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Implementing a Systematic Depression Screening in the Primary Care Setting

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IMPLEMENTING A SYSTEMATIC DEPRESSION SCREENING IN THE PRIMARY CARE SETTING

by

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ABSTRACT

The Advanced Practice Nurse is responsible for providing quality care and treatment for the whole person. 3 John 1:2 KJV states, “I wish above all things that you may prosper and be in health, even as your soul prospers” (King James Bible, 2023, para. 2). To prosper and be in health refers to a holistic approach in which the mind, body, and spirit of an individual is considered. Mental health care is an integral part of the holistic health approach.

Mental illness affects approximately one in five adults (52.9 million) in the United States alone (National Institute of Mental Health (NIMH), 2022). Since the COVID-19 pandemic, the rate of individuals suffering from mental illness, specifically anxiety and depression, has dramatically increased by upwards of 25% in the prevalence rate of these disorders (World Health Organization (WHO), 2022). Furthermore, the COVID-19 pandemic complicated the issue of gaps in care within mental health care. Mental health care was rated among the highest and most impacted healthcare services due to disruption in services during the COVID-19 pandemic (WHO, 2022).

The purpose of this DNP project was to incorporate a systematic depression screening utilizing the Patient Health Questionnaire-9 (PHQ-9) in a primary care facility. This implementation increased the number of mental health screenings within a primary care facility to identify individuals with mental health symptoms early and provided individuals with the appropriate mental health resources and continuity of care. Thus, the study utilized a retrospective chart review that assessed the current screening rate within the primary care facility, and the PHQ-9 was implemented within the facility as a measurement-based tool that identified patients with symptoms of depression. The results

showed that the screening rate increased from 0% to 62.5%. Further, 40% of patients scored five or above on the PHQ-9 screening tool which indicated mild and moderate levels of depression. The results of this study indicated that there was a critical need to increase efforts to address depression by utilizing depression screening tools within the primary care setting.

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DEDICATION

First, I would like to thank God for without Him this would not have been possible. He has equipped me with the passion for helping others and granted me with favor that has been necessary to my success. Also, I would like to thank my family and my siblings (Jacqueline, Quincy, Kevin, Anthony, Angela, Pamela, Candice, Cynthia, and Yolanda) for their support and prayers. I dedicate this degree to my parents, Evangelist Rosie L. Moore and the Late Reverend Quincy C. Moore, Jr. Your willingness to sacrifice so much to raise 10 amazing human beings does not go unnoticed or unrewarded. You taught us the importance of keeping God first, getting a good education, loving our neighbors as ourselves, and serving others. With this degree, I promise to emulate all those lessons and principles that you so gracefully passed on to me, and thus be the best healthcare provider as I serve the members of my community.

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CDC	Centers for Disease Control and Prevention
EHR	Electronic Health Record
IRB	Institutional Review Board
NAMI	National Alliance on Mental Illness
NIMH	National Institute of Mental Health
PHQ	Patient Health Questionnaire
PI	Principal Investigator
USM	The University of Southern Mississippi
USPSTF	United States Preventive Services Task Force
WHO	World Health Organization

CHAPTER I – INTRODUCTION

Major depression is a serious, common mental health illness that currently affects 280 million individuals worldwide (WHO, 2023). Major depression is categorized by the following symptoms: sad mood, interruption in sleep habits, loss of interest in once desirable activities, feelings of guilt or hopelessness, low energy, poor concentration and focus, appetite disturbances, psychomotor disturbances, somatic symptoms, and suicidal thoughts (NIMH, 2023). For a diagnosis of major depression, an individual must exhibit five of these symptoms for at least two weeks, and one of those symptoms must be a sad mood or loss of interest in once desirable activities (NIMH, 2023).

Many risk factors may contribute to the development of major depression. These risk factors include abuse (emotional, sexual, or physical), financial stressors, or even individuals with inadequate health insurance and poor healthcare access (Williams et al., 2017). Also, genetic factors, a family history of depression, or having a chronic illness can place one at a higher risk for developing major depression (NIMH, 2023). In addition, studies have shown that traumatic events sometimes trigger mental health symptoms in individuals (Ettman et al., 2020).

Traumatic events in our history or even widespread diseases (e.g., COVID-19) have shown an increase in mental health symptoms of individuals directly and indirectly affected by these occurrences (Ettman et al., 2020). The most recent traumatic event, the COVID-19 pandemic, has negatively impacted many individuals' mental health and wellness and has made some more sensitive to the subject of mental health. The Centers for Disease Control and Prevention (CDC) reports that in the U.S. in June 2020, "31% of respondents reported symptoms of anxiety or depression, 13% reported having started or

increased substance use, 26% reported stress-related symptoms, and 11% reported having serious thoughts of suicide in the past 30 days" (Gordon, 2021, para. 4). This number is drastically increased from the numbers obtained before the pandemic (Gordon, 2021). Further, Vahratian et al. (2021) revealed that between August 2020 through February 2021, adults who reported symptoms of anxiety and depression increased from 36.4% to 41.5%, and 11.7% reported that their mental needs were unmet. Other researchers (Dragioti et al., 2022; Ettman et al., 2020; Leung et al., 2022; Santomauro et al., 2021; Vindegaard & Benros, 2020) have also supported the idea that the COVID-19 pandemic has been a link to many individuals exhibiting mental health symptoms.

Over the past couple of years, there have been local mental health impacts that have been studied within the state of Mississippi. Approximately 431,000 adults in Mississippi have a mental health illness (National Alliance on Mental Illness (NAMI), 2021). In February 2021, 42.7% of adults in Mississippi reported symptoms of anxiety or depression, and 21.1% were unable to get the necessary mental health treatment due to barriers. These barriers included the cost of mental health services, a lack of insurance coverage, insurance limitations on mental health services, etc. (NAMI, 2021). Also, according to the NAMI (2021) assessment, over 2.3 million individuals in the state of Mississippi reside in communities that do not offer enough mental health services even though the demand for mental health services has drastically increased over the past few years.

Researchers suggest that the COVID-19 pandemic contributed to further lengthening the healthcare gap in individuals receiving timely, necessary mental health services (WHO, 2022). These studies and statistics pinpoint the gaps within health care

where the demand for services is high, however, individuals often do not access the appropriate mental health care and treatment. Thus, with the existence of these limitations, many signs and symptoms of mental illness may go unnoticed or dismissed by individuals. From this data, there is a need for additional systematic screening practices within health care, specifically primary care, to improve screening rates and the early identification of individuals who may benefit from mental health services.

Significance

Major depression can negatively impact many facets of one's life causing costly, devastating disabilities. According to Greenberg et al. (2021), major depression has surpassed all other disorders and is now considered the number one cause of disability across the world. The costs related to major depression have risen from $83.1 billion in 2000 to $326.2 billion in 2020 (Greenberg et al., 2021). Individuals may suffer in the areas of economic instability, poor social functioning, and difficulty accessing health care. These impacts further emphasize the importance of instituting systematic depression screening practices within the primary care setting to help identify and lessen the timeframe of untreated depression and its effects.

Economic Instability

Depression can be debilitating and has varying impairment levels based on the individual. These impairments can be a contributing factor to how well the individual can perform activities of daily living and other necessary obligations such as job performance. Major depression can cause individuals to have increased work absences and the inability to effectively perform workplace tasks and responsibilities, thus making it difficult to maintain gainful employment (Greenberg et al., 2021). Professional

impairments usually result in individuals not being able to financially provide for themselves and their families. As well, they may experience hindrances in receiving timely mental health treatment due to the inability to meet the financial expectations of healthcare costs and treatment. In addition, there are other important components such as social aspects that should be considered when addressing major depression.

Social Functioning

According to Knapp and Wong (2020), societal concerns with mental illness exist in a wide scope that encompasses poor awareness, prejudice, and stigma. Poor awareness, discrimination or prejudice, and stigma all play a critical role in individuals and communities dealing with mental illness. Social impairments extend into personal and professional relationships (Kupferberg et al., 2016). An individual with major depression is in a vulnerable state due to difficulties with emotional stability and a diminished ability to decipher risks to their interpersonal safety (Kupferberg et al., 2016). Individuals with major depression may be perceived as difficult to get along with or uninterested; however, these social impacts stem from depressive symptoms such as anhedonia and amotivation (Kupferberg et al., 2016). These impacts may cause individuals with mental illness to avoid social activities within the community leading to poor social interaction, strained relationships, and prolonged isolation (Kupferberg et al, 2016). These social avoidance behaviors may worsen mental health symptoms, cause individuals to remain silent and feel uncomfortable about discussing their mental health concerns and push them to forgo treatment and health care.

Healthcare Access

Many individuals who have gone without treatment are at the highest risk for complications related to major depression. Untreated depression can lead to a decline in quality of life (Williams et al., 2017). Untreated and undiagnosed mental illness can result in a lack of health management and self-care leading to poor health outcomes. Williams et al. (2017) suggests that individuals with depressive symptoms are sometimes overlooked by healthcare professionals who only focus on physical symptoms when those somatic symptoms are linked to masked depression. In a study conducted by Williams et al. (2017), individuals who had the following circumstances were most likely to suffer from undiagnosed depression: insufficient/no health insurance, unemployed, poor medical access, increased personal and professional stressors, history of drug use, or being diagnosed with a chronic health disorder (e.g., asthma). Thus, there is a great need to decrease undiagnosed depression and diminish its costly effects (Williams et al., 2017).

Screening Guidelines

Primary care is one of the most accessed healthcare settings that individuals routinely visit for their healthcare needs. Because primary care is frequented by many individuals, it would be an advantageous setting to incorporate mental health screenings as a routine part of the assessment (Akincigil & Matthews, 2017). Further, according to a study conducted by Akincigil and Matthews (2017), between 8% and 45% of individuals who were depressed and went on to commit suicide had a recent visit with their primary care provider for physical concerns within one month of the suicide attempt. Therefore,

primary care providers play an important role in identifying and addressing depression within the primary care setting.

Due to patients having developed rapport and trust with their primary care providers, the provider can operate in the role of patient advocate by utilizing mental health screenings to early identify individuals who may be silently or unknowingly dealing with mental health symptoms. The U.S. Preventive Services Task Force (USPSTF) suggests within their guidelines that mental health screenings be performed within the primary care setting (Mulvaney-Day et al., 2018). These screenings will allow healthcare providers to early identify and treat mental health illnesses which in turn promotes positive outcomes, controls the cost of healthcare, and lessens the risk of any complications that may arise from comorbidities (Mulvaney-Day et al., 2018). These depression screening guidelines suggest the utilization of the PHQ as a screening tool recommendation (U.S. Preventive Services Task Force [USPSTF], 2023). The USPSTF (2023) also takes special note of certain patient groups (e.g., women, multiracial patients, young adults, etc.) having higher incidences of depression. However, these guidelines do not address the frequency of the screenings. Thus, according to Mulvaney-Day et al. (2018), the rate of mental health screenings within the primary care setting remains low.

Problem Statement

Many studies have documented evidence of the need for implementing systematic mental health screenings to address the rising number of individuals with mental health illnesses and the concern of low mental health screenings within the primary care setting. This study investigated this issue within this region regarding depression as one of the most common mental health illnesses. Among adults (ages 18 and older) in the primary

care setting, will systematic depression screenings at non-acute clinical visits improve early identification of depression when compared to a yearly mental health screening over four weeks?

P Adults 18 and older in Primary Care Setting

I Systematic Depression Screening at non-acute visits

C Yearly mental health screening

O Improve early identification of depression

T Four weeks

Synthesis of Evidence

The purpose of this literature review was to find evidence to answer the question "Among adults (ages 18 and older) in the primary care setting, will systematic depression screenings at non-acute clinical visits improve early identification of depression when compared to a yearly mental health screening over four weeks?" This literature review included the following databases and resources: PubMed, Google Scholar, The USM Library (Ms. Tracy Englert: Science, Nursing, and Health Librarian and Professor), and accompanying websites such as WHO, NIMH, National Institute of Health (NIH), New York State Department of Health, and NAMI. The following key terms were utilized: "Major depression and primary care," "depression screening in primary care and screening," "depression and COVID-19," and "patient health questionnaire." This search yielded many articles related to the keywords. Additional filters of "patient health questionnaire or phq," full text, adults, adults 19+, English language, systematic review, meta-analysis, and peer review were applied. This DNP project included 32 bodies of evidence, which included Level 1 research related to the problem statement.

When considering a systematic depression screening within primary care, there are many facets to be assessed. These facets include the COVID-19 pandemic and its impact on mental health and the barriers to depression screening implementation within the primary care setting. In addition, the accuracy and reliability of the PHQ screening tool and recommendations for utilizing a depression screening within the primary care setting are also important factors to take into consideration.

COVID-19 and Mental Health

The COVID-19 pandemic has been shown to affect the psychiatric status of individuals both directly and indirectly. Vindegaard and Benros (2020) addressed the concern that most studies conducted during the COVID-19 pandemic primarily focused on the medical aspects of the virus with only a few that assessed the psychiatric impacts. The results of their systematic review revealed that higher levels of psychiatric symptoms (e.g., depression, anxiety, etc.) were identified in individuals who had a COVID-19 positive diagnosis, frontline workers, and the public when compared to before the COVID-19 pandemic. The inference from this study was like many other studies in that it identified depression as one of the major psychiatric illnesses identified by participants within the study as it relates to the COVID-19 pandemic.

Further, Ettman et al. (2020) utilized a "Life Stressors Impact on Mental Health and Well-being" questionnaire. Ettman et al. (2020) similarly concluded that there was a higher incidence of depressive symptoms due to COVID-19 in its participants with a rate that was at least three times higher during the COVID-19 pandemic when compared to pre-COVID levels. Within this study, it was also noted that participants who had lower social and economic resources and were exposed to more stressors (e.g., loss of

employment, loss of loved one, financial troubles) were at a higher risk for exhibiting depressive symptoms.

Further, researchers proposed that the aspects of the COVID-19 pandemic such as the uncertainty of the virus, lockdowns, social distancing, virtual learning, business closures, etc. played a major impact on the mental health status of individuals across the world (Santomauro et al., 2021). Santomauro et al. (2021) conducted a systematic review of research data between January 2020 and January 2021 that revealed a global increase in major depression due to the COVID-19 pandemic of 27.6%. In addition, the primary outcomes of a systematic review and meta-analysis identified that from February to July 2020, participants reported elevated levels of anxiety, depression, sleep disturbances, stress, suicidal ideations, and post-traumatic symptoms during the COVID-19 pandemic (Dragioti et al., 2022).

Further, from the findings of the pooled results from a systematic review and meta-analysis conducted by Leung et al. (2022), several inferences can be made. As a result of the COVID-19 pandemic and other similar epidemics, there was a statistically significant burden on mental health globally. Concerning the COVID-19 pandemic, there was an increase in depression, anxiety, and other mental health conditions (Leung et al., 2022). Leung et al. (2022) make recommendations for healthcare professionals to be vigilant and prepared to recognize mental health conditions in their patients. Due to unknowns regarding future pandemics or outbreaks, Leung et al. (2022) suggest that the time is now for mental health preparedness. The researchers from studies like these identify recommendations and the urgent need to improve mental healthcare systems by promoting mental health awareness, increasing screenings, and providing accessible,

prompt management of mental health conditions worldwide and more importantly within the local community. These recommendations must be met with the awareness of the barriers to implementation within the primary care setting that may exist.

Barriers to Implementation

Insurance incentives like the Medicare Shared Savings Program and regulations by the Centers for Medicare and Medicaid Services have encouraged the USPSTF depression screening guidelines to be utilized within the primary care setting (Mulvaney-Day et al., 2018). These regulations provide incentives such as shared savings and reimbursement as an advantage for healthcare facilities to integrate these screenings within the clinical workflow (Mulvaney-Day et al., 2018). However, in a 2017 study, screening for depression within the primary care setting was at 4.2% (Akincigil & Matthews, 2017). Researchers propose that there are barriers that may limit the utilization of a more frequent approach to screening within the primary care setting.

Researchers suggest that healthcare providers in the primary care setting may abstain from conducting mental health screenings within the clinical setting. Some reasons include the primary care provider may not feel as competent with mental health knowledge and skills to identify mental health illnesses, and there may not be policies/protocols in place or knowledge for appropriate mental health resources and referrals (Poghosyan et al., 2019). In addition, Blackstone et al. (2022) identify that primary care visits are compact, and this limits the time available for mental health screenings. Therefore, due to these time constraints, mental health screenings are sometimes not feasible to integrate within clinical practice (Akincigil & Matthews, 2017). A challenge to the successful implementation of depression screenings also

includes screening results not being readily available to providers and the need for additional screenings (Blackstone et al., 2022). Other reasons include that due to COVID-19, some clinics have implemented more telemedicine options, and opportunities are missed during this type of healthcare visit where the provider can appropriately screen for mental health illnesses (Blackstone et al., 2022). In addition, many screening tools can be utilized, and the primary care healthcare provider may not be cognizant of which tools are the most accurate and reliable in meeting their clinical needs (Blackstone et al., 2022).

Accuracy and Reliability of the PHQ

Systematic screening for depression in the primary care setting at every visit can help with the early identification of patients who are at risk or in need of interventions related to the concerns. Many screening tools have been produced and evaluated for this purpose. Individual facilities would need to decide which screening tool is most suitable for their patient population to implement within practice. When choosing a suitable screening tool for primary care utilization, one should consider many factors. The tool should be able to be administered by any healthcare professional and should be capable of being self-administered by the patient (Miller et al., 2021). Screening tools should be precise, practical, easy to utilize, cost-efficient, and easily accessible (Mulvaney-Day et al., 2018). For this study, a common depression screening tool, the PHQ was utilized.

The PHQ has been researched to determine its accuracy and reliability in successfully identifying individuals with depression. The PHQ was identified among 23 other behavioral health screening tools that met criteria for validity, sensitivity, and specificity of greater than 75%, and the implications for practice due to its feasibility of

implementation in the primary care setting (Mulvaney-Day et al., 2018). Miller et al. (2021) further investigated multiple screening tools that were evaluated based on the length of the screening tool, the level of literacy that the tool required, and whether the screening tool was easy to score. The PHQ-9 was found to be the best screening tool for depression in that it ranked superior in its specificity, positive likelihood ratio, a-ROC score, and DOR ratio (Miller et al., 2021). In addition, Costantini et al. (2021) determined the sensitivity and specificity results of the PHQ ranged from 0.80 to 0.99. These findings further confirm the accuracy of this depression screening tool for utilization within the primary care setting. When compared to other similar screening tools, the PHQ-9 was determined to be a brief, accurate screening tool that was easily administered within the primary care setting (Miller et al., 2021).

Recommendation for Use

Researchers revealed that a systematic depression screening within the primary care setting allows for prompt recognition and poses beneficial outcomes for patients when utilized. According to a study conducted by Petrosyan et al. (2017), quality indicators were assessed to evaluate the effectiveness and feasibility of depression screening in primary care. This systematic review yielded 38 articles that identified 53 clinical guidelines and quality indicators for practice within primary care. The quality indicators fell within the categories of structural, process, and outcomes. These indicators addressed access to care, quality improvement, screening, initiation of treatment, etc. (Petrosyan et al., 2017). Although the total number of indicators was low, the identified ones covered a vast range of important clinical guidelines related to appropriately integrating a systematic depression screening into the primary care setting and set a

foundation for more studies to be conducted to further this initiative (Petrosyan et al., 2017). Further, Pfoh et al. (2020) studied this initiative and results indicated that the utilization of the PHQ screening within a large integrated health system resulted in a rate increase of 1.2% of depression diagnosis per month immediately after implementation with 69% of patients with depression receiving timely appropriate mental health treatment within 90 days of diagnosis.

In addition, Siniscalchi et al. (2020) implemented a quality improvement project to enhance the recognition and treatment of depression within a primary care facility. This implementation resulted in a 95.4% screening rate among patients seen in the study's primary care facility. As a result of this implementation, 236 out of 1200 patients were diagnosed with depression and received the necessary mental health treatment (Siniscalchi et al., 2020). Further, there was a decrease in the mean depression score from 14.89 to 9.58. This study's results showed there was a significant decrease in depression severity scores when comparing the follow-up visit to the initial appointment with 23.1% scoring less than five on the PHQ-9 at follow-up (Siniscalchi et al., 2020). Thus, with prompt recognition and the appropriate treatment, these patients benefitted from the systematic depression screening to early identify and manage their depression symptoms.

Rationale

Many change management theories and frameworks have been utilized within health care to allow for the best evidence-based practice to be integrated into the clinical workflow. One of these frameworks is the Knowledge-To-Action framework (see Figure 1) (Wilson et al., 2011). The Knowledge-To-Action framework was introduced in the early 2000s as a framework designed to translate evidence-based knowledge into action

(Wilson et al., 2011). This framework was utilized in the implementation of this DNP project and consists of three primary steps: research, translation, and institutionalization (Wilson et al., 2011).

Research

Research entails a systematic analysis of research studies and clinical data involving an intentional focus on a specific need for change within clinical practice (Wilson et al., 2011). Once questions are asked, a research synthesis takes place that combines research data that is related to the inquiry (Wilson et al., 2011). This step was achieved by conducting a literature review within multiple healthcare databases on depression screening within the primary care setting. Research entailed seeking out the efficacy and validity of the PHQ depression screening tool and the effectiveness of the systematic depression screening implementation when studied across various healthcare facilities within the primary care setting.

Translation

The second step in the Knowledge-to-Action framework is translation. The translation phase has been coined the action phase (Wilson et al., 2011). This step is where the previous synthesis and knowledge gathered becomes a determining factor to decide if there can be a successful translation of the evidence-based research into clinical practice resulting in improved patient-centered care and outcomes (Wilson et al., 2011). The evidence gathered led to the planning phase for the implementation of a systematic depression screening within the primary care setting involving facility stakeholders in the planning process. The planning phase included modifying the information to target the

specific population, evaluating processes for any barriers, and then designing the intervention to meet the needs of the facility and its patients (Wilson et al., 2011).

Institutionalization

The third step in the Knowledge-to-Action framework is the institutionalization step. This step involves the assessment, evaluation, and sustainment of the implementation within clinical practice (Wilson et al., 2011). This step was achieved by implementing the depression screening DNP project within the primary care setting for the four-week period. This step continued during and after the intervention with data analysis, interpretation of study findings, and dissemination of those findings. Further, the Knowledge-To-Action framework can be utilized by all healthcare professionals as a guideline for implementing future evidence-based treatments for their patients.

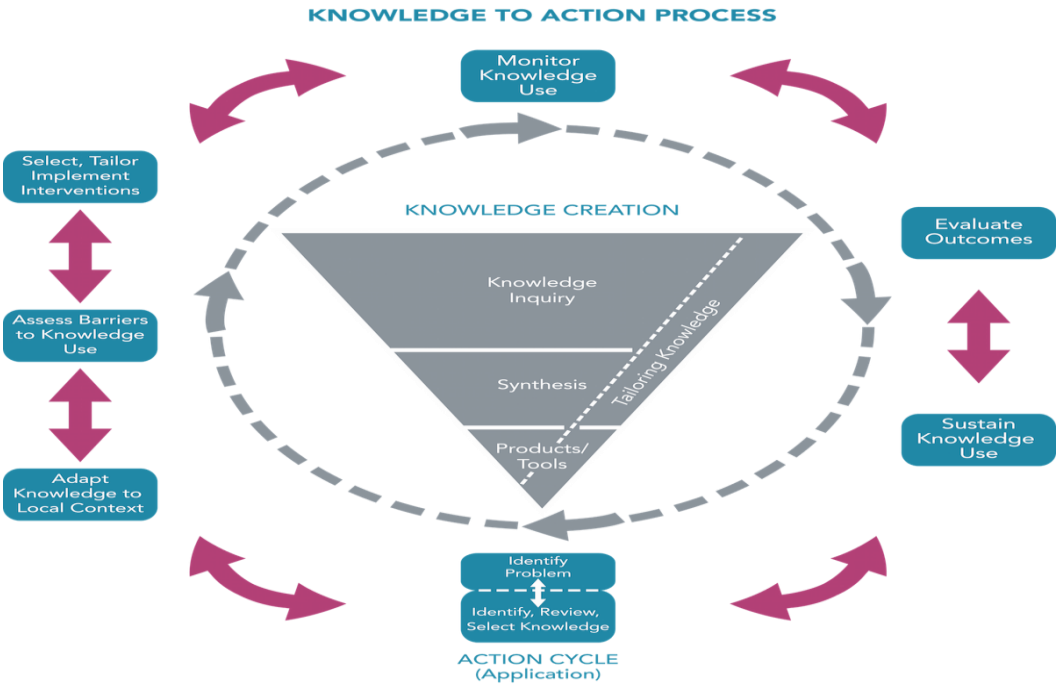


Figure 1. Knowledge-To-Action Process.

(Wilson et al., 2011)

Specific Aims

The purpose of this DNP project was to improve the early identification of depression in patients within the primary care setting and to assess the current screening rate within the facility. The DNP project aim was to incorporate a more routine depression screening within this primary care setting to identify individuals with depressive symptoms earlier with an increase in depression screenings for this facility. Through routine screenings, patients with signs and symptoms of depression are identified and prompt referral and treatment are instituted.

DNP Essentials

Essential I: Knowledge for Nursing Practice

This essential was met by developing the problem statement and conducting a literature review from multiple healthcare databases related to it. As well, this step involved the translation of nursing theories and evidence-based practice within the clinical facility to promote healthy outcomes for the patients (American Association of Colleges of Nursing [AACN], 2021).

Essential II: Person Centered Care

This essential was met by determining health problems within the community. As well, it involved utilizing evidence-based interventions (PHQ screening, educational handout to improve mood) that promoted care for each patient, employing effective communication skills between team members, and ensuring patient engagement within their care. In addition, there was a treatment protocol already in place at this facility to ensure a continuity of care for individuals. With this already established protocol, an

additional treatment plan was provided to give individuals additional resources for continued coordination of health care for the patients (AACN, 2021).

Essential III: Population Health

This essential was met by conducting a needs assessment for the state of Mississippi and our country. From this needs assessment, it was determined that utilizing the PHQ-9 depression screening intervention would help address the mental health needs of this community. As well, the population health essential included collaboration with facility and university stakeholders to address population health within the community. Therefore, this DNP project promotes early identification of depression to ensure prompt treatment and management of this chronic illness (AACN, 2021).

Essential IV: Scholarship for the Nursing Discipline

This essential was met by every component of this DNP project's research methods which included the research inquiry, gathering of research studies related to the problem statement, the translation of evidence-based practice, applying the research into clinical practice, interprofessional collaboration, communicating the findings from the DNP project to the stakeholders, and ensuring that ethical considerations were met and maintained as set by the primary care facility and the USM's Institutional Review Board (IRB) (AACN, 2021).

Essential V: Quality and Safety

This essential was met by collaborating with different healthcare disciplines to improve current healthcare processes. As well, meeting this essential included strategic planning to assess the improvements of the healthcare processes, incorporating outcome

measures to further evaluate processes, and the dissemination of the study's outcomes to appropriate stakeholders (AACN, 2021).

Essential VI: Interprofessional Partnerships

This essential was met by interprofessional collaboration with different healthcare disciplines, patients and families, and community entities and stakeholders (AACN, 2021).

Essential VIII: Informatics and Healthcare Technologies

This essential was met by the utilization of technology in caring for patients and populations (e.g., an educational handout, PowerPoint® presentations, Zoom® sessions) (AACN, 2021).

Essential IX: Professionalism

This essential was met by demonstrating professionalism, ethical behaviors, and integrity in all academic and clinical settings (AACN, 2021).

Essential X: Personal, Professional, and Leadership Development

This essential was met by participating in virtual conferences (e.g., NAMI, University of Mississippi Medical Center, Mental Health of America, Doctor of Nursing Practice), various training courses (e.g., CITI, etc.), and completing continuing education units to allow for personal/professional growth and leadership development (AACN, 2021).

Summary

To effectively address the early identification of major depression, an implementation of a systematic screening was instituted within the primary care setting. By instituting mental health screenings, the primary care provider was able to notice any

cues within the assessment that may have warranted deeper investigation. These screenings raised awareness and aided in comfortability for patients to speak up and have the necessary conversations regarding mental health concerns. In addition, a depression screening within primary care was able to address many vulnerable populations (e.g., elderly patients, postpartum patients, patients without insurance who pay out of pocket, patients who are frightened by the diagnosis of a mental illness and do not seek mental health care, high-risk patients (e.g., those who have experienced a recent loss or new physical health diagnosis), etc.). Lastly, providing this systematic screening service gave patients the needed support in procuring affordable resources to treat their mental health needs and helped to ensure that the members of every community are more mentally healthy.

CHAPTER II – METHODOLOGY

Researchers suggest that a systematic depression screening within primary care allows for prompt recognition and poses beneficial outcomes for patients when utilized. This DNP project of implementing a systematic depression screening within the primary care setting helped to determine the current mental health screening rate. Also, the DNP project's goal was to incorporate a more routine depression screening within this primary care facility to identify patients with depressive symptoms early and connect them with appropriate, timely mental health resources.

Context

Non-Acute Visits. A non-acute visit was a follow-up appointment or wellness appointment.

Patient Health Questionnaire. In screening patients for depression symptoms, several valid screening tools are feasible to integrate within the clinical workflow. For this study, the PHQ-9 was utilized (Appendix D). The PHQ-9 is scored as follows: zero to four (None to Minimal); five to nine (Mild); 10 to 14 (Moderate); 15 to19 (Moderately Severe); 20 to 27 (Severe) (New York State Department of Health, 2018) (Appendix F).

Retrospective Chart Review. The retrospective chart review identified the current screening rate for the primary care clinic by assessing the number of yearly depression screenings that were conducted within the clinic over the past two months of patient visits (Appendix A).

Weekly Documentation Form. The results from the screening were documented on a weekly documentation form. This form was a recording tool for patient demographic information and other pertinent information regarding the screening (Appendix F).

Intervention

The implementation of this DNP project consisted of a four-week timeline. The DNP project was divided into two parts: Pre-Intervention and Intervention.

Weeks One Through Four (Pre-Intervention)

During this time, the study's implementation team attended a DNP project in-service via Zoom®. This in-service included the various components of the implementation phase: the objectives of the study, timeline, the recruitment process for identifying potential participants, obtaining consent, PHQ-9 form, retrospective chart review, weekly documentation form, storage of information, recommended proposed treatment plan, and to answer any questions from the staff.

In addition, during Weeks one through four, the facility secretary began conducting a two-month retrospective chart review (Appendix A) to determine the current mental health screening rate within the clinic. The retrospective chart review was achieved by the secretary adding up the number of yearly mental health screenings that had taken place between January 21, 2023 through March 21, 2023, and adding up the total number of patients who were seen within the clinic during the two months.

Weeks Two Through Four (Intervention)

The intervention phase took place during Weeks two through four. At the beginning of week two, recruitment fliers (Appendix B) were placed in exam rooms of the primary care facility. The intervention phase included the following steps:

1. Every day the nurse identified patients ages 18 and older who presented for a non-acute visit (wellness visit or follow-up appointment) and who did not have a history of mental illness. Once the nurse determined that the patient

met the criteria, the following script to obtain consent from the patient was used. The script was as follows: “In this clinic, we want to focus on your total health, this includes your mood and feelings. Would you mind answering some questions about how you have felt over the last two weeks? There are no anticipated risks. Participation is voluntary and can be terminated at any point. Your provider will notify you of your results during your visit” (Blackstone et al., 2022, p. 402). If the patient agreed to the screening, then the patient was given a consent form to sign (Appendix C).

2. The patient was then given a written PHQ-9 to answer (Appendix D). The patient gave the completed form to the provider to review and score the form. The proposed treatment plan followed recommendations from the New York State Department of Health (2018) with an additional add-on educational handout that was compiled from the National Institute of Health (2021). The proposed treatment plan was as follows: all patients who completed the PHQ-9 were given an education handout (5 Tips to Help Improve Your Mood) (Appendix E). In addition, the following treatment recommendations were advised for patients with a score of five to nine (repeat the PHQ-9 at their follow-up visit); 10 to 19 (repeat the PHQ-9 at their follow-up visit and initiate a treatment plan of either psychotherapy, medication, or referral for mental health services); 20 to 27 (repeat the PHQ-9 at their follow-up visit and immediate initiation of pharmacotherapy and an expedited referral to a mental health specialist for psychotherapy and/or collaborative management).

If warranted and based on the healthcare provider's discretion, then an appropriate treatment plan was initiated for the patient.

3. The nurse then filled out the weekly documentation form (Appendix F). Item 1 asked for the total number of patients who met the inclusion criteria for the study. Item 2 on the form asked for the total number of PHQ-9 screenings that were conducted for the week. Below Item 2 was a chart that asked for additional confidential information for those patients who were given a PHQ-9 screening. Screening results were documented within the patient's Electronic Health Record (EHR).

Study of the Intervention

To effectively evaluate and assess the measures, the nurse filled out a weekly documentation form of the screening results so that the screening was evaluated. Weekly visits were made to the facility by the Principal Investigator (PI) to gather data and answer any questions regarding the DNP project. As data was gathered and reviewed, the DNP project steps were assessed, and the processes were clarified as needed.

Population of Interest

This DNP project took place in a primary care facility in Jackson, Mississippi that has been operating for approximately 12 years. Within this primary care facility, there are 10 staff members which include the following healthcare disciplines: Medical doctor (facility owner and Medical Director), licensed dietitian, nurse, certified health technician, licensed practical counselor, and secretary. This primary care facility serves patients of all ages from around Jackson and the surrounding areas. The population of interest for this DNP project had the following inclusion and exclusion criteria:

Inclusion:

- Adults ages 18 years and older: This DNP project was designed for patients ages 18 years and older.
- Non-Acute Visits: Patients who presented to the clinic for non-acute visits were included in the study. This category included follow-up appointments and wellness visits.

Exclusion:

- Younger than 18 years old: Patients younger than 18 years old were excluded from this study.
- Mood disorder diagnosis and prior history of a mental health illness: Patients already diagnosed with a mood disorder (depression, bipolar disorder, etc.) and had a prior history of a mental health illness were excluded from the study.

Measures

When utilizing the implementation of a two-month retrospective chart review and a systematic depression screening within this primary care facility, such outcome measures would address the following:

- The number of depression screenings conducted during implementation versus the current screening rate measured by a two-month retrospective chart review.
- The number of individuals with signs and symptoms of depression identified who do not already have a diagnosed mood disorder.

To address these measures, the appropriate instruments for data collection are a key component. The PHQ-9 is a common depression screening tool utilized to measure the presence and absence of depression symptoms as well as the severity of those symptoms. Across research articles, the PHQ-9 has been ranked superior as a screening tool to determine depression symptoms and severity in patients, and it is recommended by the USPSTF (USPSTF, 2023). The PHQ-9 screening form required no special permissions to utilize as a screening tool (Pfizer, 2021).

Along with the PHQ screening tool, a retrospective chart review form and a weekly documentation form were utilized. The retrospective chart review measured the number of depression screenings conducted within the two months before the study. The weekly documentation form was utilized to document additional data to assist with the statistical analysis and to assess if objectives were met. This additional data consists of the total number of patients seen for the week and the total number of PHQ-9 screenings conducted. From the PHQ-9 screenings, the following data was collected: patient initials, age, gender, race, PHQ-9 score, history of mood disorder (depression, bipolar depression) or prior mental health history, date of last mental health screening, if the educational handout was given (5 Tips to Help Improve Your Mood), and the treatment that was initiated with the suggested follow-up timeframe.

Analysis

The outcomes of this DNP project were measured and studied using quantitative analytical methods. Descriptive statistical methods were employed to identify the screening rate and number of individuals with positive PHQ-9 scores in percentages. The frequency was calculated of the number of individuals who scored within each range per

cut-off score (none, mild, moderate, moderately severe, severe) of the PHQ. The central tendency was calculated based on the sample as a whole and then broken down to analyze per gender type.

To determine the current screening rate, a two-month retrospective chart review was conducted to assess the number of screenings conducted within the timeframe of January 21, 2023 through March 21, 2023. Quantitative data was gathered for the number of screenings that were conducted divided by the total number of patients seen in the clinic during the timeframe (screening rate = x (number of screenings)/ y (number of patients seen in clinic)). To determine the DNP project screening rate, the number of screenings that were conducted was divided by the total number of patients seen in the clinic during weeks two through four who met the qualifications for the study (DNP project screening rate = x (number of screenings)/ y (number of eligible patients seen in clinic)). Also, to determine the rate for positive screening results (individuals scoring five and above on the PHQ-9), data was gathered to determine the number of individuals whose screenings were positive divided by the total number of patients who were screened during the study (positive screening rate = x (number of positive screenings)/ y (number of individuals screened)).

Ethical Considerations

In research, it is important to follow ethical principles to ensure the safety of the patients. As current regulations exist in health care, patients who took part in the screenings were assured that there would be confidentiality and privacy of their screening results as highlighted in their consent form. According to the USPSTF guidelines, healthcare facilities must have a treatment protocol in place beforehand that will ensure

individuals receive adequate support, timely referral, appropriate follow-up, and continuity of care (Maurer et al., 2018). This facility already had an established treatment protocol in place and routinely referred patients to both psychiatry and psychology as needed. In addition to the facility protocols, standardized treatment protocols were added in the event an individual's screening results warranted further evaluation or referral.

The primary care facility followed the protocols set forth by the USM IRB and the facility nurse and PI participated in the CITI training requirement. All confidential information was de-identified and no identifying information was included. Study results from the retrospective chart review, informed consent, and weekly documentation forms were locked up and secured by the facility DNP project team on-site and within the PI's home office according to the USM IRB's protocols and regulations to ensure patient privacy and maintain confidentiality. The study results once analyzed were taken back to the facility for shredding. A letter of support from the primary care facility and approval from the USM IRB (Protocol #23-0144) was obtained (Appendix G).

Summary

The goal of this DNP project was to determine the current screening rate for this facility and to utilize the PHQ-9 screening tool to early identify patients suffering from depressive symptoms and appropriately connect them to timely mental health resources and treatment. In addition, the DNP project aimed to help reduce the stigma related to mental illness and encourage more communication regarding mental health in the primary care setting. Therefore, creating an environment within this facility that regularly encourages these conversations to effectively serve individuals within this community.

CHAPTER III – RESULTS

This DNP project of implementing a systematic depression screening within the primary care setting to promote early identification of depression was instituted in two phases. Phase one (Weeks one through four) consisted of a DNP project in-service via Zoom® and a retrospective chart review. The in-service included training the facility staff members involved in the DNP project regarding the various components of the implementation phase. Also, during this phase, the facility's secretary began conducting a two-month retrospective chart review to determine the current screening rate within the clinic. Phase two (Weeks two through four) involved the implementation of the PHQ-9 screening tool with the nurse serving as the study's recruiter and data collector.

Retrospective Chart Review Results

One aspect of this DNP project was to determine the current screening rate of the primary care clinic versus the DNP project's screening rate for patients who met the criteria for the study. The retrospective chart review was a two-month review for the time of January 21, 2023 through March 21, 2023. During this two-month timeframe, there were 993 patient appointments which included all visit types (acute, wellness, follow-up, and telehealth appointments). In addition, there were no depression screenings utilizing any depression screening tool during this time. In total, during the DNP project's study period (Weeks two through four), 16 patients met the criteria for the study with 10 patients consenting to participate in the DNP project (see Figure 2). Furthermore, this DNP project resulted in a screening rate of 62.5%.

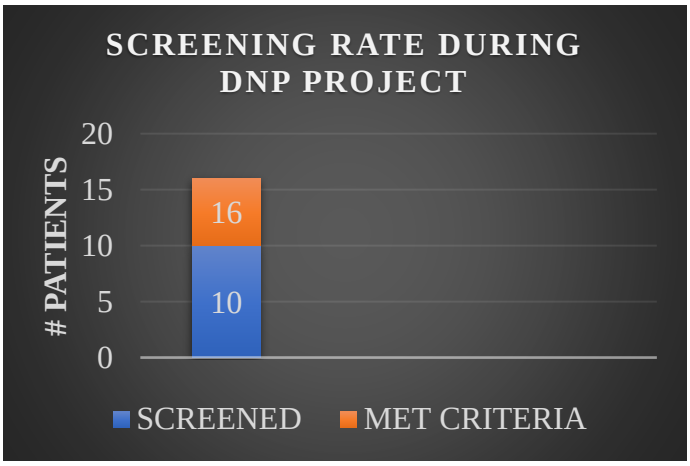


Figure 2. Screening Rate During DNP Project.

PHQ-9 Results

The USPSTF depression screening guidelines suggest the utilization of the PHQ-9 as a screening tool recommendation (USPSTF, 2023). The PHQ-9 screening tool is a measurement-based tool to identify patients with symptoms of depression. This DNP project followed those guidelines and employed the PHQ-9 as the depression screening tool. Ten patients met the criteria and consented to the study. The demographic profile of those patients according to race and gender is as follows: 100% of the consenting patients were African American with a gender breakdown of 60% males and 40% females. The following percentages show the patients according to their age range: 20 - 29 y/o (10%); 30 - 39 y/o (10%); 40 - 49 y/o (20%); 50 - 59 y/o (30%); 60 - 69 y/o (20%); and 70 - 79 y/o (10%) (see Figure 3). The ages of the 10 patients were males of 26, 44, 50, 52, 58, and 77 years old and females of 33, 42, 63, and 69 years old.

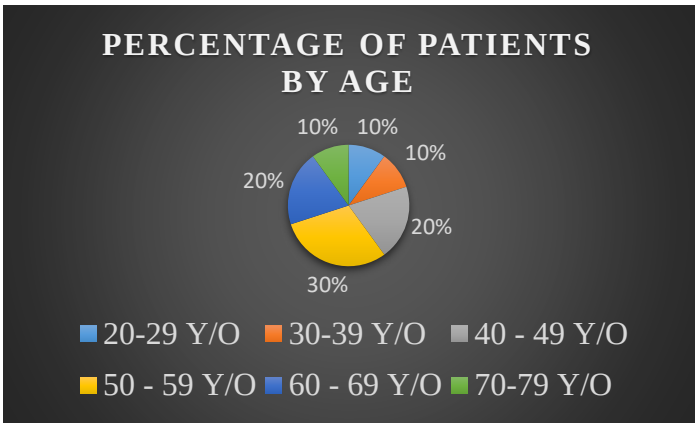


Figure 3. Percentage of Patients by Age.

As a measurement-based tool, the PHQ-9 scores can be recorded and compared over time to reassess symptom improvement. The following patient scores were reported per category: none to minimal (zero to four): 60%; mild (five to nine): 10%; moderate (10 to 14): 30%; and no scores fell within the moderate/severe (15 to 19) and severe (20 to 27) categories. The frequency of the PHQ-9 scores per gender was as follows: none to minimal (zero to four) were males at 5/6 and females at 1/6; mild (five to nine) were males at 1/1; and the highest PHQ-9 scores of moderate (10 to 14) were all females at 3/3 (see Figure 4).

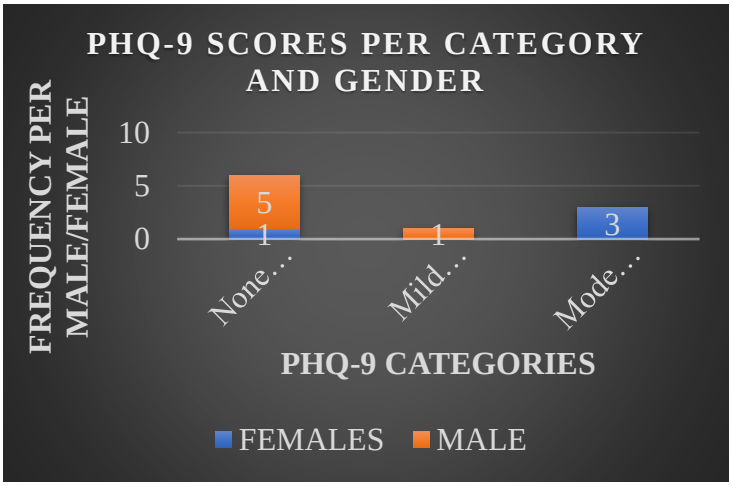


Figure 4. PHQ-9 Scores per Category and Gender.

Further breakdown of the PHQ-9 scores included male PHQ-9 scores of zero, two, two, four, four, and nine (see Figure 5) and female PHQ-9 scores of three, 10, 10, and 12 (Figure 6). In addition, the rate for positive screening results was determined by the patients who scored five and above on the PHQ-9. The positive screening rate was 40%. After further investigation into their symptoms, the healthcare provider decided on the best course of action for those patients who scored on the higher end of the reported PHQ-9 scores which included scheduling a follow-up visit to reassess in a couple of months.

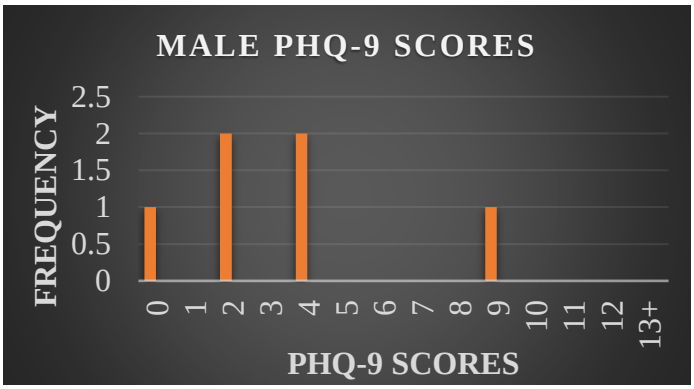


Figure 5. Male PHQ-9 Scores.

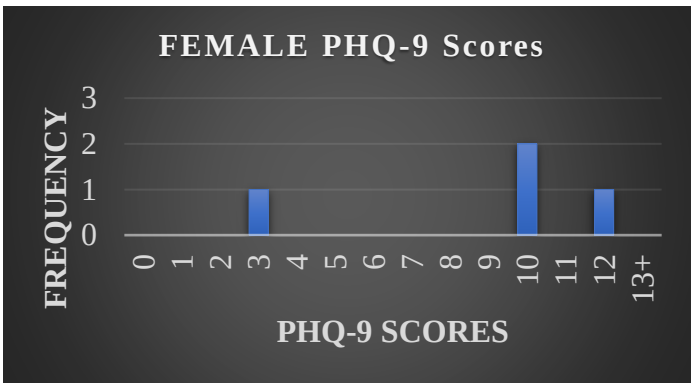


Figure 6. Female PHQ-9 Scores.

In addition, the central tendency of the PHQ-9 scores was included as a part of the descriptive statistical analysis. The central tendency of the PHQ-9 scores (Table 1) was

analyzed according to the total DNP project and then broken down per gender. For the entire study, there was a sample size of 10 patients, a range of 12, a mean of 5.6, a tri-modal value of numbers of two, four, and 10, and a median score of four. The females within the study had a sample size of four, a range of nine, a mean of 8.75, a mode of 10, and a median score of 10. The males involved in the study had a sample size of six, a range of nine, a mean of 3.5, a bi-modal value of numbers two and four, and a median score of three.

Table 1

Central Tendency for Study

	N	**Range**	**Mean**	**Mode**	**Median**
All Patients	10	12	5.6	2, 4, 10	4
Females Only	4	9	8.75	10	10
Males Only	6	9	3.5	2, 4	3

Summary

Major depression can negatively impact many facets of one's life causing costly, devastating disabilities. The rising prevalence of depression both nationally and locally speaks to the urgency of interventions such as systematic depression screening within more accessed healthcare systems like primary care facilities. These screenings offer an additional service in helping to meet the needs of patients with mental illness. Thus, the results of this study indicate the screening rate within this primary care facility improved to 62.5% with a positive screening rate of 40% (patients who scored five and above on the PHQ-9 screening tool). Further, these results support the suggestions from researchers in similar studies who recommend the implementation of systematic depression screenings within the primary care setting. These screenings promote prompt recognition

and treatment of depression symptoms and pose beneficial outcomes for patients when utilized.

CHAPTER IV – DISCUSSION

This DNP project's aims were accomplished in that the DNP project identified the rate of depression screenings conducted during the implementation phase versus the current screening rate measured by a two-month retrospective chart review. The DNP project also identified patients with signs and symptoms of depression, who did not already have a diagnosed mood disorder. Systematic screening for depression in the primary care setting is advantageous in that it helps in the early identification of patients who are at risk or in need of mental health interventions related to the concerns. Further, this DNP project reiterates the need to improve mental healthcare systems by promoting mental health awareness, increasing screenings, and providing accessible, prompt management of mental health conditions worldwide and within local communities.

Key Findings

The implementation of a systematic depression screening is essential in increasing mental health screenings within primary care settings to raise screening rates and to identify individuals with mental health symptoms early. The result of this study shows that the screening rate within the facility was 0% two months before the study. In comparison, during the study, the screening rate for those who qualified for the study increased to 62.5%. Further, this study identified 40% of patients who scored a five or above on the PHQ-9 screening tool, indicating mild and moderate levels with females having the highest scores. This finding of women having the highest PHQ-9 scores supports the information from the USPSTF (2023) that women are one of the special groups with a higher incidence of depression. These patients will be reassessed and

followed closely by the primary care facility, with plans to provide appropriate mental health care if warranted by the healthcare provider.

Strengths and Limitations

One strength of this study was that the screening rate for depression improved at this primary care facility. This study also included an educational handout (5 Tips to Help Improve Your Mood) for all consenting patients for future reference to help improve mental health. One limitation of this study was the small sample size (N = 10). In the primary care setting, patient appointment types (e.g., wellness, acute, follow-up, telehealth) vary week by week. Thus, during this timeframe, there were only 16 patients who met the criteria for the study. In addition, the time of three weeks for the screening portion of the intervention reduced the number of potential patients to be considered for the study. Lastly, the inclusion criteria of in-person non-acute appointments targeted a smaller patient pool with no provisions made for acute or telehealth appointments.

Implications for Future Practice

Oftentimes, physical health takes precedence while mental health is overlooked. This precedence may be related to several reasons, such as the stigma and discrimination that may exist concerning being labeled as having a mental health illness. Whatever the case, this does not negate the importance of total wellness which incorporates mental well-being. Further, this study and studies alike speak to the urgent need to improve mental healthcare systems. The results of this study support the critical need to increase efforts to address depression by utilizing depression screening tools within the primary care setting to fill any healthcare gaps that may exist. For example, this can also be accomplished by promoting mental health awareness and providing accessible, prompt

management of mental health conditions within the primary care setting using mental health liaisons. The liaisons would visit primary care providers to promote mental health awareness and screenings. The liaisons would provide a mental health toolkit that offers evidence-based screening tools for utilization and resources for affordable mental health care within the local and nearby communities.

Summary

Major depression is a common psychiatric disorder that affects many individuals of all ages and races. Major depression is a serious health concern with a prevalence that is steadily increasing. Further, a systematic depression screening within the primary care setting can address the mental health needs of many vulnerable populations across their lifespan (e.g., adolescents, college students, elderly patients, postpartum patients, high-risk patients) (e.g., those who have experienced a recent loss or new physical health diagnosis, etc.).

Primary care providers must be cognizant of the current USPSTF screening guidelines and institute these within their clinical workflow. Future adherence to these guidelines from the primary care community supports the aims of this DNP project with the opportunity to early identify depression in patients within the primary care setting and to increase the national depression screening rates for primary care. Through routine screenings, patients can garner the needed support in obtaining affordable resources to treat their mental health needs, leading to positive health outcomes, and aiding in minimizing the overall burden of the disease.

APPENDIX A – Retrospective Chart Review

Retrospective Chart Review

(Secretary Use Only)

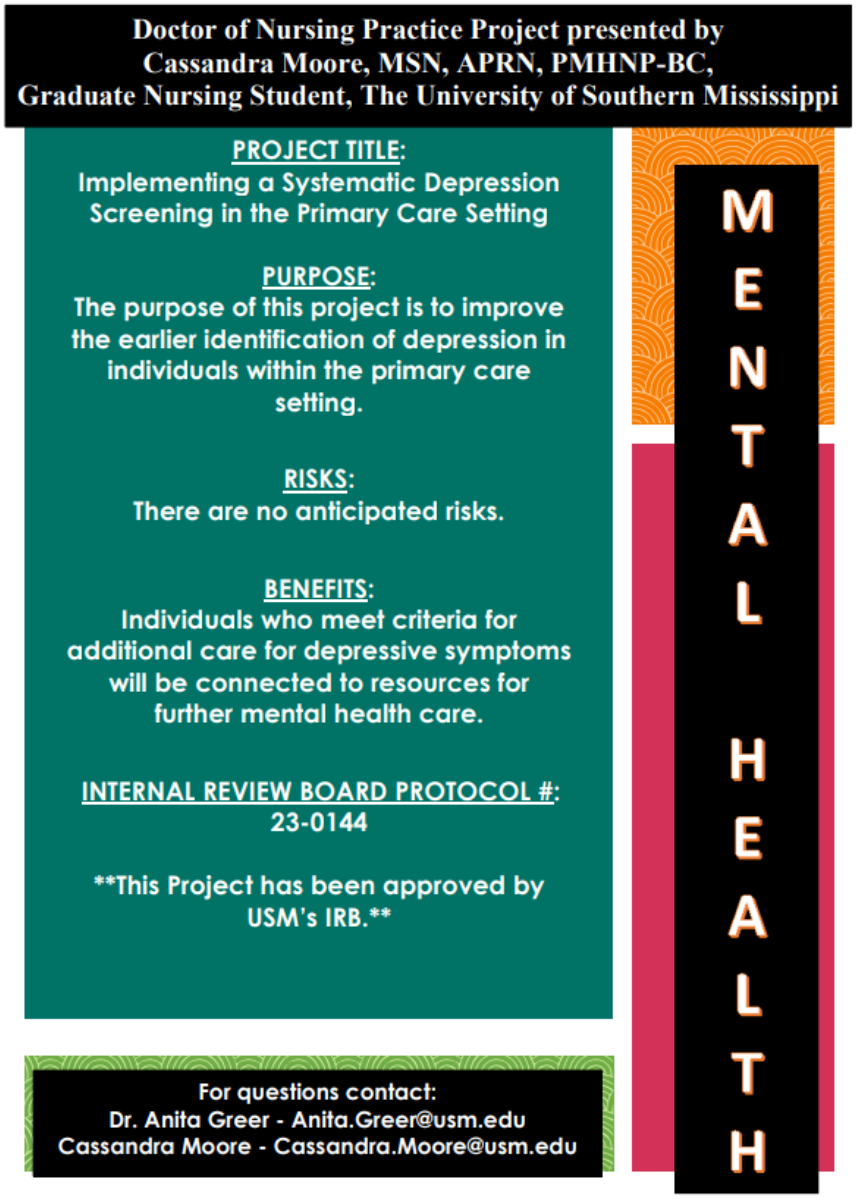
From _____ to _____

(Beginning Date) (Ending Date)

Total # of Yearly Mental Health Screenings Conducted_____

Total # of Patients Seen _____

APPENDIX B – Recruitment Flier



APPENDIX C – Consent Form

Consent Form for participation in the Doctor of Nursing Practice Project
presented by **Cassandra Moore, MSN, APRN, PMHNP-BC,**
Graduate Nursing Student, The University of Southern Mississippi

The project will consist of a Patient Health Questionnaire (a 9-question survey about your feelings and emotions). Then you will be given a handout that will give you tips to help improve your mood.

Your participation is optional. There are no penalties involved for non-participation. There are no incentives offered for participating. There are no risks involved. This project has the approval and support of the project committee.

This project has been reviewed by the University of Southern Mississippi's Institutional Review Board Human Subjects Protection Review Committee, Protocol # 23-0144, which ensures that research projects involving human subjects follow federal regulations. Any questions or concerns about rights as a research subject should be directed to the chair of the Institutional Review Board, The University of Southern Mississippi, 118 College Drive #5147, Hattiesburg, MS 39406-0001, (601) 266-5997. The results of this study will be made available upon completion of the project.

You are consenting to participate in the Doctor of Nursing Practice project presented by Cassandra Moore from The University of Southern Mississippi, and she can be contacted at Cassandra.Moore@usm.edu. The investigators on this evidence-based practice clinical inquiry involved with this study are myself (Cassandra Moore) and my Chair, Dr. Anita Greer who can be contacted at Anita.Greer@usm.edu. We will have access to the data. Data will be reported as group data. In any reports written about this study, no identifying information will be included. Your results will be confidential. No individual responses will be reported.

Your signature below is only used for proof of consent for participation.

Signature _____

Date _____

APPENDIX D – Patient Health Questionnaire 9

Name _____ Date _____

PATIENT HEALTH QUESTIONNAIRE-9 (PHQ-9)

Over the last 2 weeks, how often have you been bothered by any of the following problems? *(Use "✔" to indicate your answer)*	Not at all	Several days	More than half the days	Nearly every day
1. Little interest or pleasure in doing things	0	1	2	3
2. Feeling down, depressed, or hopeless	0	1	2	3
3. Trouble falling or staying asleep, or sleeping too much	0	1	2	3
4. Feeling tired or having little energy	0	1	2	3
5. Poor appetite or overeating	0	1	2	3
6. Feeling bad about yourself — or that you are a failure or have let yourself or your family down	0	1	2	3
7. Trouble concentrating on things, such as reading the newspaper or watching television	0	1	2	3
8. Moving or speaking so slowly that other people could have noticed? Or the opposite — being so fidgety or restless that you have been moving around a lot more than usual	0	1	2	3
9. Thoughts that you would be better off dead or of hurting yourself in some way	0	1	2	3

FOR OFFICE CODING 0 + _____ + _____ + _____

=Total Score: _____

Pfizer (2021)

Developed by Drs. Robert L. Spitzer, Janet B.W. Williams, Kurt Kroenke, and colleagues, with an educational grant from Pfizer Inc. No permission required to reproduce, translate, display, or distribute.

APPENDIX E – Education Handout

5 Tips To Help Improve Your Mood

BE POSITIVE

Practice positive self-thought. Instead of saying "I can't do this" or "I always make mistakes" say "I can do this" or "I got this."

GET ACTIVE/EAT HEALTHY

Exercise helps to boost chemicals in your brain that helps you to feel good. Make sure to eat a balanced diet that includes fruits and vegetables to increase your energy and to improve your focus.

GET YOUR REST

We often don't get enough sleep at night. Poor sleep affects both physical and mental health. Getting quality sleep helps to improve your focus, increases your reflexes, and helps you to feel better.

DO THINGS THAT YOU ENJOY/SELF-CARE

Participate in positive, healthy activities that you enjoy. It may be listening to music, sitting outside in the sun, reading a book, or spending time with family or friends.

REDUCE STRESS

Stress can be harmful to your mental and physical health. Identify ways to manage stress in your life. Remember it is ok to ask for help.

List some things you can do this week to improve your mood.

1._____

2._____

3._____

4._____

5._____

INTERNAL REVIEW BOARD PROTOCOL #: 23-0144

Reference: National Institute of Health (2021)

****For more information, contact your Healthcare Provider****

Produced by: Cassandra Moore, MSN, APRN, PMHNP-BC
Graduate Nursing Student, The University of Southern Mississippi

APPENDIX F – Weekly Documentation Form

Weekly Documentation Form for Staff Members
(Nurse Use Only)
Dates _____ to _____

1. Number of patients seen this week in clinic that met criteria _____
2. Number of Patient Health Questionnaires – 9 (PHQ-9) conducted _____

**Identifiable information for the above individuals given a PHQ-9
(See first line that is highlighted for an example)

Name (Initials)	Race	Gender	Age	PHQ-9 Score	History of mental illness or mood disorder (depression, bipolar disorder, etc.)? Y/N	Date of Last Mental Health Screening	Educational Handout Given? (5 Tips to Help Improve Your Mood) Y/N	Treatment Initiated and follow-up recommendation
J. D.	*AA*	*MALE*	*25*	*5*	*N*	*02/20/22*	*Y*	*WILL CONTINUE TO MONITOR F/U 2 months*

PHQ-9 Score	Depression Severity	Proposed Treatment
0-4	None-minimal	Educational Handout on improving mood
5-9	Mild	Educational Handout on improving mood; repeat PHQ-9 at follow-up
10-14	Moderate	Educational Handout on improving mood; repeat PHQ-9 at follow-up and Initiate Treatment Plan (psychological treatment - psychotherapy or medication; or mental health referral for psychotherapy/antidepressants)
15-19	Moderate – Severe	Educational Handout on improving mood; repeat PHQ-9 at follow-up and Initiate Treatment Plan (psychological treatment – psychotherapy or medication; or mental health referral for psychotherapy/antidepressants)
20-27	Severe	Educational Handout on improving mood; repeat PHQ-9 at follow-up and Immediate initiation of pharmacotherapy and expedited referral to a mental health specialist for psychotherapy and/or collaborative management

APPENDIX G – IRB Approval Letter

Office of Research Integrity

THE UNIVERSITY OF SOUTHERN MISSISSIPPI

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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:	23-0144
PROJECT TITLE:	Implementing a Systematic Depression Screening in the Primary Care Setting
SCHOOL/PROGRAM	Systems Leadership & Health Outcome
RESEARCHERS:	PI: Cassandra Moore Investigators: Moore, Cassandra~Greer, Anita~
IRB COMMITTEE ACTION:	Approved
CATEGORY:	Expedited Category
PERIOD OF APPROVAL:	03-Mar-2023 to 02-Mar-2024

Donald Sacco Jr.

Donald Sacco, Ph.D.
Institutional Review Board Chairperson

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