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Screening for Social Determinants of Health in Primary Care

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Screening for Social Determinants of Health in Primary Care

By

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A Project
Submitted in Partial Fulfillment of the Requirements for the
Degree of Master of Science in Nursing, College of Nursing and Speech
Language Pathology
Mississippi University for Women

The Graduate Committee of Sarabeth Lee Clark, Mallori McBryd, Taylor Smith, and Lauren Sullivan hereby approves their research project as meeting partial fulfillment of the requirements for the Degree of Master of Science in Nursing.

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Dedication

The research team would like to dedicate this study to God, our families, and friends. Through long hours and many challenges, God provided us with the strength, endurance, and wisdom to excel in this program. The completion of this study and this program would have been impossible without Him.

In addition, the immeasurable amount of patience and constant encouragement from our friends and families did not go unnoticed. The sacrifices made by our friends and families and each of us brought the team to this point in the program. We are forever thankful for their presence then and now.

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Secondly, we would like to thank our committee members, Dr. Shonda Phelon and Dr. Beth Turner. Their support, critiques, and encouragement have helped us to complete a study we can build upon in practice. They have both helped us grow as students and future providers.

Lastly and most importantly, we would like to thank the participants of the study. Each participant took time out of their busy schedules to help us by reviewing any information provided to them and completing our questionnaire. This study would not have been possible without them.

Abstract

Social determinants of health (SDoH) can increase patient morbidity and mortality. Providers that utilize screening tools in primary care can give insight into patients' needs and coordinate potential resources within the community. Many social factors affect mortality, including socioeconomic status, level of education, poor social support, and racial segregation. These factors almost equal the number of deaths caused by health morbidities such as heart attacks, cardiovascular incidents, and lung cancer (Wark et al., 2021). Increasing awareness and knowledge of these issues with proper screening tools and community resources could improve health by building rapport and bringing light to resources needed by patients. (Drake et al., 2021). Understanding the screening process performed by patients' primary care providers across multiple settings provides insight into barriers of optimal health. It can show the positive effects of implementing clinical practice changes such as screening to decrease adverse patient outcomes. The project aimed to elicit responses from 500 providers, including medical doctors, nurse practitioners, doctors of osteopathy, and physician assistants across central and eastern Mississippi, using a quantitative questionnaire regarding their use of SDoH screening tools. Utilizing SDoH screening tools in primary care allows for further questioning regarding referral processes and understanding specific patients' SDoH needs. The researchers assumed that primary care providers do not utilize a standard screening tool or routinely implement changes to management plans based on positive screenings for SDoH. The researchers of this study also considered multiple practice barriers within the primary care setting that could potentially prevent providers from implementing necessary patient accommodation.

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Chapter I: Dimensions of the Problem

Social determinants of health (SDoH) are becoming an exceedingly important topic within the healthcare community. SDoH are factors that impact “people’s health, well-being, and quality of life” (Healthy People 2030). Examples of SDoH include safe housing, transportation, education, income, discrimination, violence, and much more. In the past, SDoH have not been considered within patients' management plans. In recent years the World Health Organization released a book that directed attention to health inequity and the effects of socioeconomic status on health. There was a significant push for primary care providers (PCPs) to address these concerns (Moen et al., 2020).

There is no standardized screening for SDoH within healthcare. However, the absence of screening and recognizing these factors can be detrimental to a patient’s health. It is vital that healthcare professionals understand these determinants and adapt plans of care regarding them to achieve better outcomes for patients. Multiple barriers can prevent providers from routinely screening for SDoH. These barriers include providers’ lack of knowledge, clinical setting and location, and the availability of appropriate resources. The presence of one or all of these barriers can lead to inadequately educating and adapting the management plan for the patient, which can lead to nonadherence, increased morbidity, and mortality (Moen et al., 2020).

The American Academy of Family Physicians (AAFP) defines SDoH as “conditions under which people are born, grow, live, work, and age” (The everyone project, 2019). The AAFP suggested that screening tools be made available to patients. PCPs should be able to review these tools and effectively implement these details into the patient’s management plan. The AAFP also encouraged healthcare professionals to know of available resources within their community and to make appropriate referrals based on all the information that they were provided (The everyone project, 2019).

The following data presents a few of the SDoH that can be screened for and affect patients' health outcomes. According to the United States Census Bureau, in 2021, the percentage of persons in poverty in Mississippi was 19.4%, while the national average was 11.6%. In 2021, Mississippi was noted to have 14.2% of persons without health insurance under the age of 65, which was the country's highest. In addition, Mississippi is below the national average for literacy, scoring an 84% in comparison to the national average of 88%. Literacy is described as the number of persons able to read and write age 15 and older (U.S. Literacy, 2022). The preceding statistics would elicit a significant need to adapt the patient’s management plan based on the SDoH findings. Varying resources within communities create barriers for providers and hinder them from appropriately adapting the management plan for their patients.

Purpose of the Research Project

The purpose of this study was to determine if primary care providers were knowledgeable of SDoH, if they routinely screened for SDoH, and if they utilized their findings to adapt and implement these into the management plan appropriately.

Significance of the Study

Providers should properly utilize screening processes for social determinants of health to adapt management plans appropriately. Currently, there are no set screening recommendations for providers in the United States healthcare infrastructure. The study aimed to evaluate if primary care providers were screening patients for social determinants of health (SDoH) and if they utilized their findings to aid patients with proper resources.

In a research study performed by Verdecias et al. (2020), the survey identified over 2,000 SDoH needs that were unable to be met. These needs were not met mainly due to the significant barriers to the availability of resources to address the needs. The researchers then concluded, “Most participants (64.3%) had at least one unexpressed need; 30.6% had two or more unexpressed needs, and 12.5% had three or more unexpressed needs” (Verdecias et al., 2020, Expressed and unexpressed social needs section). The researchers assumed that when providers are knowledgeable in screening for SDoH and have the available resources in the community needed to adapt to their patients’ management plans, then there is a significant increase in patient compliance and mortality. By evaluating and adequately referring patients based on needs, there is a direct correlation between a higher level of care and rapport built between providers and patients. (Drake et al., 2021).

There are positive outcomes when screening for SDOH. This was evident from the research conducted by Wark et al. (2021). Trust between patient and provider, management of care collaboration between the patient and provider, and the ability to coordinate patient needs with resources are examples of positive outcomes. Singh (2017) also identified a direct correlation between socioeconomic resources' impact on health status and life expectancy. The researchers aimed to provide insight into providers’ knowledge of SDoH, utilization of a screening tool, and management plan adaptation based on the availability of resources. This research also has the potential to identify barriers to screening for SDoH by primary care providers. Identifying these barriers could ultimately improve patient compliance and overall quality of care.

Conceptual Framework

The Self Care Deficit Theory of Nursing (SCDNT), authored by Dorothea Orem (1914-2007), is a conceptual model that addresses the necessity of nursing as a functioning system regarding the patient’s specific condition and health deficits affecting treatment and/or healing. Through collaborative research and application, Orem concluded that “the inability of a person to maintain on a continuous basis their own care or the care of their dependents indicated the need for nursing care” (Alligood et al., 2022, p.208). Her definition/basis for the SCDNT is primarily based on the patient’s environment and ability to adhere to a treatment plan while operating/living in their chosen environment. Practicing providers and researchers have utilized this theory to support treatment plan creation and continue the necessary research to support the application of optimal healthcare practices.

This theory directly relates the patient’s lack of ability to care for themselves to their treatment plan compliance and overall poor health management. The student researchers built upon Orem’s theory by choosing more specific variables and testing the application of the theory in the primary care setting between patients and providers. The variables of the selected research study are the provider's knowledge of self-care deficits and screening for those deficits as it relates to the patient’s health management through treatment plan compliance. Orem concludes that the application of the SCDNT allows healthcare personnel to better aid the patient by highlighting the areas in which the provider and/or nurse would be best utilized (Orem & Taylor, 2011, p. 40). Proper utilization of healthcare personnel and consideration of the patient’s healthcare deficits should yield increased treatment plan compliance.

Research Questions

The following research questions guided this study:

1. Are primary care providers able to define social determinants of health?
2. What screening questions do primary care providers utilize to evaluate social determinants of health?
3. Do primary care providers adapt their management plans based on social determinants of health?

Definition of Terms

Various terms regarding research required a definition to clarify their meaning to correlate with the current study. The theoretical and operational definitions are as follows:

Adapt

Theoretical: make (something) suitable for a new use or purpose; modify (Oxford Learner’s Dictionary, n.d.)

Operational: Restructuring a patient’s management plan to accommodate the patient’s social determinants.

Evaluate

Theoretical*:* A critical appraisal or assessment. (Farlex, 2022)

Operational*:* A judgment of the value, worth, character, or effectiveness of screening processes. It is a measurement of progress.

Primary care providers

Theoretical*:* A person trained and licensed to give health care. (CMS, 2022)

Operational*:* For this study, a healthcare provider is a medical doctor (MD), doctor of osteopathy (DO), physician's assistant PA, or nurse practitioner (NP).

Management Plan

Theoretical: Giving guidance to a patient regarding treatment (Venes & Taber, 2021, p. 1478).

Operational: A intended goal that is established between the patient and the PCP to help the patient attain optimal health outcomes.

Screening

Theoretical: "The evaluation or investigation of something as part of a methodical survey to assess suitability for a particular role or purpose." (Oxford Learner's Dictionaries, n.d.)

Operational: The questions asked by providers to elicit information regarding SDoH.

Social Determinants of Health (SDoH)

Theoretical: "The conditions in the environments where people are born, live, learn, work, play, worship, and age that affects a wide range of health, functioning, and quality-of-life outcomes and risks" (Healthy People 2030)

Operational: Any socioeconomic factor that affects the health and health outcomes of a person

Assumptions

The researchers assumed PCPs would be truthful in answering the survey. They also believed that the responses would be pertinent to the sample population. Another assumption was that PCPs were knowledgeable about SDoH and screening practices. The final assumption was that the PCPs needed to adapt the management plans based on the positive findings when screening.

Limitations

The researchers anticipated limitations regarding the research. Although the targeted number of providers was aimed at five hundred, the researchers expected the participation to be smaller. Another limitation was the geographical location of the providers. The geographic location was limited to eastern and central Mississippi, which did not allow for diversity among the providers. The time allocated for the questionnaire to be available to providers was also an assumed limitation of the study.

Summary

In summary, the researchers conducted this study to evaluate the knowledge primary care providers have regarding SDoH, current screening practices for SDoH, and clinical barriers, if any, to implement change in the patient’s management plan. SDoH screening is imperative for primary care providers to identify. SDoH screening can potentially drastically improve the quality of care and patient compliance. Ultimately, standardized screening for SDoH and consistent screening can improve overall population morbidity and mortality.

Chapter II: Literature Review

The purpose of this study was to determine if primary care providers can define SDoH, if they are adequately screening for social determinants of health, and if they utilize their findings appropriately by implementing them into the management plan of the patient. The student researchers hypothesized that by adapting the management plan to address the patient's disease process using the patient's social determinants of health, a higher rate of patient compliance would be seen. Additionally, screening for and implementing the SDoH deficits into the management plan would also improve the quality of patient care.

The following chapter is a review of literature that supports the theoretical framework of the study and provides additional insight into the application of Orem's SCDNT to the student researcher's study. This chapter also highlights and reviews the articles chosen to support the study's ideation, implementation, and data changes. There were nine articles reviewed by the student researchers regarding the subject of study.

Review of Related Literature

Tuna and Alparsalan (2021) explored and highlighted the effects that Orem's SCDNT had on delivering care to elderly patients with rheumatoid arthritis regarding the reduction of hand pain and improved hand symptoms and life activity. Dorothea Orem's Self Care Deficit Nursing Theory was used as the conceptual framework of this study. Tuna and Alparsalan (2021) hypothesized that the application of Orem's theory would positively affect the patient's health management and decrease hand pain in these patients. The researchers used a sample of 22 patients over 65 years of age with rheumatoid arthritis. The subjects were equally divided into a control group and an intervention group.

The subjects were interviewed once daily, each day over eight weeks, and interviewed in person at week 4 for an hour. The patient's needs were determined regarding their care at home, and difficulties were discussed during daily interviews. The patients in the intervention group were provided suggestions to eliminate any self-care deficits being experienced. The control group was told to continue their daily lives without information or suggestions to eliminate self-care deficits.

The study results concluded that the intervention group displayed that hand pain, hand symptoms, and issues with life activity scores were lowest at week eight. The reduction of pain in the intervention group validated the hypothesis made by the researchers that hand pain would be reduced by applying Orem's theory. Application of the theory can be seen as the researchers inquired about and addressed the deficits voiced by the patients of the intervention group. This also supported the theory that applying Orem's SCDNT positively impacts the patient by individualizing the treatment plan to address the patient's deficits.

Additionally, Jeffery Yuk Chiu Yip explored the implementation of Orem's SCDNT in its entirety and conducted a case study using an advanced practice nurse in an asthma clinic of a public hospital in Hong Kong. The case study focused on a patient with frequent asthma attacks for two months before being referred to an asthma clinic. The case study sought to examine and compare the use of Orem's SCDNT in the case management of a patient using the advanced practice nurse (APN) as the center of care.

After a physical exam and interview, the APN uses the SCDNT to address the patient’s knowledge and financial and environmental deficits. Applying the SCDNT yielded a positive result regarding case management in this scenario. Yip (2021) concluded that implementation by the APN allowed the patient to be seen as an agent that can change and grow to address their needs and eliminate the deficits they previously had. The SCDNT guided the researcher by providing a basis for study and application. The patient’s deficits were highlighted and addressed uniquely to the patient and their treatment plan.

Moore et al. (2020) researched the issue of factors that influence the rating of the seriousness of chronic health conditions that Americans face. The study researched the issues of chronic health conditions and the tangibility of environment, education, sex, and race. The chronic health conditions that the United States leads the world in causes serious human, economic, and social issues. The health conditions commonly associated with death are tobacco use, poor diet, physical inactivity, and substance abuse. In contrast, positive behaviors are associated with longevity of life and disease prevention. This study focused on researching knowledge of citizens related to chronic health conditions (CHC). Researching early detection of CHC is essential for an increase in life expectancy, quality of life, and health costs.

The primary data for this study was acquired from the national sample of American adults in the survey *Obesity in the United States: Public Perceptions.* The survey was taken by the Associated Press-NORC Center for Public Affairs Research. The household survey included 1011 adults aged 18 or older who answered questions on various obesity-related topics, such as reasons behind the increase in obesity, the relationship between obesity and CHC, and health conditions that affect Americans. Trained bilingual professionals conducted the phone interviews, and the participants were a random sample from all 50 states.

Moore. et al. (2020) noted that the following questions were used to guide the research: (1) does having a CHC, such as diabetes or being overweight/obese, correlate with rating the seriousness of CHCs that Americans are facing?, (2) what factors are significantly associated with the rating of seriousness of these conditions, and (3) given the effect of education, gender, and race, how do these factors jointly influence the rating of the seriousness of the CHC's? The theoretical framework used dependent variables in this study and was listed as the knowledge of the seriousness of rampant health issues in Americans. The independent variable was listed as the survey participants. The participants were asked if they had ever been informed by their healthcare provider that they were overweight/obese or if they had diabetes. There were two sets of variables used to measure the environment. The first variable was (1) positive environment (leptogenic factors), characterized by easy access to parks and healthy food choices. The second variable was (2) a hostile environment (obesogenic) characterized by unhealthy processed food availability. The study asked about the environment participants lived in and how accessible certain things such as access to sidewalks, paths to jog or walk on, bike paths, safety outdoors, shopping without driving a vehicle, and markets with fresh foods.

At the end of compiling data, the researchers used three regression models to show answers to the research questions. Model 1 measured the participants' relationship between the seriousness of CHCs and their status of diabetes and overweight/obesity. Model 2 measured the variables from the first model that were used to answer question two (what factors are significantly associated with the rating of seriousness of CHCs among American adults? Model 3 included two sets of interaction terms: (1) race by education and (2) race by sex used to answer the question: How do race, education, and gender jointly influence the rating of seriousness of CHCs?

The study showed a significant correlation between overweight/obese individuals rating CHCs as less severe compared to physically fit individuals. Individuals who lived in obesogenic environments rated CHCs as less severe compared to the leptogenic environment individuals. Participants who were >40 rated CHCs as less severe, and surprisingly, the study notes that Hispanics rated CHCs as more serious than white or black participants. Males rated CHCs less serious than females across race and education levels. The study revealed that individuals still rate CHCs as less severe even after being told by their healthcare provider that they were indeed overweight/obese. There were several surprising findings, such as participants with only high school education rated CHCs as more serious than college-educated participants, non-white participants rated the seriousness higher, and older adults rated the seriousness of CHCs higher. In conclusion, the study revealed that there is poor knowledge of the CHCs that are prevalent in the United States, which is believed to be the contributing factor to the high incidence of CHCs. Therefore, education on these health disparities could help Americans participate in health policies that can decrease health disparities.

Future research is outlined as necessary to examine individual knowledge of CHCs and what affects the population. Some of this study's strengths showed a misconception about understanding CHCs related to race, sex, age, and education level. The study showed a knowledge deficit among all groups of Americans. The study's weakness was the small sample size for the amount of area covered and the study's timing. A larger random sample would be beneficial.

This research benefited the topic being studied because it shed light on misconceptions. It highlighted that there is a knowledge deficit across the United States, and the deficits did not vary with the population. The research was necessary to understand that additional changes were needed to affect policies, environmental advocacy, and necessary healthcare process changes.

Tong et al. (2018) aimed to address if social determinants of health (SDoH) were screened for by physicians and applied to the treatment plans of each patient in Clinicians' Experiences with Screening for Social Needs in Primary Care. The research group also wanted to go a step further and investigate the impact that the proposed application would make on each patient's health by gauging the patient’s receptiveness to the availability of resources and additional teaching in areas where screening scores indicated they needed assistance. There is a lack of evidence supporting the need for screening as it relates to decreased health disparities or improved patient outcomes. Tong et al. (2018) wanted to universalize the data by choosing an affluent community and identifying cold spots within that community to screen and gather data on the effectiveness of screening. The theoretical framework of the study was not identified.

The research study also did not have a clear hypothesis but intended to address two questions. The first was, “Will knowing patients' social needs help clinicians address healthcare gaps, adapt care for patients, and improve morbidity and mortality”? Also, “Will adding more required data collection for primary care clinicians burden them without benefit if they cannot address the needs”?

The research study was performed in Northern Virginia between April 2016 and December 2016. Seventeen primary care clinicians were selected from twelve practices within the same health system. The practices served patients within the following counties: Fairfax, Loudoun, Prince William, Fauquier, and Arlington counties. These counties are the wealthiest in the United States. The researchers focused on and determined the patients who were among those in poverty and of low educational level by calculating those that earned less than 200% of the federal poverty level and assessing low education by identifying those that did not have a GED or high school diploma.

The patients were sent surveys asking about the following: transportation, food access, physical activity, dental health, safety, education, housing, mental health, social connections, substance abuse, finances, employment, and overall quality of life. Additionally, patients were asked if they wanted assistance or to be connected with resources in areas they felt they needed assistance. Patients that were under the age of 18 and did not read English were excluded. The researchers also surveyed the physicians through four collaborative meetings to establish their baseline understanding and disposition to addressing SDoH and applying them to the patient's treatment plan. Two meetings were prior to survey distribution, and the last two meetings were after total distribution. In addition, physicians were instructed to make diary entries to collect the data from discussions with patients about their needs during their appointments. All seventeen physicians completed the study. There were 215 patients found eligible, but only 123 completed the study.

Data was collected through learning collaborative transcripts, clinician diary entries, and patient social needs surveys. Statistical analysis was done using descriptive statistics to calculate percentages. The qualitative analysis was completed by three reviewers using a template approach. This analysis identified facilitators, barriers, and suggestions to improve outcomes.

The study showed that 86.2% of patients screened positive for at least one of the sixteen surveyed areas. Of the 86.2% of participants, only 3.3% expressed their desire to receive help or additional patient education. The areas that received the most positive screens were physical activity, dental health, and alcohol use. Social connections, safety, and education were the areas that received the least positive screens. The clinicians reported that the social needs survey helped impact care for 22.5% of patients by allowing them to provide more information based on their needs. The clinicians reported that 52.5% of the encounters were also impacted due to the strengthened clinical relationships and the physician's understanding of the patient outside their medical/clinical presentation.

Tong et al. (2018) identified that although screening for SDoH is beneficial in primary care, the lack of receptiveness of the patients to any additional resources may indicate that screening provides an unnecessary burden on physicians. The research team stated that additional studies were needed to support widespread implementation. The researchers did well in choosing a sample of patients from “cold spots” in an affluent community. This choice allowed for less socioeconomic bias and skewing of the data. However, the researchers should have chosen a larger sample size for physicians and used physicians from different healthcare systems to gather a broader and less biased set of data.

Tong et al. (2018) also noted that the sample of patients may have excluded those that did not live in a cold spot but still had social needs. They also noted that excluding patients that could not read in English created a need for more data about a population that may also have needs that must be addressed. Therefore, refining the sample size to represent the population in future studies should be done clearly.

The article was relevant to the current study because it tested the concept the student researchers addressed and tested. The basis of the study provided a different approach to data procurement by including the physician’s feelings about the collection. The student researchers sought to address physicians' knowledge of and use of SDoH screening and if PCPs are adapting the patient’s management plans to accommodate the positive findings of SDoH. The student researchers did not consider the receptiveness of the patients when needs are identified and how that plays a role in the presence of health disparities and nonadherence to the treatment plan. The student researchers gained insight regarding sample selection by observing the pros and cons of the study outlined in the article.

Verdecias et al. (2020) conducted a study that combined the screenings of social needs at the healthcare and social services levels to find a link between expressed and unexpressed needs. This study's authors wanted to understand better the relationship between these needs to improve screening and interventions set in place within healthcare facilities and social services. No theoretical framework was identified within the study.

Although no hypothesized statements were included within this study, Verdecias et al. (2020) posed questions and the purposes of the study. Healthcare foundations are now taking a greater interest in social determinants of health; however, data on screening for these needs still needs to improve. The authors believed that some expressed social needs were markers for unexpressed social needs. They also believed that more social needs would be identified by adapting a more systematic approach to screenings.

This study was conducted between June 2017 and October 2019. The study utilized a 2-1-1 helpline in Missouri to gain access to 1,397 low-income adults seeking social needs assistance. All the participants were daily smokers over 18 years of age who lived in Missouri and were trying to quit smoking. The 2-1-1 operators would include their routine questions, provide their referrals, and then they would give the callers who met the criteria the option to participate in the survey. The mean age of the participants in the study was 48.1 years, with most being black females. Half of the participants had an annual pre-tax household income of less than $10,000, and 31% of participants and not completed high school (Verdecias et al., 2020).

Within the survey, participants made 2,447 requests; however, more requests could have been made, but 2-1-1 operators could only document up to three service requests per call. The authors grouped these needs into 12 social needs categories, although nine categories were established because two of the categories encompassed the same topic. These categories included housing, childcare, utilities, food, transportation, personal safety, neighborhood safety, healthcare, and employment. The study then excluded neighborhood safety after establishing that only a few callers contacted the helpline regarding this topic. Verdecias et al. 2020 then established criteria for unexpressed needs. This criterion included the social need the caller requested help for was in one of the eight categories, and the participant could not have any expressed needs in the same category as unexpressed needs (Verdecias et al., 2020).

According to the study, “most participants (64.3%) had at least one unexpressed need; 30.6% had two or more unexpressed needs, and 12.5% had three or more unexpressed needs” (Verdecias et al., 2020, Expressed and unexpressed social needs section). Verdecias et al. 2020 also established that there was a connection between specific expressed and unexpressed needs. Transportation, childcare, employment, and personal safety were commonly unexpressed but identified during the screening process. Therefore, it was estimated that at least one social need was unexpressed by the participants (Verdecias et al., 2020).

The study conducted by Verdecias et al., 2020 had strengths and weaknesses. One strength included the sample size and variety of participants. The authors also proved their problem statements by finding a link between specific expressed and unexpressed social needs. A weakness of this study was that it was conducted in one state, and the participants were all smokers looking to quit. Another concern is that this study focused more on social service agencies rather than healthcare agencies.

This study is relevant to the current study because of the implications this has for necessitating standardized screening for social needs and social determinants of health. Integrating a more standardized screening tool could help improve anticipating the needs of patients. The current study analyzed what screening processes are in place and how providers utilize them to adapt the patient’s management plan based on their findings. By understanding that specific expressed needs are related to unexpressed needs, primary care providers can better assess patients’ available resources. This, in turn, can significantly enhance adapting management plans to be more attainable for their patients and improve patient outcomes.

Joanna Theiss and Marsha Regenstein (2017) analyzed the results of national surveys and qualitative interviews to try and determine why there are inconsistencies when screening for social determinants of health by primary care providers. The authors explored if there is a correlation between a decrease in screening for social determinants of health (SDoH) due to the obligation of legally having to consider a solution to the issue. The authors analyzed surveys given to medical-legal partnerships (MLPs) to examine this avenue. MLPs are based upon the assumption that the patient's unmet legal needs may generate a patient's SDoH. When a provider identifies a patient's SDoH, they can adequately apply them to the management plan to improve patient outcomes. Identifying SDoH "can also reduce health care costs" (Theiss & Regenstein, 2017). There was no theoretical framework provided for this study.

The authors' hypothesis is to determine if providers fail to screen for SDoH due to the fear of overwhelming the communities' resources with legal needs identified when screening patients for SDoH. Additional reasons SDoH may not be screened routinely are staff shortage and burnout, a decrease in funding if there is not a high patient turnover or no standard screening tool. The authors sought to identify these pitfalls in screening for SDoH in the healthcare setting. A survey and interview process was conducted to determine what screening tools are used in the healthcare setting and if they are used to benefit the patient's health outcomes.

A national survey was distributed to 405 primary care providers and legal partners working collectively in MLPs. The survey was distributed and returned within thirty days. The survey was completed and returned by 256 MLPs, or 63%. There were specific questions for health providers and legal partners. The primary care providers were asked if they have screening processes for SODH and unmet legal needs. The MLPs were asked if they have received any referrals from providers, and if so, how many referrals for legal assistance over the last twelve months. They followed up the survey questionnaire with a qualitative interview with sixteen members of the MLP surveyed. Some of the post-survey interview questions pertained to what tools were used to screen patients for social and legal needs, the follow-up or referral process when SDoH or legal needs were identified, and the steps to ensure the patient needs were met.

The survey disclosed that "only 79% of all healthcare organizations with an active MLP reported screening for social determinants of health that may have legal solutions" (Theiss & Regenstein, 2017). When asked about the routine screening of SDoH that may also have legal solutions, only 30% of primary care providers admitted to screening as part of their assessment "all the time" (Theiss & Regenstein, 2017). A positive outcome noted that 48% of the MLPs reported routinely screening for domestic violence and abuse. It also revealed that 84% of primary care providers with routine screening for SDoH were in hospitals or healthcare settings. The follow-up interviews concluded that "only 63% of healthcare partners used a formal protocol to screen" (Theiss & Regenstein, 2017). Even though 74% of the healthcare partners felt confident in the MLP's ability to handle their patients' legal needs, the median referral number from primary care providers to their legal partners was eighty. Primary care providers referred to the most significant population (82%) with concerns about household income and insurance needs. Only sixty-three percent of healthcare partners in the survey reported having a standard screening tool for SDoH. It can be concluded that there is a high probability of at least 40% of patients being neglected with unmet needs due to a lack of screening for SDoH.

The authors of this research reached out nationwide to 405 primary care providers and medical-legal partners. They had a 63% response rate within the thirty-day time frame. In addition, they conducted surveys that were pertinent to the corresponding individual. They followed up with the 16 willing participants associated with MLP programs through phone interviews. The emailed survey responded to 205 participants but were direct, close-ended questions. Even though the follow-up interview was more petite, it allowed the researchers to further inquire into the possible reasons screenings for SDoH were minimally used in daily practice.

This article was a direct complement to the student researchers' study. The research group determined that providers are applying their patients' social determinants of health to the management plan. One of the student research groups' focus was determining if providers use a screening process for SDoH. This article's research exposed the need for providers to increase routine screening for SDoH with each visit. One of the recommendations noted in this article was the importance of teaching future providers the importance of knowing how to screen for SDoH and incorporating SDoH to improve the patient's management plan and health outcomes. It was vital to know the SDoH of patients and be able to provide resources to get those needs met. Incorporating screening tools into the routine assessment will help identify patients' needs to improve their health further.

Wark et al. (2021) reviewed and researched the efforts to incorporate social determinants of health (SDoH) into electronic health records (EHR) and how that information impacted indigenous peoples. Recently there has been an increase in interest in patients' SDoH and the impact of these factors on health outcomes. The significance of the study is that many social factors affect mortality, such as socioeconomic status, level of education, poor social support, and racial segregation. These factors almost equal the number of deaths that are caused by health morbidities such as heart attacks, cardiovascular incidents, and lung cancer. Increasing awareness and knowledge of the issues the communities and stakeholders presented could improve health. The idea of SDoH, although not named, began in the 1900s. When EHRs became available in the 1970s, the SDoH evolved into retrievable medical data. However, there are still no universal SDoH measurement standards given this timeline. Having the ability to identify SDoH, referral, and follow-up is a necessary means to decrease health disparities. The research problem is whether SDoH facets are adequately documented in the EHR by means of cultural relevancy and sensitivity and if there is a difference when stakeholders' buy-in.

Wark et al. (2021) showed that there are data elements that were manually extricated and studied that were pertinent to the research question regarding three specific areas: 1) context or integration of SDoH into EHRs, 2) population in the US or indigenous people in Canada, and 3) concept or strategies including stakeholders engagement process to incorporate SDoH into EHRs. Initially, n=2,459 articles were pulled, and only n=20 met the criteria for the study. The articles that met the criteria for the analysis were retrieved from PubMed, preliminary background searches, and bibliography reviews. The most recurring SDoH topics discussed among the included articles were demographics, psychosocial factors, economics, health behaviors, education, environmental factors, housing, and relationships. The framework used for this study was Arksey and O'Malley's scoping review methodology, which influenced the research question. The research question for this study was: “How have healthcare systems in the U.S. and Canada integrated SDoH and protective factors into EHR, and what strategies did they tailor SDoH to the population they serve?”

Wark et al. (2021) reviewed research articles and noted barriers and facilitators to the barriers. Several categories were included: domain indicators, screening, and measurement, screener data collection methods and procedures, patient/provider relationships, health system, and payers. An example of a barrier is the provider's liability to respond to certain disclosures. The facilitator of this barrier was to exclude domains that require immediate attention from providers (e.g., domestic violence, alcohol, and depression). The article concludes that for patients to be accepting of screening, there should be an integration of SDoH into EHR, and there should be exercised caution from retraumatizing patients, training staff to manage secondary trauma, communicating with patients and providers on the rationale for screening, and being aware of security. There are positive outcomes when screening for SDoH, as evident from the research, such as trust between patient and provider, management of care collaboration between the patient and provider, and ability to coordinate patient needs with resources. The stakeholder involvement (patients, health providers, resource providers) is essential to increase facilitators to barriers. Engaging patients is an avenue to understand health constraints better and measure SDoH.

Wark et al. (2021) state that some of the article's strengths are that compiling and evaluating data that several studies have completed shows trends in barriers, the need for facilitators, and SDoH issues. Also, the data revealed that problem lists are often generated but not a resource list to coordinate for solving the problem. This is essential information to build on to change the outcomes for SDoH. Reviewing trends in data is essential for future data that is needed for change to happen. One of the article's weaknesses was that only twenty research articles were used. Search engines also gathered the data by using keywords that could have limited pertinent resources. Another limitation identified in this article is the possibility of expanding inclusion criteria for identifying additional resources.

This research article was essential to the current research because of the named barriers and facilitators. This aided in the hypothesis and the framework model for how the data was gathered. SDoH are increasingly being incorporated into management plans. However, if there is no way to coordinate those plans with outside resources through stakeholders, another issue must be addressed.

Ochieng & Crist (2020) performed a qualitative study to investigate the effects of addressing SDoH on managing type 2 diabetes mellitus in African American women. The research group sought to address the apparent health disparities present among a minority group regarding a chronic illness while not considering the factors of the presence of noncompliance or nonadherence to treatment. The research group addressed the following questions: How do social determinants of health influence type 2 diabetes self-management in African American women? How does health care delivery influence type 2 diabetes self-management in African American women? There was no theoretical framework identified.

The setting of the study was in the southwest United States. Participants are chosen using the following criteria: having a diagnosis of type 2 diabetes mellitus for one year, residing in the southwest United States, female gender, reading and speaking in

English, and being willing to participate in the study voluntarily. Women from varying degrees of educational and socioeconomic backgrounds were used. Data was collected from each participant using a demographic questionnaire, audiotaped individual interviews, observation, and field notes. Interviews lasted 60-90 minutes and focused on the varying social determinants of health that affected each individual’s healthcare and what needed to be done to address them from the patient’s perspective. The snowballing technique was used for recruitment. The study consisted of 10 AA women with type 2 diabetes mellitus, ranging in age from 26-69 years. Household income for the sample group ranged from $18,000 to $60,000.

Open coding was used to analyze the data collected and honor the words of the participants as they related to their feeling about type 2 diabetes management and the effects their environment had on their adherence to their treatment plan. These open codes were grouped into subcategories that correlated to the research questions proposed. Theoretical coding was used to complete the final analysis.

The study's findings indicated that SDoH heavily influenced African Americans’ self-management of their type 2 diabetes mellitus. Five themes emerged based on data analysis. Theme one pertained to their geographic location. Based on the participants' responses, living in a rural area provided difficulty when adhering to the treatment plan set by a provider due to the limited access to healthcare facilities. Theme two pertained to their educational background. Six participants had access to educational resources that provided additional knowledge on their diagnosis and management. The other four participants were limited to the patient teaching from their providers. Theme three was based on their level of income. Participants were noted to be influenced positively or negatively by their household income. Those with lower incomes were not able to obtain all medication or supplies needed to support proper compliance or adherence to the treatment plan. Theme four explored the participant's health literacy. Participants with a fair understanding of diabetes were noted to be more proactive and expressed their strong compliance with their treatment plan. Those with poor health literacy were not proactive and expressed a lack of compliance regarding their lack of understanding. Theme five perceived systemic racism. Some participants expressed a lack of trust in the healthcare industry and providers. This lack of trust influences compliance among this minority group.

The strengths of this research study were the focus on one group and one chronic disease. By minimizing the focus, there was a lack of variables that may have been present while studying a larger group with differing backgrounds and responses to this chronic illness. The application of SDoH can also be better visualized in the data due to the focus being only on African American women and the management of diabetes. The five themes derived from the results can be easily assessed, and the necessary application of SDoH can be made for each patient.

The weakness of the study was the size of the sample chosen. The ten participants provided valuable data that allowed for further research but was not large enough to support a broader application in healthcare. However, the validity of the need to address social determinants of health when creating a treatment plan and supporting the patient throughout the treatment plan was confirmed.

This article supports the student research group’s hypothesis that providers should address SDoH. This confirmation also supports the need to identify the provider’s knowledge level regarding SDoH to accurately develop management plans for each patient. Focusing on one minority group highlights the need to tailor the management plan to the patient while considering all known SDoH, including possible feelings of systemic racial bias. It is a clear reminder to be sensitive to known as well as unknown determinants that may influence the patient and present in specific demographics, not limited to race.

Summary

The student researchers collectively agreed on the importance of SDoH screening and the application of screening results to the patient's management plan. Each article above highlights the lack of screening and how that absence negatively affects the patients. There were no proposed disagreements within the literature review that would contradict the researcher's hypothesis.

The student researchers aimed to address the lack of provider opinion concerning screening and screening applications. There was a lack of literature that addressed the providers' feelings regarding SDoH screening and application. Those that addressed this topic were vague in their receptiveness and comfort with screening for SDoH and applying them to the patient's management plan. The student researchers understand that provider receptiveness and comfort are pertinent to accurately and adequately screening patients for SDoH.

Chapter III: Design and Methodology

Primary care providers in Mississippi manage various patients with diverse findings of social determinants of health. This study aimed to determine if primary care providers are knowledgeable of SDoH, if they are routinely screening for SDoH, and if they are utilizing their findings to adapt and implement them into the management plan appropriately. The CDC reports that when SDoH are identified and met with related resources, the patient’s and the community's health improve, and health equity also advances. This chapter will discuss the researcher’s step-by-step approach to the design of the study, the data collection, analysis, and interpretation of the study.

Design of the Study

The researchers used a descriptive quantitative study to determine if primary care providers in central and eastern Mississippi are adequately screening for social determinants of health and if they are implementing those needs into their patient’s management plans. The survey distributed to primary care providers included fourteen questions that focused on the sample population's demographics, knowledge of SDoH, the screening tools used to assess them, and how they adapted SDoH to their patient’s management plans. The survey was distributed using convenience sampling by the research group via email, along with a QRL code shared through social media and placed in the participating primary healthcare settings throughout Mississippi. A total of seventy-nine surveys were completed, returned, and analyzed. The use of a descriptive quantitative study was relevant to this research due to the time restraints in which the research group had to complete their objective.

Setting for the Research Project

The research questionnaires were distributed to Mississippi's primary care clinics, emergency rooms, and health departments. In addition, individuals within the research group distributed the survey to various healthcare facilities by email, social media, and placement of QRL codes in participating facilities and social media platforms.

Population and Sample

The research group had a target population of all primary care providers in Mississippi. The sampling population was narrowed to the researcher's geographic location for convenience. There was a diverse representation of primary care providers that completed the questionnaire. A total of eight physicians, two doctors of osteopathy, and sixty-nine nurse practitioners responded to the survey. Their surveys were utilized due to completing the questionnaire and prompt return.

Methods of Data Collection

The research was implemented by developing a proposal and questionnaire presented and approved by the Institutional Review Board (IRB) at Mississippi University for Women. After approval, the proposal was presented to healthcare facilities and their providers for approval of distribution and participation. The survey was delivered to the participating primary care providers throughout Mississippi via email, social media, and a QRL code placement in break rooms in the healthcare facilities.

Instrumentation

The questionnaire consisted of demographic data, knowledge of SDoH, the screening tools used to assess them, and resources utilized to adapt positive SDoH findings to their patients’ management plans. The survey was directed only to primary care providers who identified as a physician, doctors of osteopathy, nurse practitioner, or physician assistant. There were no identifying questions such as name, date of birth, or locations asked of the providers or their patients. The closed-ended questions varied between dichotomous, multiple-choice, and forced-choice questions. The survey included instructions that only completed surveys would be used in the study and for the survey to be completed and returned by March 1, 2023. A copy of the results and a thank you note for participation were sent to participating healthcare facilities and providers. No incentives were used for cooperation from healthcare facilities or providers.

Methods of Data Analysis

The effectiveness of the research project was determined by statistical analysis of the completed questionnaires. The data from the completed questionnaires were stored electronically, transferred to an Excel spreadsheet, and sent to a professional statistician for analysis. A professional statistician performed statistical analysis using SPSS 27. Chi-square test analysis was also performed on the questionnaire results to analyze the relationship between specific study variables.

Chapter IV: Presentation of the Findings

This study was designed to evaluate if providers are screening for social determinants of health, if the providers are implementing their findings into their management plan, and if there are barriers to screening. A quantitative study was performed utilizing a questionnaire created by the researchers. This questionnaire focused on the providers' demographics, knowledge of the providers, screening practices, and barriers to implementing their findings into patients’ management plans. This survey was dispersed to healthcare providers throughout Mississippi via email and QR code. Descriptive and inferential statistics were utilized to analyze the responses to the questionnaires.

Participants

The questionnaire was dispersed to medical doctors, doctors of osteopathy, nurse practitioners, and physician assistants. A total of 79 healthcare providers completed the questionnaire. The questionnaire was completed by eight (10.3%) medical doctors, two (2.53%) physician assistants, and 69 (87.34%) nurse practitioners. No doctors of osteopathy responded to the questionnaire.

Of the 79 participants, 19 (24.05%) had less than five years of experience, and sixty (75.95%) had more than five years of experience. The participants also worked in different healthcare settings. Seven (8.86%) reported working in a hospital, 48 (60.76%) reported working in primary care, and 24 (30.38%) reported working in a specialty area. The healthcare providers were also asked about the number of patients seen daily. Nine (11.54%) reported seeing one to ten patients per day. Thirty (38.46%) reported seeing 11 to 19 patients daily. Twenty-nine (37.18%) of the providers reported seeing 20 to 29 patients daily, and 10 (12.82%) reported seeing 30 or more patients daily.

The average age of patients seen by the healthcare providers was also surveyed. Pediatric patients were seen by 19.12% of providers, 55.15% reported seeing adults, and 25.74% reported seeing geriatrics. Of the participants, 37.36% reported servicing a patient population with private insurance, 38.51% reported servicing patients with government-funded insurance, 21.26% reported patients who used the self-pay method, and 2.87% reported other forms of payment.

Outcomes

The first knowledge-based question determined if providers could define social determinants of health. Out of the 79 participants, 73 chose the correct definition of social determinants of health. There was no statistically significant difference in correct responses based on provider role ($\chi^2(2, N=79)=0.451, p=0.798$), years of experience ($\chi^2(1, N=79)=2.056, p=0.152$), facility type ($\chi^2(2, N=79)=0.631, p=0.729$), or number of patients seen ($\chi^2(3, N=79)=3.349$, $p=0.341$). These survey results can be viewed in Figure 1. Providers also chose which SDoH they thought affected their patients' health outcomes the most. These findings are demonstrated in Figure 2.

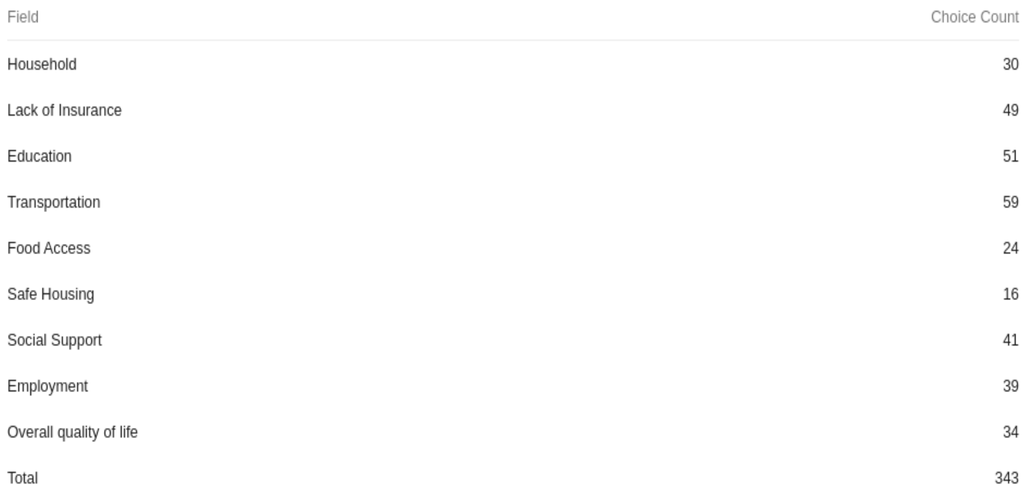
Figure 1

Are primary care providers able to define social determinants of health?

Field	**Count**
The conditions in the environments where people are born, live, learn, work, play, worship, and age that affect a wide range of health, functioning, and quality of life outcomes and risks.	**73**
The cultural background of a patient, including race, ethnicity, religion, gender, or sexual orientation.	**3**
None of the above.	**3**

Figure 2

Which of the following SDoH affects your patients' health outcomes the most? Choose all that apply.



Field	Choice Count
Household	30
Lack of Insurance	49
Education	51
Transportation	59
Food Access	24
Safe Housing	16
Social Support	41
Employment	39
Overall quality of life	34
Total	343

Providers were also asked about the screening process of SDoH for their patients. These findings are displayed in Figure 3. Of the participants, 26 (32.91%) always screen, 39 (49.37%) sometimes screen, seven (8.86%) occasionally screen and seven (8.86%) rarely screen their patients for SDoH. The tools providers utilize for screening for SDoH were also assessed. One provider selected using the Health-related Social Needs (HRSN) Screening Tool, and one provider utilized the HealthBegins screening tool. The PRAPARE implementation and Action Assessment Tool was utilized by five of the 79 providers. Twenty-one providers utilized a standardized EMR-based screening tool, and 51 providers do not use a standardized screening tool. Figure 4 demonstrates these findings.

Figure 3

How often do you screen each patient for social determinants of health?

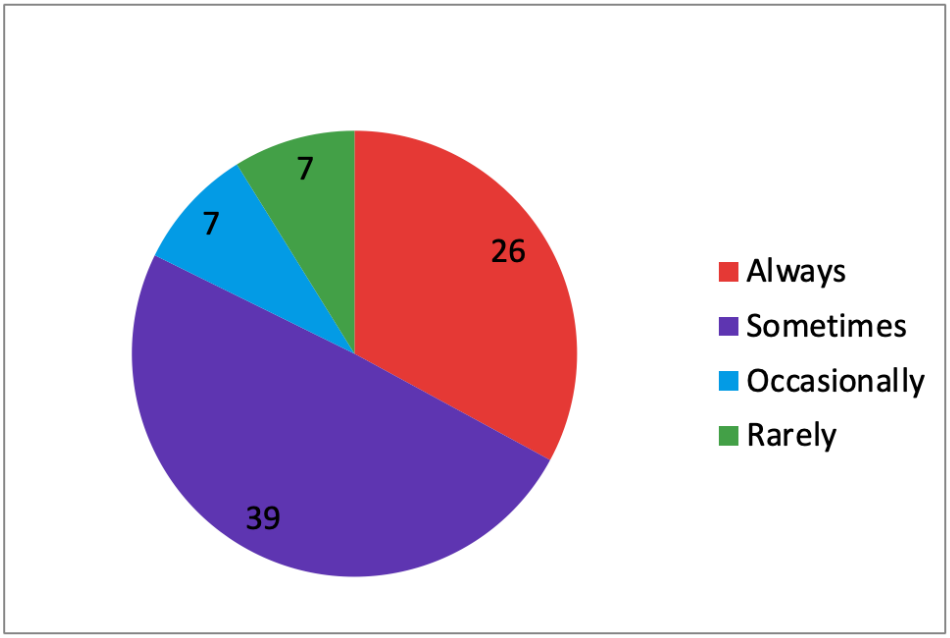


Figure 4

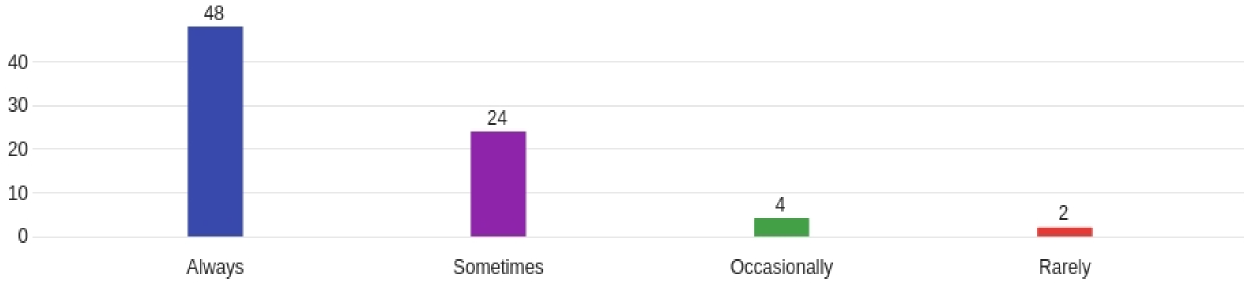
When assessing social determinants of health, what type of screening tool do you utilize?

Field	Count
Health-Related Social Needs (HRSN) Screening Tool	1
PRAPARE Implementation and Action Assessment Tool	5
HealthBegins	1
Other standardized EMR-based screening tool	21
I do not use a standardized screening tool	51

The researchers also assessed how often providers consider social determinants of health when developing a patient's management plan. Figure 5 demonstrates these findings. Of the participants, 48 (61.54%) always, 24 (30.77%) sometimes, four (5.13%) occasionally, and two (2.56%) rarely adapt the patient's management plan based on social determinants of health assessment findings.

Figure 5

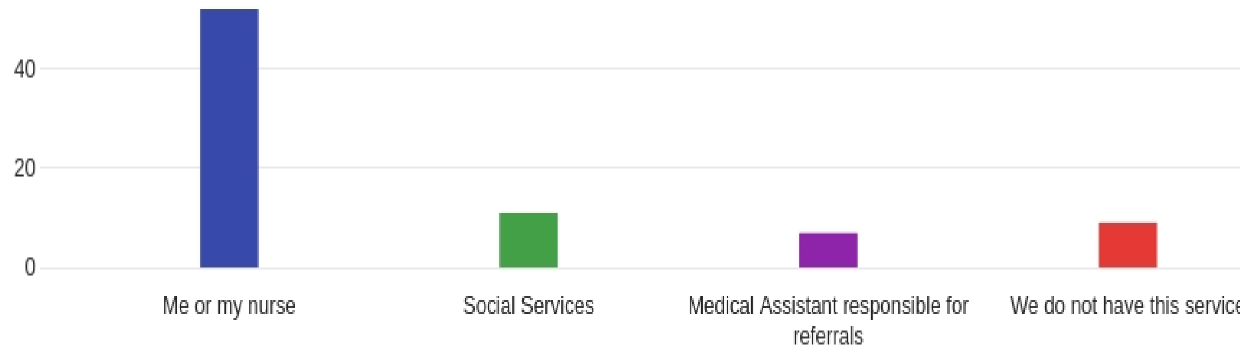
When developing your patient's management plan, how often are social determinants of health considered?



The implementation of the provider's findings from the screening for SDoH was also assessed. Eleven of the participants answered adapting the management plan, and three answered referring to community resources. Sixty-five of the participants selected both adapting the management plan and referring the patient to community resources. When asked who within the clinic carries out these referrals, fifty-two (65.82%) providers chose the option "me or my nurse", and eleven (13.92%) providers chose the option "social services." A medical assistant was utilized by seven (8.86%), and nine (11.39%) of the 79 providers did not offer the service within their healthcare setting. These findings are seen in Figure 6.

Figure 6

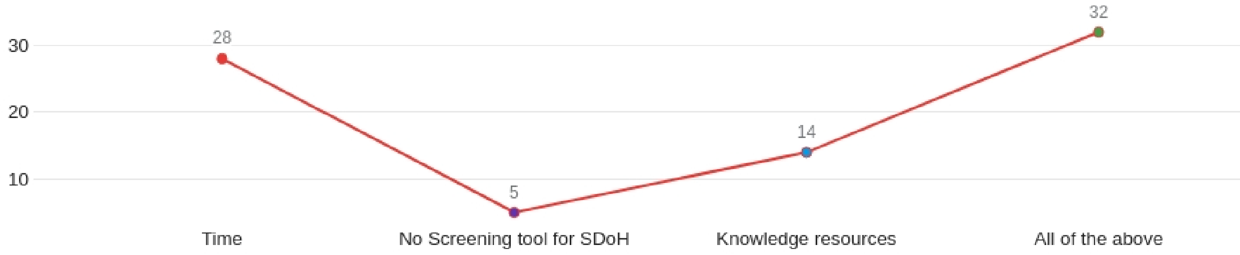
Who implements resources into the patient's management plan?



The researchers also investigated the barriers providers face when implementing social determinants of health findings into the patient's management plan. Time was identified as a barrier by 28 (35.44%), while five (6.33%) providers identified no screening tool as a barrier. Knowledge resources were identified as a barrier by 14 (17.72%) providers, and 32 (40.51%) chose all of the previous options. These findings are seen in Figure 7.

Figure 7

What barriers do you face in implementing social determinants of health?



Summary of Findings

The questionnaire consisted of six demographic questions, four questions assessing the provider's knowledge of SDoH, and four questions assessing the implementation of SDoH in each provider's practice. The study consisted of a total of 79 participants. The survey participants were primary care providers in diverse roles of specialties and included MDs, DOs and NPs.

This study aimed to determine if primary care providers were knowledgeable of SDoH, if they adequately screened for SDoH, and if they utilized their findings to adapt and implement them into the management plan appropriately. A total of 92.41%, or 73 out of 79 participants, chose the correct definition for SDoH. These results indicated that the majority of participants were knowledgeable about SDoH. A total of 32.91% of the PCP always screened patients for SDoH, and 49.37% sometimes screened. Of the 79 PCP, 61.54% always considered SDoH when developing patients' management plans, and 65 (82.28%) adapted management plans based on SDoH screening and referred them to community resources. Primary care providers had at least one barrier when implementing SDoH into the patient's management plan.

Barriers that hindered PCP from implementing SDOH to patients' management plans included taking the time to screen for SDoH (35.44%), while not having the knowledge of resources was a barrier for 17.72% of providers. Based on these findings, the majority of participants are knowledgeable of SDoH, but there is a lack of consistent screening among participants. Of those that do screen for SDoH, the majority of participants consider SDoH as they develop management plans for their patients. The questionnaire results validated the hypothesis that while there is no set screening recommendation for providers in the United States, providers are screening for SDoH and implementing their findings into the patients' management plans.

Chapter V: Implications

A growing number of health disparities among Mississippians prevent patients from understanding and adhering to their management plans. These disparities are linked to a patient's SDoH and their healthcare providers' implementation or lack of implementation in their management plans. SDoH are currently divided into five domains, education access and quality, economic stability, healthcare access and qualities, neighborhood and built environment, and social context and community (Healthy People 2030). Profound focus is placed on SDoH and how addressing them may decrease many of the health disparities that currently plague patients. Healthcare providers are the initial point of contact for assessing and formulating management plans that will adequately address SDoH and decrease health disparities.

A review of the literature was performed, and a growing need for assessment of SDoH, along with several considerations for implementation in primary care management plans, were highlighted. A study completed by Moore et al. (2020) indicated that there is a direct link between chronic health conditions and SDoH. This research group interviewed patients suffering from chronic health conditions and assessed their knowledge of those conditions and their management plans. The research group concluded there was a knowledge deficit among the sample group of participants who had difficulty managing their chronic health conditions. This indicated a need to assess all patients for any knowledge deficits concerning treatment prior to initiating treatment (Moore et al., 2020).

While a need to assess SDoH and implement measures to address SDoH is indicated, the researchers also reviewed literature regarding studies highlighting barriers to implementation. Wark et al. (2021) conducted a study in which participants were interviewed concerning their receptiveness to any assistance given in addressing their SDoH and help to adhere to their management plans. Barriers identified for screening and implementation of SDoH were patient-provider relationships, amount of screening/collection of data, and payment for resources and services. Resolution of these barriers to screening and implementation of SDoH would need to be performed to ensure successful treatment and outcomes. These are essential topics the student researchers took into consideration as they prepared to conduct their study (Wark et al., 2021).

After compiling information on previous studies, the student researchers hypothesized that there is a need to screen SDoH and implement measures that address them. This screening should ideally be completed by providers during office visits prior to discussing the patient’s management plan. Due to this, providers' screening practices and knowledge are vital components that need to be assessed.

This study aimed to assess providers' knowledge in North and South Mississippi regarding SDoH, screening practices for SDoH, and implementation of SDoH into the patient’s management plan. The student researchers distributed a questionnaire to a convenience sample of providers at each clinical site visited during the duration of their MSN program. A QR code was also sent out via email to a compiled list of primary care providers around the state of Mississippi. Questionnaires were completed anonymously by each provider. Questionnaire results underwent statistical analysis and were reviewed by the student research group.

Discussion of the Findings

The study's goal was to assess a provider's knowledge of SDoH, screening practices for SDoH, and implementation of measures addressing SDoH in a patient's management plan. Results obtained and statistical analysis indicated that providers are able to define SDoH. Due to the statistical findings, the student researchers concluded that providers are knowledgeable of SDoH. With this information, the student researchers could eliminate an assumed barrier of lack of knowledge to implement measures to address SDoH.

There was a variety of screening tools used among participants. Most participants used an EMR-based screening tool. EMR-based screening tools are built into the system used in healthcare settings for patient charting and record keeping. A tool of this type is preferred due to the lack of variability in assessment and documentation. Other participants indicated they do not use a screening tool to assess a patient's SDoH. It is hypothesized that this can cause variability of results and may indicate a lack of SDoH screening altogether.

Adaptation of measures to address SDoH was a prominent proponent of the study. Without applying findings of screening for SDOH to a patient's management plan, providers' knowledge of SDoH and screening practices do not truly affect patients, improve their outcomes, or decrease health disparities. The results indicated that most participants considered SDoH when creating management plans for their patients. The student researchers concluded that providers are knowledgeable of SDoH, but not screening as efficiently as necessary.

Ochieng & Crist (2020) performed a qualitative study that assessed the effects that assessment of SDoH would have on African American Women with type 2 diabetes mellitus. In this study, the researchers hypothesized that the assessment and application of measures to address SDoH in management plans would improve outcomes among this population. The research team also wanted to identify any barriers that influenced the delivery of management plans and medical advice in this population of individuals with type 2 diabetes mellitus. Results were obtained by conducting interviews with participants and noting similar themes and/or phrases that created self-management challenges. These results indicated that SDoH heavily influenced the participants' ability to self-manage their type 2 diabetes mellitus. Domains identified were household income, healthcare literacy, and patient/provider rapport (Ochieng & Crist, 2020).

The current study had a similar hypothesis but did not assess barriers to successful implementation and receipt from a patient’s standpoint. The current study yielded results stating that providers are knowledgeable and attempt to implement SDoH measures into a patient’s management plan when screening is done. However, the current study did not consider the patient’s receptiveness during delivery after implementation is successfully performed. This is a significant factor in decreasing health disparities and truly addressing SDoH.

Theiss and Regenstein (2017) conducted a study in which they analyzed national surveys regarding possible inconsistencies in screening practice for SDoH. At the time this study was conducted, a decrease in screening for SDoH nationally had been noted. The authors of this study considered possible reasons for a decrease in screening, such as the “legal obligation to consider a solution for a patient’s issue” (Theiss & Regenstein, 2017). The study outlined how providing a solution may be difficult for providers due to other barriers, such as limited time and resources. These surveys were distributed to healthcare providers in facilities belonging to medical-legal partnerships.

Surveys were distributed and collected after eight weeks. A total of 405 healthcare providers were contacted, and 63% returned the surveys. Of the 63%, only 30% indicated screening for SDoH "all the time." The researchers concluded that the majority of the participants do not screen for SDoH due to a lack of referral resources, fear of legal obligation, and lack of time for screening.

This was pertinent to the current research study due to the identification of possible barriers that may impair and decrease screening practices. The student researchers considered these as they reviewed results obtained from the current study. A survey question regarding barriers was listed on the current study's questionnaire. The answers to this question were similar to the results obtained by Theiss and Regenstien because most participants cited a lack of screening/implementation due to a lack of screening tools, referral resources, and time for assessment.

Limitations of the Research Project

There were project limitations that may have affected the research results. One limitation was the amount of time allocated. The survey was distributed, completed, and returned within an eight-week time span. This limited the time the researchers had to distribute the survey to providers and the time the providers had to complete and return the survey. Although the researchers could utilize social media to extend the survey to a wider distribution, the respondents mainly responded within the researcher's demographics. Although the survey was distributed to all primary health providers, the majority of the participants were nurse practitioners. This resulted in a lack of diversity that may have skewed the results of the research.

Implications

SDoH have been identified as crucial to improving patients' health in recent years. The WHO released a book that identified the importance related to the effects of socioeconomic status and health inequity. There is an increased demand for providers to address SDoH and coordinate into their management plan. This research aimed to identify if primary care providers have the knowledge of SDoH, are screening, and are implementing these findings into the patient's management plan in Mississippi. There is no standard to which primary care providers are screening for SDoH. According to the US Census Bureau 2021, Mississippi is rated with the highest percentages for poverty and persons without health insurance and is below the national average for literacy. These are factors that influence SDoH. SDoH are defined as factors that influence a person's health and, ultimately, their quality of life. Where people grow, live, work, and age are the influences that form SDoH. After conducting the research evaluating seventy-nine healthcare providers’ knowledge of SDoH, the majority were correct. The highest percentages describing patients' SDoH were lack of insurance, education, and transportation, as shown in Figure 2. As illustrated in Figure 3, only 32.91% of the providers who participated in this research state that they always screen for SDoH. When initiating a treatment plan, identifying factors affecting patients' ability to obtain health is vital for nursing practice. Understanding how to screen for these factors that influence SDoH is of greater importance. The research findings could impact the settings of health where the surveyed providers work because decreasing patient mortality and increasing resources can cut healthcare costs. Dorothea Orem’s theory, SCDNT, is applicable as this model describes the necessity of nursing as a functional unit between the patient's condition and the health deficits that affect healing. Essentially, Orem’s theory shows the importance of coordinating nursing skills with patients who are unable to maintain their own care. This theory highlights nurses' impact on patients by identifying and proactively incorporating SDoH into care. For future research, more emphasis should be placed on barriers to implementing SDoH. This research indicated that there are specific barriers, such as knowledge of resources, clinical setting/ location, and the availability of resources. Since learning how SDoH interferes with patient outcomes and increases healthcare costs, more research should be focused on addressing the barriers to allow providers to address SDoH. The research revealed that over 50% of providers surveyed see 20-30+ patients daily. This could be researched as a possibility of an additional barrier to screening and implementation of SDoH due to time constraints. The research revealed a need for healthcare administration to consider SDoH as providers report issues with time, screening tools, and knowledge for resources being barriers to the implementation of SDoH into management plans (figure 7). The majority of providers were able to define SDoH; however, there were still 6 of the 79 who did not, which revealed the need for education on SDoH among providers.

Nursing Research

Increasing nursing research in SDOH to help evaluate and develop a more standardized screening tool to improve patient outcomes would be beneficial. A research study to implement a standardized screening tool at each patient visit would identify unmet needs that can be applied to the management plan, provide resources for those needs, and improve patient care outcomes.

Advanced Nursing Practice

Advanced Nurse Practitioners should adapt their practice with a standardized routine screening for SDoH at each patient visit, use the findings to adapt the patient's management plan, provide resources for adaptation, and continue to evaluate improving patient health outcomes.

Nurse Practitioner Education

The nurse practitioner should continue to update their education in the knowledge of SDoH, screening for SDoH, and implementing the findings into the patient’s management plan. NPs should monitor how implementing this knowledge affects the patient’s health outcomes.

Recommendations

Based on this research, a quantitative study was performed by distributing a questionnaire to a convenience sample of healthcare providers. The majority were knowledgeable of SDoH and routinely screened. In the future, research will prove the importance of addressing barriers to screening. The barriers to implementing changes in patients' management plans due to SDoH were identified as time, lack of screening tools, lack of referral resources, and all listed barrier options. The researchers for this study recommend a larger scale of involvement from providers, as there were only 79 participants in the study. A longer time to conduct research would be a third recommendation for this study. The eight-week time frame could have limited participants for the research. Allocating more time for conducting research could increase the sample size. One of the key recommendations is to develop a screening system that can be utilized across many different systems or EHRs to ensure SDoH are easily screened for and implemented into treatment plans.

Education is vital for patients and providers on SDoH, as reflected in the research and research articles. This research group understands the correlation between literacy and SDoH, thus the importance of education on disease processes, medications, and resources. With SDoH becoming a significant factor in patient outcomes, there are recommendations to elevate the level of care surrounding SDoH.

Conclusion

The purpose of the student research was to assess healthcare providers' knowledge of SDoH, if they routinely screen for SDoH, and if they implement their findings into the management plan for each patient. A quantitative study was performed by distributing a questionnaire to a convenience sample of healthcare providers in eastern and central Mississippi. The convenience allowed student researchers to gather data and assess provider knowledge and their screening practices. The questionnaire was available for eight-weeks and yielded results from 79 participants.

Based on the results, the student researchers concluded that the majority of participants are knowledgeable of SDoH. Their knowledge was indicated by the ability to choose the correct definition from a multiple-choice answer set. Statistical analysis revealed no statistical significance existed based on provider type, years of experience, and facility type for correct answers.

It was determined that participants are knowledgeable of SDoH; however, the majority are not consistently screening for SDoH. Most providers considered SDoH when implementing changes to their patients’ management plans. Many participants cited that barriers to screening include time, lack of screening tools, lack of referral resources, or all listed barrier options. The student researchers were aware that barriers to screening may be present. Additional information is necessary to eliminate barriers as they are uniquely present in facilities.

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Appendix A

Institutional Review Board Letter

To: Dr. Lindsay Kemp MSN Research Group

From: Irene Pintado, IRB Chair *I.P*

Date: 04/10/2023

Project: Screening for SDoH in Primary Care

The Mississippi University for Women IRB committee has determined that your project, Screening for SDoH in Primary Care, is exempt under 45 CFR 46.101 (b)(4). This project does not involve minors and does not collect information on protected health information.

If any changes are made to the study, the Committee must be notified. If the project is still running twelve months after the date of this memo, please be advised that we will need an update for our files.

Good luck with your work!

Appendix B

Social Determinants of Health Screening in Primary Care Survey

Dear Participant,

This survey is regarding social determinants of health in primary care and implementing those into a patient’s management plan. Responses to this survey will be utilized in our research project for completion of the MSN program at MUW. Participation is strictly voluntary. Completion and submission of this survey will imply our consent to participate in the study. You may choose to withdraw from the study at any time prior to submission. All submissions will be anonymous; therefore, please do not enter your name or any personal identifiers on this survey. Thank you for your participation.

Sincerely,
Sarabeth Lee Clark, RN
Mallori McBryde, RN
Taylor Smith, RN
Lauren Sullivan, RN

Social Determinants of Health Screening in Primary Care Survey

1. **What is your healthcare provider status?**

    A. MD

    B. DO

    C. PA

    D. NP

2. **How many years of experience do you have?**

    A. Less than 5 years

    B. Greater than 5 years

3. **Which type of healthcare facility do you practice in?**

    A. Hospital

    B. Primary Care

    C. Specialty Care Area

4. **How many patients do you typically see in a day?**

    A. 1-10

    B. 11-19

    C. 20-29

    D. 30 or more

5. What is the average age of patients you see? Select all that apply.

A. Pediatrics
B. Adult
C. Geriatric

6. Which of the following best describes your patient population? Select all that apply.

A. Private insurance
B. Government funded
C. Self-pay
D. Other

7. Choose the correct definition of social determinants of health within healthcare.

A. The conditions in the environments where people are born, live, learn, work, play, worship, and age that affect a wide range of health, functioning, and quality-of-life outcomes and risks.
B. The cultural background of a patient including race, ethnicity, religion, gender, or sexual orientation.
C. None of the above

8. How often do you screen each patient for social determinants of health?

A. Always
B. Sometimes
C. Occasionally
D. Rarely

9. When assessing social determinants of health, what type of screening tool do you utilize?

A. Health-Related Social Needs (HRSN) Screening Tool
B. PRAPARE Implementation and Action Assessment Tool
C. HealthBegins
D. Other standardized EMR based screening tool
E. I do not use a standardized screening tool

10. Which of the following SDoH affects your patients' health outcomes the most? Choose all that apply.

A. Household Income
B. Lack of Insurance
C. Education
D. Transportation
E. Food access
F. Safe housing
G. Social support

H. Employment
I. Overall quality of life

11. When developing your patient's management plan, how often are social determinants of health considered?

A. Always
B. Sometimes
C. Occasionally
D. Rarely

12. When considering social determinants of health, how do you implement these findings to your patient's management plan?

A. Adapt to management plan
B. Refer to community resources
C. All of the above

13. Who carries out referrals to address SDoH for your patients in your clinical practice?

A. Me or my nurse
B. Social Services
C. Medical Assistant responsible for referrals
D. We do not have this service

14. In your clinical practice, which of the following barriers do you experience most often regarding social determinants of health?

A. Time

B. No screening tool for SDoH

C. Knowledge of resources

D. All of the above