RESULTS

At the closure of the project, all data was collected and assessed within the EHR. The information gathered was presented to the quality improvement coordinator and other health care providers at the FQHC. The data from the EHR revealed exactly how many patients met criteria within the specified population during the specified time frame. The data also revealed whether providers utilized the SDOH screening tool to develop an appropriate treatment plan.

After discussion with the quality improvement coordinator, no plans currently exist to incorporate the concise tool created by the researcher for utilization within the EHR at this time. All of the providers agreed that the tool could be useful and the SDOH should be considered prior to providing treatment to individuals. The tool was utilized on the five patients that met the criteria. However, there were no adjustments to the treatment plan. The quality improvement coordinator did mention that the tool could be very beneficial and will work with the medical director and clinical coordinator to possibly incorporate the tool into the EHR in the future. It was established that whether the tool created by the researcher or another more concise method of assessing SDOH should be utilized. More discussion is needed within the clinic on the importance of assessing SDOH prior to the treatment of all patients.

Observed Associations

The aim of the project was to identify the importance of the impact of SODH on hypertension. The SDOH screening tool created was utilized with the patients that met criteria. However, difficulty existed due to the fact that there was no change to the current treatment plan based on the answers revealed on the SDOH screening tool.

Unfortunately, the specific reason for no changes to the treatment plan remains unknown. Either the healthcare providers at the FQHC felt there was no need to make adjustments to the treatment plan based on the results or the healthcare providers simply made a decision not to consider the results on the screening tool.

The outcome of the project revealed the concise tool created by the researcher was an appropriate tool for utilization within an EHR. No evidence that the tool was difficult to understand or interpret was noted. If determined later to utilize the SDOH screening tool created by the researcher, benefits will be present for both the patient and the FQHC. The prognosis of the patient will improve due to the patient having a more personalized treatment plan. The FQHC will benefit through utilization of the tool to assist with data collection for input into the uniform data system.

Summary

The results of the project allowed providers the opportunity to view the SDOH in a concise area without searching throughout the EHR. The associated observations discussed were considered in relation to the true results of the project. Although there were no adjustments to the treatment plans of the patients, the SDOH screening tool assisted with increasing the awareness of the impact of SDOH on hypertension to the healthcare providers employed at the FQHC.

CHAPTER IV - DISCUSSION

As doctoral prepared nurses, emphasis must focus on health promotion within the communities that are served. The Chronic Care Model, which focuses on health promotion, aligns specifically with this project. The integration of population health promotion through prevention and management will assist with a better delivery of providing care in relation to chronic disease.

The literature expresses the need for improvement of identification strategies to improve blood pressure control and outcomes among African American males. Inadequate control of blood pressure can be linked to many different things, such as physical inactivity, poor diet, lack of social support, non-compliance with medications, and knowledge deficit (Sulaica et al., 2020). Inadequate blood pressure control leads to complications, such as myocardial infarctions, cerebrovascular accidents, and eventually death. Through assessment of SDOH, will increase healthcare providers' awareness of the risk associated with not considering SDOH prior to establishing a treatment plan, as well as benefits associated with considering the SDOH before establishing an adequate treatment plan. As the healthcare system transforms to a more modern method of treatment, patients should begin to feel more comfortable with sharing all of their health concerns with their healthcare provider.

Interpretation

Adequate assessment of SDOH, prior to treatment, can make a significant impact on a patient's prognosis. This project assessment of the current practice of healthcare providers at this FQHC informed this healthcare team that there is a need to implement an appropriate, cohesive screening tool to assess SDOH. At this FQHC, the project

established the primary fact that most times, healthcare providers continue with the same treatment plan every routine, follow up appointment, without any consideration of SDOH before treating African American males with Hypertension, ages 18-39.

Limitations and Barriers

Several barriers and limitations existed throughout completing this project. An initial barrier included acquiring IRB approval which took approximately three months. Another barrier was the 4-week interval of the project. Allowing more time to complete the project would have allowed both, the researcher, and the healthcare providers more of time to assess the specifications of the project. A limitation to this project included the small sample size; only five patients were seen during the specified interval. Larger sample size may have elicited different responses from the healthcare providers.

The design of the project which included the nurses conducting the assessment during triage versus the healthcare providers utilizing the SDOH tool during the visit may have also been a limitation to this project. The final limitation can be associated with the possibility of only using an electronic health system to view charts versus paper charts. The total number of patients revealed may have been skewed due to the EHR registry inadequately capturing the number of patients. The possibility of the skewed numbers may have been related to the demographics selected related to the population. The original number of patients was increased compared to the other numbers revealed.

Implications

Delivering quality care must be the foundation to which healthcare services are provided to each individual or population served. Through assessment of SDOH with every patient encounter, the FQHC can clear the way for desired health outcomes and

decrease adverse outcomes. Providing a concise, standard tool to assess SDOH for utilization at every patient visit will ensure that the patients receive adequate treatment; as well as increase the FQHC's ability to deliver quality care.

Conclusion

Adequate assessment of SDOH can have a remarkable impact on the lives of African American males with Hypertension, ages 18-39. As healthcare providers become more aware of this significance, a transformation can exist regarding the life expectancy of African American males. The earlier the intervention occurs, the sooner the healthcare system will be able to view a decrease in the poor prognosis among this population. Assessment of SDOH should take place at every visit to assess whether the patient is able to continue the current treatment plan or requires modifications.

Dissemination of this project with other clinical team members of this FQHC is essential. This will ensure that the importance of assessing SDOH will occur on a more routine basis. Through increasing healthcare provider knowledge at this FQHC, the implementation of a concise SDOH screening tool will disperse to other FQHCs in Mississippi. The healthcare providers' willingness to implement this change may present an issue. However, implementing change through the introduction of a concise SDOH assessment tool will definitely indicate progress in the right direction has been initiated.

APPENDIX A – Social Determinants of Health Screening Tool

1. Are you single, married, divorced, or widowed?

2. Do you use tobacco products?

3. Do you drink alcoholic beverages?

4. Do you work full time, part time, disabled, or retired?

5. How hard is it for you to pay for basic needs, such as housing, food, medical needs, heating/air?

6. How many people live in your household? Adults? Children?

7. Are you able to drive? If so, do you have adequate transportation?

8. What is the highest grade level of college or high school completed?

9. Do you have access to healthy fruits and vegetables?

10. Do you have a safe place to exercise? If so, how often do you exercise? _____times/week?

APPENDIX B – Consent for Participation

Consent For Participation in the Doctor of Nursing Practice Project Title:

The Impact of Social Determinants of Health on Hypertension

Presented by Lakenya Forthner

The project will consist of a questionnaire that will assess the social determinants of health (SDOH) on Hypertension and whether the providers consider this prior to treating a patient with Hypertension. The project will include a retrospective chart review to assess current prescribing and treatment practices and whether SDOH are considered when providing care to clients. After an educational session and presentation explaining the project and how it will operate, the project will begin. After the project is completed, another chart review will take place to assess whether changes were made in prescribing and treatment.

By providing your signature below, you are consenting that you are at least 18 years old and willing to participate as a provider.

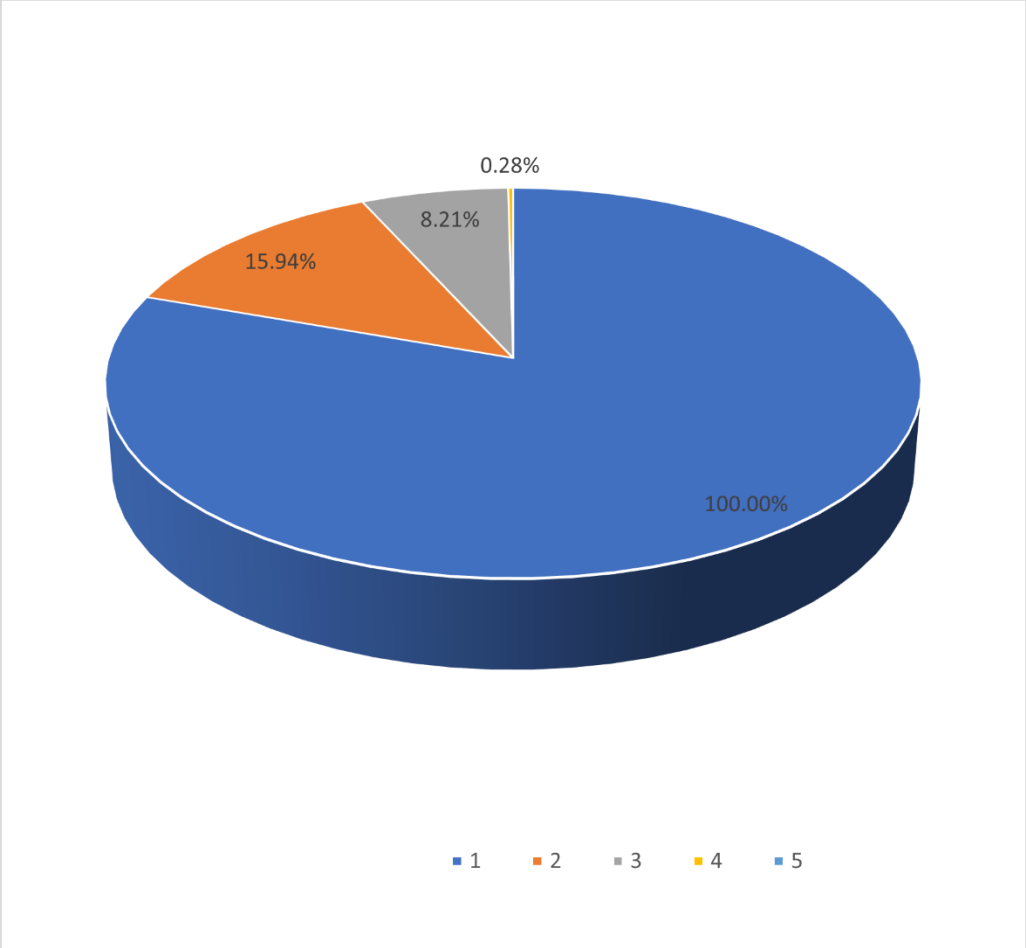
You also consent to participate in the Doctor of Nursing Practice Project with Lakenya Forthner from The University of Southern Mississippi. Your participation is optional. There are no penalties involved for non-participation. There are no incentives offered for participating. There are no risks involved.

Your signature below is only used for proof of consent for participation. No other identifying information will be used or shared.

Signature _____

Date_____

APPENDIX C – Treatment Plan and Hypertension in the African American Male



1. Describes the total percentage (1813) of African American male patients with Hypertension that are patients at the FQHC
2. Describes the percentage of African American male patients with Hypertension, aged 18-39 that were seen, at the FQHC, between the interval of July 19, 2021 and January 18, 2022.
3. Describes the percentage of African American male patients that were seen, at the FQHC, between the interval of February 6, 2022 and February 19, 2022.
4. Describes the percentage of African American male patients with Hypertension, aged 18-39 that were seen, at the FQHC, between the interval of February 6, 2022 and February 19, 2022 that met criteria.

APPENDIX D – IRB Approval Letter

Office *of* Research Integrity

THE UNIVERSITY OF SOUTHERN MISSISSIPPI

118 COLLEGE DRIVE #5116 • HATTIESBURG, MS | 601.266.6756 | WWW.USM.EDU/ORI

NOTICE OF INSTITUTIONAL REVIEW BOARD ACTION

The project below has been reviewed by The University of Southern Mississippi Institutional Review Board in accordance with Federal Drug Administration regulations (21 CFR 26, 111), Department of Health and Human Services regulations (45 CFR Part 46), and University Policy to ensure:

- The risks to subjects are minimized and reasonable in relation to the anticipated benefits.
- The selection of subjects is equitable.
- Informed consent is adequate and appropriately documented.
- Where appropriate, the research plan makes adequate provisions for monitoring the data collected to ensure the safety of the subjects.
- Where appropriate, there are adequate provisions to protect the privacy of subjects and to maintain the confidentiality of all data.
- Appropriate additional safeguards have been included to protect vulnerable subjects.
- Any unanticipated, serious, or continuing problems encountered involving risks to subjects must be reported immediately. Problems should be reported to ORI via the Incident submission on InfoEd IRB.
- The period of approval is twelve months. An application for renewal must be submitted for projects exceeding twelve months.

PROTOCOL NUMBER:	21-208
PROJECT TITLE:	The Impact of Social Determinants of Health on Hypertension
SCHOOL/PROGRAM	School of Leadership & Advance Nursing Practice
RESEARCHERS:	PI: Lakenya Forthner Investigators: Forthner, Lakenya~Morgan, Lisa~
IRB COMMITTEE ACTION:	Approved
CATEGORY:	Expedited Category
PERIOD OF APPROVAL:	18-Jan-2022 to 17-Jan-2023

Donald Sacco, Ph.D.
Institutional Review Board Chairperson

APPENDIX E –Letter of Support

OUTREACH HEALTH SERVICES, INC.

Shubuta Medical/Dental Clinic
P.O. Box 527/130 N High St.
Shubuta, MS 39360
(601)-687-5859

Jasper Medical/Dental Clinic
P. O. Box 485/309 Pine Ave.
Heidelberg, MS 39439
(601)787-3464

September 21, 2021

RE: Letter of Support for Lakenya Forthner, FNP-BC

To whom it may concern:

This letter is in reference for Lakenya Forthner, FNP-BC who is applying to Outreach Health Services for application and approval of her Clinical Doctoral Project. The focus and title of her evidenced-based project is *The Impact of Social Determinants of Health on Hypertension.* The site is a Federally Qualified Health Center.

I have discussed this topic with Lakenya Forthner and support and recommend the need for this information. I understand that this intervention involving providers evaluating SDOH appropriately will be done over a period of 30 days.
After data analysis, I understand that Lakenya will present her findings to the providers and clinic coordinator.

I understand that following approval from Outreach Health Services, she will seek approval from The University of Southern Mississippi's Institutional Review Board (IRB) for final approval of her Clinical Doctoral Project proposal. At present, I understand that Lakenya Forthner is a nurse practitioner student in the Doctor of Nursing Practice Program at the University of Southern Mississippi, Hattiesburg campus.

I am the CEO at Outreach Health Services, Shubuta and Heidelberg, MS locations. I am offering this letter of support of the doctoral student, Lakenya Forthner, in her doctoral project as titled above and look forward to hearing her findings.
I understand that participation by the providers, nurses, clinic coordinator, and quality improvement coordinator is completely anonymous and voluntary. There is no compensation for their participation.
I understand the planned dates are 30 days from USM IRB approval is received.
I understand that this letter of support will be included in the University of Southern Mississippi's Institutional Review Board (IRB) application.

Her Chair contact information is Dr. Lisa Morgan, FNP-BC lisa.morgan@usm.edu and cell 228 669 2700.

As Chief Executive Officer at this proposed site, I would like to fully support Lakenya Forthner to achieve her academic endeavor in this clinical practice project. I look forward to hearing the results of this study and the implications on clinical practice.

If there is any other information you should need, please do not hesitate to contact me.

Sincerely,

Sabrina Howze

Sabrina Howze
Outreach Health Services, Inc.

REFERENCES

Bauer, U. E., Briss, P. A., Goodman, R. A., & Bowman, B. A. (2014). Prevention of chronic disease in the 21st century: elimination of the leading preventable causes of premature death and disability in the USA. *Lance*, *384*(9937), 45–52. https://doi.org/10.1016/S0140-6736(14)60648-6

Carey R.M., Muntner P., Bosworth H.B., & Whelton P.K. (2018). Prevention and control of hypertension: JACC health promotion series. *Journal of the American College of Cardiology, 72*(11):1278-1293. https://doi.10.1016/j.jacc.2018.07.008

Carter-Edwards, L., Lindquist, R. Redmond, N., Turner, C.M., Harding, C., Oliver, J., West, L.B., Ravenell, J., & Shikany, J.W. (2018). Designing faith-based blood pressure interventions to reach young black men. *American Journal of Preventive Medicine*, *55*(5-1), S49-S58. https://doi.org/10.1016/j.amepre.2018.05.009

Centers for Disease Control (CDC). (2022). Healthy People 2023. Retrieved from https://www.cdc.gov/nchs/healthy_people/hp2030/hp2030.htm

Chism, L.A. (2019). Overview of the Doctor of Nursing Practice degree. *In The Doctor of Nursing Practice: A Guidebook for Role Development and Professional Issues* (4th ed., pp. 97-119). Jones and Bartlett Learning.

Curley, A. (2020). *Population-based nursing. Concepts and competencies for advanced practice.* (3rd ed., pp.130-131). Springer Publishing.

Everett B., & Zajacova A. (2015). Gender differences in hypertension and hypertension awareness among young adults. *Biodemography Social Biology, 61*(1),1-17. https://doi.10.1080/19485565.2014.929488

Gavarkovs, A. G., Burke, S. M., & Petrella, R. J. (2016). Engaging men in chronic disease prevention and management programs: A scoping review. *American Journal of Men's Health*, NP145–NP154. https://doi.org/10.1177/1557988315587549

Haggart, R.C., Bartels, C.M., Smith, M.A., & Johnson, H.M. (2018). Sociodemographics and hypertension control among young adults with incident hypertension: a multidisciplinary group practice observational study. *Journal of Hypertension, 36*(12), 2425-2433. https://doi-10.1097/HJH.0000000000001872Healthy People 2023. https://www.cdc.gov/nchs/healthy_people/hp2030/hp2030.htm

Hong, Y.R., & Mainous, A.G. (2020). Development and validation of a county-level social determinants of health risk assessment tool for cardiovascular disease. *Annals of Family Medicine, 18*(4), 318-325. https://doi-10.1370/afm.2534

Huntley, M., & Heady, C., (2013). Barriers to health promotion in african american men with hypertension. *American Journal of Health Studies 28*(1), 21-26.

Johnson, H.M., Warner, R.C., LaMantia, J.N., & Owers, B.J. (2016). "I have to live like I'm old." Young adults' perspectives on managing hypertension: a multi-center qualitative study. *BMC Family Practice, 17* (31).

Johnson, H.M., Warner, R.C., Bartels, C.M., & LaMantia, J.N. (2017). "They're younger….it's harder." Primary providers' perspectives on hypertension management in young adults: a multicenter qualitative study. *BMC Research Notes 10*(1), 9. https://doi.10.1186/s13104-016-2332-8

Kennard, J. (2020). *Health statistics for black american men*. Retrieved from https://www.verywellhealth.comblack-american-mens-health-2328772 on August 20, 2021.

Russell, B. S., Lincoln, C. R., & Starkweather, A. R. (2019). Distress Tolerance Intervention for Improving Self-Management of Chronic Conditions: A Systematic Review. *Journal of Holistic Nursing*, *37*(1), 74–86. https://doi.org/10.1177/0898010118777327

Short, V. (2014). Report on the burden of chronic diseases in mississippi, 2014. Retrieved from www.msdh.ms.gov.

Stephens, J.D., Althouse, A., Tan. A., Melynk, B.M. (2017). The role of race and gender in nutrition habits and self-efficacy: results from the young adult weight loss study. *Journal of Obesity,* 1-6. https://doi-10.1155/2017/5980698.

Sulaica, E.M., Wollen, J.T., Kotter, J., & Macaulay, T.E. (2020). A review of hypertension management in black male patients. *Mayo Clinic Proceedings, 95*(9). 1955-1963.

Thorpe, R. J., Wilson-Frederick, S. M., Bowie, J. V., Coa, K., Clay, O. J., LaVeist, T. A., & Whitfield, K. E. (2013). Health behaviors and all-cause mortality in african american men. *American Journal of Men's Health*, 8S-18S. https://doi-10.1177/1557988313487552

Thorpe, R. J., Jr, Kennedy-Hendricks, A., Griffith, D. M., Bruce, M. A., Coa, K., Bell, C. N., Young, J., Bowie, J. V., & LaVeist, T. A. (2015). Race, social and environmental conditions, and health behaviors in men. *Family & Community Health*, *38*(4), 297–306. https://doi.org/10.1097/FCH.0000000000000078

Tucker, K.L., Sheppard, J.P., Stevens, R., Bosworth, H.B., Bove, A., Bray, E.P., Earle, K., George, J., Godwin, M., Green, B.B., Herbert, P., Hobbs, F.D. R., Kantola, I., Kerry, S.M., Leiva, A., Magid, D.J., Mant, J., Margolis, K.L. McKinstry, B., & McLaughlin, M. A., (2017). Self-monitoring of blood pressure in hypertension: a systematic review and individual patient data meta-analysis. *PLoS Medicine, 14*(9), 1-29. https://doi: 10.1371/journal.pmed.1002389

U.S. Department of Health and Human Services (USHHS), Office of Minority Health. *Data/Statistics*. Retrieved from https://minorityhealth.hhs.gov/omh/browse.aspx?lvl=1&lvlid=4

Walker, R. J., Strom Williams, J., & Egede, L. E. (2016). Influence of race, ethnicity and social determinants of health on diabetes outcomes. *The American Journal of the Medical Sciences, 351*(4), 366–373. https://doi.org/10.1016/j.amjms.2016.01.008

Watson, J. (2014). Young african american males: barriers to access to health care. *Journal of Human Behavior in the Social Environment, 24*(8), 1004–1009. https://doi.10.1080/10911359.2014.953416

Zaccagnini, M. E., & White, K. W. (Eds.). (2017). *The Doctor of Nursing Practice Essentials: A New Model for Advanced Practice Nursing* (3rd ed., pp. 1-15). Jones & Bartlett