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Encouraging Medication Compliance by Implementing a Medication Adherence Tool

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ENCOURAGING MEDICATION COMPLIANCE BY IMPLEMENTING A MEDICATION ADHERENCE TOOL

by

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ABSTRACT

Medication non-adherence has been a common and challenging problem in health care, especially among mental health patients. Studies show medication compliance among psychiatric patients has been at a lower rate than patients with physical conditions. Non-compliance with medications has been one of the considerable contributions to rapid psychiatric hospital readmission. Rapid readmissions have been costing health care billions of dollars annually. The stigma behind mental health has a large contribution to why mental health patients are non-compliant with their psychotropics. Utilization of the Medication Adherence Rating Scale (MARS) on a patient to evaluate the patient's willingness and ability to take medicine daily will improve medication adherence in the psychiatric community. Providers will have a better understanding of the patients' need for education on the importance of medication compliance. Implementing the MARS will improve outcomes in the psychiatric community.

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DEDICATION

First and foremost, I would like to give thanks to Jesus Christ for his grace and mercy. He has given me strength and courage throughout all the challenging moments in this DNP project.

To my son Khaza and my special son Dekevion, I am so grateful God saw fit to bless me with the gift of being your mother. You encourage me to be stronger and better. I love you more than life itself. To my mother Jeanette, thank you for being supportive and listening. I would also like to thank my sister, Carolyn, for stepping in to assist where needed in my absence to further my career. I must also thank my brother, Brian, and friend, Arlene, for their words of encouragement during those times I felt defeated. Finally, I must thank all my friends and family for their unwavering support and belief in me. I dedicate this degree to you all.

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DNP	Doctor of Nursing Practice
MARS	Medication Adherence Rating Scale
PDSA	Plan Do Study Act Model
Post-MARS	Post-Medication Adherence Rating Scale
Pre-MARS	Pre-Medication Adherence Rating Scale
RCT	Randomized Controlled Trial
USM	The University of Southern Mississippi

CHAPTER I INTRODUCTION

Encouraging medication adherence has been a vital component in treating psychiatric patients, and by implementing the medication adherence tool we were able to get a better understanding of each individual's attitude towards adherence towards psychotropics. Medication non-adherence leads to rapid readmissions of psychiatric patients, which tend to be costly and disruptive not only to the victims but also to family members. Care providers and patients can be demoralized with frequent readmissions. Hence, there has been a need for intervention, such as promoting medication adherence. Notably, non-adherence to medication has been a complex behavior that can occur intentionally or unintentionally. Patients may decide not to follow recommendations, or they are willing to adhere but lack the capability or the resources. To solve this, the medication adherence tool, which was an intervention describing dimensions including medication adherence behavior, attitude towards taking medication, and the negative side effects and attitudes patients have towards psychotropic medications, can be reliable (Owie et al., 2020). The medication adherence rating scale (MARS), a 10-item self-report adherence scale, has been crucial in this case as it assesses both intentional and nonintentional adherence to medication (Owie et al., 2020). The tool was specifically designed to solve the limitations of self-reporting tactics that minimize social desirability bias and set the pace for patients who consider non-adherence normal. The tool has a response scale that enhances the categorization of patients according to their position available in the adherence dimension instead of the yes/no high/low basis. As a result, there was the surety of more details and differentiation between the individuals.

Problem Statement

Promoting medication compliance in mental health has been a critical component of serving the psychiatric community. Medication non-compliance leads to rapid hospital readmission; these high readmission rates then lead to increased healthcare spending, with estimates indicating that frequent hospital patients cost health services around 2.3 billion annually (Tadros et al., 2013). Shameer et al. (2018) reported that worldwide, over 14% of individuals hospitalized for psychiatric reasons have readmission to the hospital within 30 days after discharge. Rapid readmissions highlight the need for hospitals to assess and enhance their current care transitional practices to increase the likelihood of patients remaining engaged in treatment post-discharge (Benjenk & Chen, 2019).

Improving care transition practices involves various factors, such as providing adequate support services and educating patients about the importance of follow-up care. Moreover, ensuring patients receive personalized care plans and are well-informed about their medications can help prevent relapses and readmissions (Benjenk & Chen, 2019). In addition, hospitals can leverage technology to enhance communication between patients and providers, including telehealth services that provide remote consultations and check-ins. Such measures could improve the quality of care and reduce the risk of readmissions by promoting medication compliance.

PICOT

This DNP project utilized the Population, Intervention, Comparison, Outcome, and Time formula known as the PICOT to formalize the question proposed. In patients with mental health disorders implementing a medication adherence tool to encourage medication compliance compared to no use of the medication adherence tool improves

medication compliance within 21 days. Implementing the Medication Adherence Rating Scale will be of great advantage in encouraging medication compliance resulting in a higher quality of life for psychiatric patients.

Literature Review

A search was performed in the following databases: Google Scholar, NIH, and PsycINFO (APA PsycNET). A survey was taken from sixty-three articles to get an appropriate response to the PICOT question presented in this DNP project. In utilizing evidence-based practice, the stronger the evidence, the better the chances of these interventions helping to encourage medication compliance by utilizing the medication adherence tool. After careful review, thirty-two articles were chosen to help with the solution of the PICOT presented.

Hospital readmission has been an important indicator of medication non-compliance by psychiatric patients. A review of multiple articles shows several factors that contribute to psychiatric readmission rates. These contributing factors include medication non-adherence, substance use disorder, length of hospital stays, lack of follow-up care, insufficient social support, and medical comorbidities (Owusu et al., 2022). Thus, opportunities to explain to patients the value of pharmacotherapy in psychiatric treatment and to encourage medication compliance may become more important than ever before (Cramer & Rosenheck, 1998).

The proposed PICOT question aims to encourage medication compliance in psychiatric patients by implementing a medication adherence tool versus not implementing a medication tool. Several studies have explored interventions that can help promote medication compliance in psychiatric patients. One study found evidence

showing how adherence can be a property of the type of medication and how the same patient can adhere to a regimen for a given drug but not for others (Marrero et al., 2020). Another study found that medication adherence and compliance with follow-up appointments were protective factors that increased the likelihood of medication compliance (Del Favero et al., 2020).

The Medication Adherence Rating Scale

Medication non-adherence has been a common and challenging problem in health care, especially among mental patients. Medication non-adherence has been a significant concern for healthcare practitioners because it can result in poor treatment outcomes, increased healthcare expenses, and worse patient quality of life. To successfully address this issue, healthcare providers need accurate techniques for assessing and treating medication adherence. The Medication Adherence Rating Scale (MARS) appears as a useful tool for gaining a thorough and nuanced picture of patients' medication adherence practices. Obtaining critical information from patients requires MARS and can be convenient for clinical practice. The tool enhances accuracy in almost all the conditions to be detected. The tool has items describing various non-adherence traits where the items are framed in a nonthreatening and nonjudgmental way to influence adherence. Care providers and patients can be demoralized by the frequent readmissions. Hence, there has been a need for intervention, including medication adherence. Notably, non-adherence to medication has been a complex behavior that can occur intentionally or unintentionally. Patients may decide not to follow recommendations, or they are willing to adhere but lack the capability or the resources.

To solve this, the medication adherence tool, which was an intervention describing dimensions including medication adherence behavior, attitude towards taking medication, and the negative side effects and attitudes patients have towards psychotropic medications, can be reliable. According to Owie et al. (2020) medication adherence rating scale (MARS), a 10-item self-report adherence scale was crucial in this case as it assesses both the intentional and nonintentional adherence to medication. Owie et al. (2020) also acknowledged that the tool was specifically designed to solve the limitations of self-reporting tactics that minimize social desirability bias and set the pace for patients who consider non-adherence normal. MARS has a response scale that enhances the categorization of patients according to their position available in the adherence dimension instead of the yes/no high/low basis.

Development and Structure of the MARS

In this section, we explore deeper into MARS, investigating its origins, structure, psychometric features, and the numerous benefits it brings to the world of health care. The Medication Adherence Rating Scale (MARS) was created to address the shortcomings of existing self-report medication adherence metrics. MARS is a 10-item self-report questionnaire developed by Thompson et al. (2000) to examine adherence behaviors in patients receiving long-term drugs, particularly psychiatric medications. MARS was developed using thorough psychometric testing and validation, making it a reliable tool for healthcare practitioners. MARS was structured in such a way that it captures both intentional and unintentional components of adherence behaviors. The MARS consists of a series of questions addressing several aspects of medication

adherence, including patients' attitudes toward taking medication, adherence behavior, and concerns about potential side effects (Owie et al., 2018).

Psychometric Properties of MARS

MARS's outstanding psychometric qualities are one of its strengths. The MARS has undergone thorough validation processes to assure its dependability and Validity in assessing medication adherence. Several major psychometric properties contribute to its clinical utility. Internal Consistency is one in which the MARS has a high level of internal consistency, meaning that its items are closely related and consistently measure the same underlying construct (Thompson et al., 2000). Test-Retest Reliability in which the MARS has shown strong test-retest reliability, meaning that it produces consistent findings when given to the same individuals at different times (Thompson et al., 2000). Convergent Validity is another in which MARS has been proven to correlate well with various measures of adherence, indicating its Validity as a medicine adherence measure (Owie et al., 2018). Discriminant Validity shows factor structure that enables the assessment of multiple elements of adherence behavior, such as intentional non-adherence (e.g., intentionally missing doses) and inadvertent non-adherence (e.g., MARS differentiates between adherent and non-adherent patients, suggesting its ability to discriminate effectively between different levels of adherence (Owie et al., 2018). Lastly, Sensitivity to Change in which MARS has shown sensitivity to changes in medication adherence over time, making it a useful tool for tracking adherence progress (Owie et al., 2018).

MARS Benefits in Healthcare Practice

The Medication Adherence Rating Scale (MARS) has several substantial advantages in healthcare practice, particularly in psychiatric care and beyond. MARS provides a complete assessment of medication adherence by examining many characteristics, helping healthcare providers acquire a better knowledge of their patients' behaviors and attitudes toward their drugs. MARS distinguishes between purposeful non-adherence (when patients choose not to follow suggestions knowingly) and inadvertent non-adherence (when patients desire to follow recommendations but suffer difficulties such as forgetfulness or resource restrictions). This distinction guides targeted actions. MARS uses a response scale to reduce social desirability bias. Because they are not evaluated or coerced to produce socially acceptable answers, patients may be more honest in their responses. Rather than relying on a basic "yes/no" or "high/low" adherence categorization, MARS categorizes patients based on their adherence characteristics. This refined method provides more precise insights regarding adherence behavior**.** MARS provides precise information that can be used to inform treatment planning and medication management methods. Individual patients' adherence issues can be addressed by healthcare practitioners by tailoring strategies. MARS can be used for continual drug adherence monitoring, allowing healthcare providers to track changes in adherence patterns and alter interventions as needed. MARS can be used to facilitate open and productive talks regarding medication adherence between patients and healthcare providers. The MARS can aid in the identification of potential barriers and concerns that patients may have, allowing for collaborative problem-solving. MARS was

also useful for research purposes, supporting the evaluation of adherence-related therapies and contributing to the enhancement of healthcare quality.

The Medication Adherence Rating Scale (MARS) marks a significant step forward in the assessment and management of medication adherence in psychiatric patients and beyond. Its creation, robust psychometric features, and multidimensional approach to evaluating adherence behavior make it a significant clinical tool. MARS not only improves the understanding of patients' adherence behaviors, but it also aids in the development of personalized interventions, resulting in better treatment outcomes and patient experiences. MARS was a valuable asset in the quest for medication adherence and the improvement of overall healthcare quality as health care continues to prioritize patient-centered care and results.

Specific Aims

This DNP project aims to encourage medication compliance among adult psychiatric patients by implementing a medication adherence tool. Literature indicates that implementing the medication adherence tool ensures medication compliance among the psychiatric population. The PICOT question for this DNP project was whether implementing the medication adherence tool will help encourage medication compliance among psychiatric patients versus not implementing the tool. This DNP project aims to improve patient medication compliance and self-care management through implementing the medication tool.

After implementing the medication tool to assess patients' medication non-adherence traits, interventions such as proper Psychoeducation by providers on medication management, education on medications or any new medications, the

importance of medication compliance, or any possible side effects and steps to take if side effects are experienced can help combat negative attitudes patients may have towards taking their medications as prescribed by providers. The potential benefits of this intervention are significant, including improved patient outcomes, reduced healthcare costs, and better resource utilization. Implementing the medication adherence tool to encourage medication compliance has been a promising intervention for promoting medication adherence, which will also lead to reducing rapid readmission rates among adult psychiatric patients. By promoting better self-care management and improving patient medication compliance, this program can lead to better patient outcomes and more efficient use of healthcare resources.

Doctor of Nursing Practice Domains

The DNP domains played an important role in my DNP project. Domain 1: Knowledge for Nursing Practice was met by utilization of the Plan Do Study Act model in this DNP project. A problem was identified with medication non-compliance among mental health patients. The development of an improvement plan was produced which was the implementation of the MARS. The improvement plan was implemented/tested, and the data was analyzed. The results proved that the MARS was an effective tool in encouraging medication compliance.

Domain 2: Person-centered care was accomplished due to each participant being treated with respect and their dignity upheld throughout the implementation of the MARS. Each participant received a determination of consent to uphold the ethical conduct.

Domain 3: Population Health was met by examining the data and it proves that the medication adherence tool could help promote medication compliance among the mental health community. Non-adherence to psychotropic medications is a complex behavior in utilizing MARS can help overcome this behavior.

Domain 4: Scholarship for Nursing Discipline was met by utilizing literature from evidence-based practice and formulating my hypothesis then applying the literature found to test my hypothesis. Literature indicated an issue with medication compliance among the mental health community. A hypothesis was formulated, intervention was implemented, and the data gathered proved to be successful in showing the MAR to be a successful tool.

Domain 5: Quality and Safety were met due to the implementation of the medication adherence tool which formed no threat to each participant's safety. As mentioned previously, each participant received a Determination of Consent to verify their capability to give informed consent. Each participant’s information was guarded under lock and key and destroyed properly after interventions were completed.

Domain 6: Interprofessional Partnership was met by collaborating with providers on the DNP project and its results and encouraging the implementation of the tool into their practice. After the Pre-MARS was given and results were analyzed. Collaboration with the providers ensued and results were discussed, providers then educated participants in areas needed.

Domain 7: System-based practice was met by utilizing literature from evidence-based practice to implement the interventions in the DNP project. Peer review articles

were utilized to research the issue. A plan was then formulated using evidence-based practice to implement the interventions of utilizing the MARS.

Domain 8: Informatics and Healthcare Technologies was met due to several database platforms such as peer review articles being used to gather literature in this DNP project. Several scholarly articles were utilized to gather data and research the problem of medication compliance among the mental health community. Data was also collected on the MARS before implementation.

Domain 9: Professionalism was accomplished by upholding autonomy and ethical research conduct throughout this DNP project. Each participant was treated with respect. The MARS were administered in privacy and interventions were conducted where others could not overhear.

Domain 10: Personal, Professional, and Leadership Development was met by the leadership qualities placed in the implementation of this DNP project and the ability to influence providers to possibly incorporate the MARS into their practice. I was able to work along with providers to incorporate the MARS into their future practice to encourage medication compliance.

The Effectiveness of the Plan Do Study Act Model for the DNP Project

The plan-do-study-act model as shown in Figure A1, was a four-stage problem-solving model essential for improving a process or making changes. Through the model, healthcare professionals can learn quickly whether and how an intervention can work in a given setting and make changes accordingly to increase the chances of delivering and sustaining a given improvement (Knudsen et al., 2019). The intervention can be equally stopped when deemed ineffective to try another one. The improvement team established a

project to improve the health of psychiatric patients who are noncompliant with medications. An intervention that was deemed to help was already identified based on research evidence and on the successful improvement. The implementation of the proposed intervention should then follow certain strategies. Strategy 1 should involve designing changes to be made to the process of care involving staff and patients and, later, a launch within the hospital (Knudsen et al., 2019). The launch should be done on the agreed date. Second, there should be a design of changes to be made to the process of care through PDSA cycles, such as stimulated tests of changes and working up in scale through step-by-step trials with specific patients until full-scale implementation of the proposed intervention.

Figure 1. Example of Plan Do Act Study Model

(Tribal Evaluation Institute, n.d.).

from https://www.tribaleval.org/wp-content/uploads/2016/05/PDSA-chart-1-1.png

Summary

In Chapter I the effectiveness of the intervention of implementing the medication adherence tool to improve medication compliance before discharge and lower readmission rates to mental hospitals was evaluated using a combination of quantitative and qualitative evaluation techniques were discussed. The evaluation's findings helped drive future initiatives to enhance the quality of mental healthcare outcomes and give useful data on the intervention's viability, efficacy, and financial impact.

CHAPTER II – METHODOLOGY

Introduction

This chapter explores the extensive methodology used in this DNP project, which aimed to present the Medication Adherence tool as a means of improving medication compliance among mental-health patients. The rigorous research design is described for the rigorous research design, the comprehensive participant selection process, the ethical concerns that protected participants' rights and well-being, the meticulous data collection processes used, and the chronological sequence of interventions.

Research Design

The research design chosen for this DNP project was quite important. A mixed-approach strategy was adopted, skillfully combining quantitative and qualitative research methods. This methodological fusion was purposefully chosen to provide a comprehensive and diverse knowledge of psychiatric patients' medication adherence behavior, attitudes toward medicine, and awareness of potential side effects. The DNP project attempted to acquire a full understanding of the complicated phenomenon under examination by incorporating both quantitative and qualitative components. This DNP project used a mixed-methods research strategy that combines quantitative and qualitative approaches. This method was chosen to provide a comprehensive assessment of mental patients' medication adherence behavior, attitudes toward medicine, and awareness of adverse effects.

Quantitative Research

The quantitative component acted as the quantitative core of the research design, giving structured data that could be statistically analyzed. The researcher was able to

acquire numerical data that evaluate components of medication adherence behavior and individuals' attitudes toward medicine by using standardized surveys such as the Medication Adherence Rating Scale (MARS). This method enabled the measurement of specific variables, allowing for statistical analysis and the detection of trends, correlations, and patterns.

Qualitative Research

The qualitative aspect of the research methodology, on the other hand, contributed depth, context, and nuance to the understanding of medication adherence among psychiatric patients. The DNP student had the opportunity to explore the underlying reasons, motives, and personal experiences that contributed to their medication adherence behavior through open-ended interviews and in-depth talks with individuals. The qualitative data added a narrative layer to the DNP project, allowing participants to share their ideas, fears, and emotions about medication adherence in their own words.

This DNP project strategy intends to overcome the constraints of a one-dimensional method by purposefully integrating quantitative and qualitative components. Medication adherence in psychiatric patients has been a complex issue driven by a variety of factors, including psychological, social, and individual aspects. A strictly quantitative study may capture the "what" of drug adherence but may overlook the "why" and "how" that qualitative insights reveal. In essence, the mixed-methods strategy was equivalent to casting a wide net over medication adherence. The strategy enabled the researcher to create a whole picture, comprehending not only the statistical prevalence of specific behaviors but also the underlying reasons and lived experiences that form those

behaviors. This detailed understanding is especially important in psychiatric care, where patient opinions and individualized care are critical.

Participants

This DNP project's participants were from the psychiatric community. Their selection was subjected to a comprehensive ethical examination to guarantee that the concepts of autonomy, beneficence, and nonmaleficence were strictly adhered to. Each participant was meticulously assessed using the Determination of Consent to determine their capacity to provide informed consent. This phase was crucial in ensuring that participants completely understood the nature and implications of their participation and could exercise their autonomy. Exacting standards guided the participant selection procedure, which was motivated by ethical concerns that prioritized the rights and well-being of the people involved. The use of the Determination of Consent was critical in establishing each participant's ability to provide informed consent, hence upholding autonomy and ethical research conduct norms.

Ethical Considerations

Before beginning, approval from USM's institutional review board was sought and granted (protocol # 23-0670). . Each participant was provided informed consent, which was the foundation of ethical research. This ethical requirement guaranteed that participants understood the DNP project's objective, their position within it, and the potential advantages and dangers connected with their participation. Throughout the study, ethical precautions were rigorously applied to preserve each participant's rights, confidentiality, and well-being.

Part A: Context of the Intervention

A major problem in the provision of psychiatric care has been medication non-compliance, which leads to hospital readmissions. Within 30 days of being discharged, one in five Americans with mental illness are readmitted to the hospital. (Olfson et al., 2015). Frequent readmissions have a negative impact on a patient's quality of life, in addition to adding to the pressure already placed on the healthcare system. Implementing the medication adherence tool to assess patients' willingness to take medications so providers could provide better education on medication compliance prior to discharge was one method to promote medication compliance and reduce psychiatric hospital readmissions. However, it was crucial to consider the environment in which this intervention was used while introducing it.

The patient population should be the first contextual factor considered. A diverse collection of people, patients with mental illness, have different requirements and interests. As a result, the education on medication compliance given to patients before release ought to be customized to meet their demands. Patients with schizophrenia, for instance, might need additional information about drug management, but individuals with bipolar disorder gain from learning about coping mechanisms for mood swings. (Bonvicini et al., 2015). Implementing the medication adherence tool to assess each patient's behaviors towards medication compliance and attitude towards psychotropics helped providers provide education to fit that patients' requirements and be pertinent to their particular circumstances.

The healthcare system in which the intervention is being used was another crucial contextual factor. The implementation of the Medication Adherence tool encourages

medication compliance and is a useful tool in assessing patients' attitudes, knowledge, and understanding of the need for medication adherence. A hospital with a culture that prioritizes encouraging medication compliance may incorporate MARS into its policies and practices. By implementing the Medication Adherence tool to improve and encourage medication compliance, it was crucial to determine whether the healthcare system was prepared to execute it and to make the necessary adjustments.

The provider population was another crucial contextual factor that must be taken into account. Mental health professionals have various levels of education, experience, and expertise. Therefore, they needed to be willing to incorporate the MARS into their practice. After implementing the Medication Adherence tool and getting an understanding of the patients' stance on medication compliance. Instruction should cover how to provide education to patients on medication compliance, how to involve patients and families, and how to deal with any potential obstacles of non-compliance. (Johnston et al., 2016).

Finally, when implementing the MARS, the broader social environment must be considered. Because mental illness has been frequently stigmatized in society, patients are less inclined to ask for assistance and adhere to treatment regimens. By accurately disclosing facts regarding mental illness and available treatments, education on medication compliance education can aid in reducing stigma (O'Connell et al., 2016). As a result, it was crucial to include community stakeholders in the implementation of the medication adherence tool to encourage medication compliance and guarantee that it was sensitive to the beliefs and values of patients as well as culturally suitable.

Part B: Description of the Intervention

The crucial issue of medication non-compliance among psychiatric patients has been a result of poor patient outcomes, higher healthcare expenses, and a lower quality of life for those who have mental illness. Implementing the medication adherence tool to encourage medication compliance was one strategy for solving this issue. To lower the likelihood of non-compliance, implementing the medication adherence tool to gain knowledge of patients' negative views on medication compliance seeks to give patients with mental illness and their families more thorough and customized education on ways to be compliant with their medication regimen.

The intervention consists of numerous parts. Initially, the Medication Adherence tool was utilized to assess patients' willingness to be compliant with medications. Adherence to medications has been an important predictor of illness course and outcome in psychosis (Fialko et al., 2008). Before release, a thorough evaluation of the patient's needs, background, and treatment preferences was done. This evaluation assists in determining the patient's strengths and weaknesses, potential obstacles to treatment adherence, and specific therapy objectives. Based on the evaluation results, the patient's need for education on medication compliance was determined by the provider in the second step. The treatment plan details the patient's diagnosis, symptoms, drugs, possible adverse effects, and methods for symptom management and relapse prevention were delivered to the patient clearly and succinctly by the provider. Finally, the Medication Adherence tool was utilized to assess patients’ understanding of the need to be compliant with medications.

Specifics of Who Will be Involved in the Work

This intervention was carried out in collaboration with providers and me. Implementation of a pre-medication adherence tool was given by me. The initial evaluation, patient diagnosis, and treatment plan development were all done by providers. During the hospital stay and up until release, providers provided patients with education on medication management, education on medications or any new medications, the importance of medication compliance, or any possible side effects and steps to take if side effects occur. After all education had been received by providers, a post-medication adherence tool was given to me to assess patients' comprehension of the importance of medication compliance.

Part C: Study of the Interventions

How did you assess the effectiveness of your intervention? The following evaluation techniques were used to determine whether the implementation of the medication adherence tool to promote medication compliance was successful. First, a pre-posttest design can be utilized. By contrasting the results obtained before and after the intervention, a pre-post-test design can be utilized to assess the effectiveness of the intervention. To ascertain the impact of the medication adherence tool, for instance, medication compliance might be compared before and after the intervention. Second, qualitative feedback can be utilized. Patients, their relatives, and healthcare professionals can all offer insightful comments on the intervention's efficacy. The experiences and happiness of patients and their families with the intervention can be evaluated using open-ended questions, and ideas for improvement can be gathered. The acceptability and feasibility of the intervention can be evaluated by medical specialists. Finally, a cost-

effectiveness analysis: To ascertain the intervention's economic effects, a cost-effectiveness analysis might be carried out. To ascertain whether the intervention was cost-effective, the expenses of the intervention—such as the time and resources needed to give the medication adherence tool—can be compared against the savings from decreased hospital readmission rates because of medication compliance.

Data Collection

A carefully planned three-week timeline aided data collection efforts as the researcher conducted a series of assessments and treatments. These tests were carefully devised not just to assess medication adherence and comprehension but also to actively improve these qualities. The Pre-Medication Adherence Rating Scale (Pre-MARs) survey was used to collect data in week one, examining participants' initial attitudes and understanding. In week two, if individuals need extra help, they receive personalized educational interventions that address their specific requirements. Finally, the efficacy of these interventions on medication adherence and knowledge was measured in week three using the Post-Medication Adherence Rating Scale (Post-MARs).

Summary

A combination of Quantitative and Qualitative methods was used in this research. Each participant received the Determination of Consent before receiving the MARS to verify the capability of giving informed consent. The MARS was utilized to assess each participant’s attitude toward taking psychotropics, knowledge of negative side effects, and behaviors toward medication adherence.

CHAPTER III – RESULTS

Chapter III delves into the DNP project's findings, delving deeper into a complete discussion and interpretation of these findings. The DNP project focused on determining the effectiveness of the Medication Adherence tool in increasing medication adherence among psychiatric patients. This chapter is critical in determining the relevance and significance of the DNP project's findings.

Implementation of MARS

This DNP project was conducted at Panola Med Behavioral Health Center in Batesville, Mississippi. Panola Med Behavioral Health is an inpatient psychiatric facility used for stabilization. After receiving consent from each participant. The Pre-Medication Adherence Rating Scale (Pre-MARs) survey was distributed to participants during the first week of the DNP project to start the data collection procedure. With this test, participants' initial adherence to prescribed prescriptions, prior understanding of possible adverse effects, and attitudes toward psychotropic drugs were all intended to be evaluated. Week two marks an important point in the DNP project's timeframe. The comprehensive analysis of the Pre-MARs data revealed that a significant proportion of participants required more education about the necessity of medication compliance. On the Pre-MARs, as shown in Figure 2, 12 of the 15 participants (80%) scored below a preset threshold, indicating the need for targeted intervention. Three out of the 15 participants (20%) scored above the threshold which indicates they are more willing to be compliant with medications. This instructional intervention targeted participants who scored four or lower on their MARs. The healthcare professionals set out on a mission to provide personalized instruction customized to the needs of each participant. During

these sessions, a focus was made on emphasizing the crucial need for medication compliance, addressing any concerns about potential unpleasant side effects, and providing participants with useful tools for dealing with these side effects if they did occur. Furthermore, healthcare providers held open conversations with participants to address any stigmas or negative views they may have had regarding psychotropic drugs.

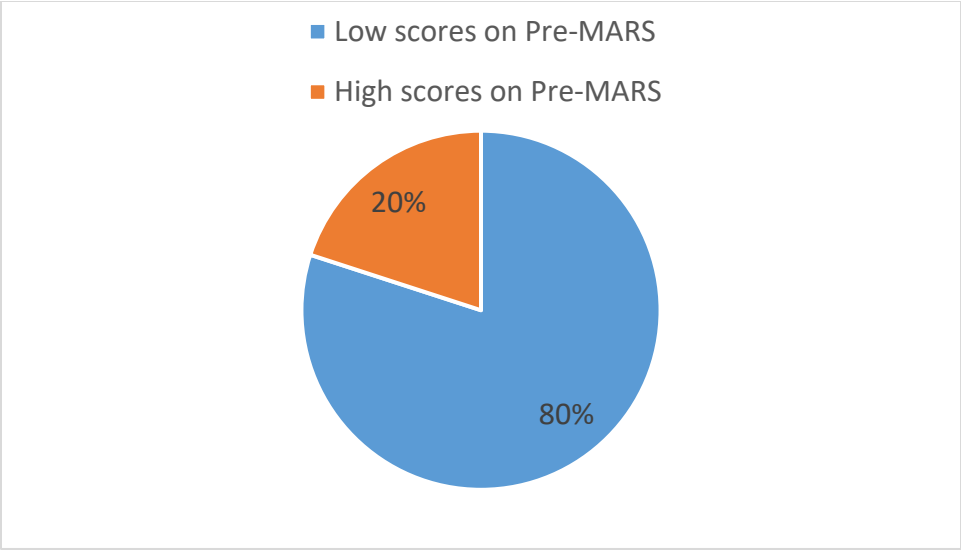

Figure 2. Pre-MARS Scores.

Post-Medication Adherence Rating Scale (Post-MARS)

Week three marked the end of the intervention phase of the trial. Participants who exhibited a need for education during week two were given a follow-up assessment using the Post-Medication Adherence Rating Scale (Post-MARs). This final evaluation attempted to assess the influence of the preceding week's education on participants' medication adherence behavior, changing attitudes toward medication, and increased awareness of potential side effects. This DNP project's precisely structured methodology was not only ethical but also strategically planned to provide a comprehensive understanding of the Medication Adherence tool's usefulness in encouraging medication

compliance among mental patients. As shown in Figure 3, after being given the post-MARS only one participant out of the previous 12 (8.3%) scored below the threshold while the other 11 participants (91.7%) scored above the threshold. This DNP project aimed to make a significant contribution to the field of psychiatric health care by adhering to strict ethical standards and conducting a well-thought-out research design.

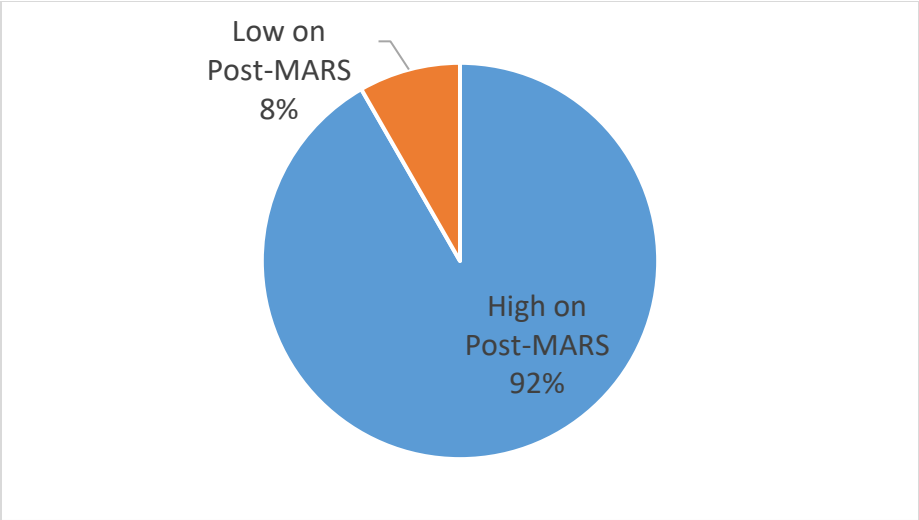

Figure 3. Post-MARS Scores.

Quantitative

An example of the diverse mixture of demographics of the DNP project participants as shown in Table 1. After obtaining informed consent, we began data collection in the first week, with each participant getting a pre-medication adherence rating scale assessment. This tool served as the baseline assessment, examining participants' initial readiness to adhere to their prescription medications, understanding of potential undesirable side effects, and overall attitude towards psychiatric medications. During the next week, it became clear that a considerable proportion of participants needed more instruction on the necessity of medication adherence. This discovery proved critical in emphasizing the complexities of drug adherence in psychiatric therapy. Nine

out of the 15 participants had a history of rapid hospital readmissions or readmission to a psychiatric hospital within 30 days. A significant 12 of the 15 participants expressed a need for additional education, notably about their views towards psychotropic drugs and the potentially harmful side effects of their prescribed regimens.

Table 1

Demographics of Study Participants

Variables	N	%
Gender	15	100
Female	6	40
Males	9	60
Ethnicity		
Caucasian	10	66.7
African American	5	33.3
Age		
18-28	0	0
29-39	5	33.3
40-49	4	26.7
50-59	4	26.7
60-65	2	13.3

Recognizing the relevance of this revelation, focused educational initiatives were launched in week two. Participants with a MAR score of four or lower received further education from healthcare providers. These interventions particularly highlighted the

potentially harmful side effects and described procedures to take if they occurred. In addition, participants were given material designed to remove any stigmas or negative views they may have had toward psychotropic medicines. Participants whose scores indicated the need for education on medication compliance by the provider received a post-MAR evaluation in the third week. Only one participant scored poorly after obtaining the requisite education on medication adherence. The improvement in the score demonstrates the potential value of educational interventions in improving medication adherence behavior and attitudes. The quantitative results reported in this part provide important insights into the impact of the Medication Adherence instrument and the accompanying educational interventions. These findings shed light not just on the existing level of medication adherence in the DNP project sample but also on prospective areas for improvement and personalized interventions.

Qualitative Results

In the context of the research, qualitative findings are just as important as quantitative ones. The qualitative component of the DNP project, resulting from educational interventions conducted during the second week, reveals a rich tapestry of insights into participants' attitudes and perceptions of medication compliance and psychotropic medicines. A rich trop of qualitative data was discovered through in-depth interviews and candid participant conversations, which improved the researcher’s understanding of the varied facets of medication adherence.

One of qualitative research's primary benefits is its ability to capture individuals' complex and often intricate viewpoints. In this area, we use the power of participant voices to bring the findings to life. Quotes and excerpts from participants are skillfully

interwoven, acting as poignant and authentic representations of the themes and ideas that emerged from the qualitative investigations. These narratives capture the DNP project participants' lived experiences and views, offering light on the 'how' and 'why' of their medication adherence behaviors. A profound grasp of the reasons, problems, and personal beliefs that motivate participants' encounters with psychotropic medicines by diving into their narratives was discovered.

The qualitative element of this research provides depth and meaning to the quantitative data, allowing the researcher to move beyond statistical abstractions to appreciate the participants' daily circumstances. These accounts allowed the researcher to see the human side of medical adherence, comprehending not just the patterns but also the personal experiences that drive adherence behaviors.

Summary

Each participant received the Pre-MARS and 12 out of 15 required education on medication compliance. The provider provided the necessary education on the importance of medication compliance to each participant in need. The Post-MARS was then given to each participant who scored below the threshold on the Pre-MARS and results indicated that the MARS was an effective tool in promoting medication compliance.

CHAPTER IV – DISCUSSION

The discussion part is an important aspect of this DNP project because it navigates the route of situating the findings within the larger context of medication adherence in psychiatric patients, expanding the discourse with both corroborative and novel insights. Beyond mere interpretation, this debate will explore the practical implications of the findings for healthcare practice and policy, emphasizing the critical role of personalized education and interventions in improving medication adherence among mental patients.

The findings support previous research on the importance of drug adherence in psychiatric therapy. According to Owusu et al. (2022) and Cramer and Rosenheck (1998), hospital readmission rates among mental patients are frequently suggestive of medication non-compliance. These factors include not just pharmaceutical non-adherence, but also substance use disorder, hospital stay duration, a lack of follow-up care, poor social support, and concurrent medical diseases. Initiatives to elucidate the value of pharmacotherapy in psychiatric treatment and to promote drug adherence have thus never been more important.

The efficacy of the Medication Adherence tool, specifically the Medication Adherence Rating Scale (MARS), was a crucial finding in the DNP project. The MARS efficiently quantified medication adherence behavior and participants' views towards their prescription regimens, according to the quantitative data. The results are consistent with the findings of (Owie et al., 2018), who highlighted the significance of MARS as an intervention that overcomes the constraints of self-reporting strategies and provides a detailed assessment of adherence. Furthermore, the qualitative findings provide important

insights into participants' attitudes and perceptions of medication compliance and psychotropic medicines. By diving into the 'why' and 'how' of drug adherence, these narratives supplement the quantitative data. This is consistent with the views of Marrero et al. (2020) and Del Favero et al. (2020), who emphasized the importance of understanding the factors impacting medication adherence beyond numerical scores.

The combination of quantitative and qualitative outcomes emphasizes the multifaceted impact of the treatments. To bridge the gap between numbers and narratives by discovering common themes and correlations, delivering a full narrative of the DNP project's impact. This comprehensive viewpoint adds to the research by illuminating the practical and human dimensions of the results.

In terms of clinical relevance, the findings highlight the importance of personalized teaching and treatments in psychiatric care. A considerable proportion of participants require more education, emphasizing the importance of targeted interventions. Providers must address negative attitudes, side effect concerns, and stigma associated with psychiatric drugs in addition to medication adherence. This is consistent with Gaynes et al.'s (2015) recommendation for comprehensive transitional support services from inpatient to outpatient care.

The research contributes to ongoing efforts to improve drug adherence among psychiatric patients. The Medication Adherence Tool, namely the MARS, has emerged as a vital asset in assessing and increasing medication adherence. The combination of quantitative and qualitative findings contributes to a better understanding of the complicated phenomena of drug adherence. The findings highlight the importance of personalized education and treatments in psychiatric care, with the ultimate goal of

improving patient outcomes and lowering hospital readmission rates. These consequences go beyond the scope of the research, motivating significant changes in the delivery of psychiatric care.

Limitations and Future Research

This DNP project admits its shortcomings, emphasizing the necessity of academic rigor and transparency. Recognizing these restrictions is critical for gaining a comprehensive picture of the findings. Furthermore, it is suggested that areas for future research allow for continuing growth and improvement in the field of medication adherence in psychiatric care. In conclusion, Chapter IV offers a helpful reference to the implications of the findings. Results go beyond basic findings to map a course toward greater drug adherence and the well-being of psychiatric patients. These ideas are intended to reverberate beyond the scope of this research, establishing a culture of patient-centered care and improving outcomes in psychiatric health care.

Summary

This DNP project's focus is on proving that implementing a medication adherence tool would encourage medication compliance in psychiatric patients. As mentioned previously non-compliance with medications is one of the considerable contributions to rapid psychiatric hospital readmissions. The MARS was utilized to gain a picture of patients' attitudes towards medication compliance. Research indicated that the MARS is a valuable asset in encouraging medication compliance among psychiatric patients.

Medication Adherence Rating Scale (MARS) questionnaire

Question	Answer
1. Do you ever forget to take your medication?	Yes/No
2. Are you careless at times about taking your medication?	Yes/No
3. When you feel better, do you sometimes stop taking your medication?	Yes/No
4. Sometimes if you feel worse when you take the medication, do you stop taking it?	Yes/No
5. I take my medication only when I am sick	Yes/No
6. It is unnatural for my mind and body to be controlled by medication	Yes/No
7. My thoughts are clearer on medication	Yes/No
8. By staying on medication, I can prevent getting sick	Yes/No
9. I feel weird, like a 'zombie' on medication	Yes/No
10. Medication makes me feel tired and sluggish	Yes/No

Medication Adherence Rating Scale: MARS (Thompson et al, 2000) Thompson et al (2000) identified several deficiencies in the DAI as a measure of adherence and proposed a new inventory, the MARS scale, that incorporates features of both the DAI and the MAQ (Centers for Excellence, n.d.) but which they claimed to have greater validity and clinical utility. They concluded that it was a valid and reliable measure of adherence to psychoactive medications. The patient should be asked to respond to the statements in the questionnaire by circling the answer that best describes their behavior or attitude toward their medication.

APPENDIX B – Recruitment Flyer

Protocol # 23-0670

I/We are asking you to participate in a research study titled "Encouraging Medication Compliance by Implementing a Medication Adherence Tool". We will describe this study to you and answer any of your questions. This study is being led by Regina Taylor, School of Leadership & Advance Nursing Practice. The Faculty Advisor for this study is Anita Greer, School of Leadership & Advance Nursing Practice. This study has been approved by USM's Institutional Review Board (Protocol # 23-0670).

The purpose of this research is to introduce the Medication adherence tool to promote medication compliance in psychiatric patients. The study proposes that implementing a medication adherence tool after receiving treatment from Providers which should include medication management, education on medications or any new medications, the importance of medication compliance, or any possible side effects and steps to take if side effects are experienced will help promote medication compliance. It will take me a total of 3 weeks to collect data. Interaction with participants will be less than 10 minutes and consist of a pre- and post-medication adherence survey. I/We are hoping this medication adherence tool can be implemented in mental health institutions to promote medication compliance and help promote better self-care.

APPENDIX C - Consent for Participation

ORI | Office of Research Integrity

INSTITUTIONAL REVIEW BOARD
STANDARD (SIGNED) INFORMED CONSENT

Today's date:08/04/23		
Project Information		
Project Title: Encouraging Medication Compliance by Implementing a Medication Adherence Tool		
Protocol Number: 23-0670		
Principal Investigator: Regina Taylor	Phone: 662-561-4032	Email: regina.d.taylor@usm.edu
College: University of Southern Mississippi	School and Program: School of Leadership & Advance Nursing Practice	

I/We are asking you to participate in a research study titled *"Encouraging Medication Compliance by Implementing a Medication Adherence Tool". We* will describe this study to you and answer any of your questions. This study is being led by *Regina Taylor, School of Leadership & Advance Nursing Practice.* The Faculty Advisor for this study is *Anita Greer, School of Leadership & Advance Nursing Practice.* This study has been approved by USM's Institutional Review Board *(protocol # 23-0670).*

1. Purpose:

The purpose of this research is to....

Introduce the Medication adherence tool to promote medication compliance in psychiatric patients. The study proposes that implementing a medication adherence tool after receiving treatment from Providers which should include medication management, education on medications or any new medications, the importance on medication compliance, or any possible side effects and steps to take if side effects are experienced will help promote medication compliance. I/We are hoping this medication adherence tool can be implemented in mental health institutions to promote medication compliance and help promote better self care

2. Description of Study:

We will ask you to...

Each participant will be asked yes/no questions on a pre-medication adherence tool. After receiving treatment from Providers which should include medication management, education on medications or any new medications, the importance on medication compliance, or any possible side effects and steps to take if side effects are experienced those participants will be asked yes/no questions on a post-medication adherence tool survey to assess their understanding of the importance of medication compliance. It will take less than 10 minutes for pre and post medication adherence tool survey to be given.

3. Benefits:

Benefits from this research are that patients will be able to better manage self-care and be medication compliant.

Benefits in the future from this research is that by implementation of Medication adherence tool this will ensure medication compliance among psychiatric patients therefore decreasing healthcare cost in the future.

4. Incentives for Participation:

There will be no incentives or compensations provided for participating in this research. Participation is of your own free will and you may withdraw from the research at any time.

5. Risks and Discomforts:

In simple, non-scientific language, describe any reasonably foreseeable risks or discomforts, with consideration given to:

- *There are no legal risks.*
- *There are no physical risks.*
- *Social risks: You will be asked about psychiatric medication compliance which could cause some embarrassment or stigma.*
- *There are no economic risks.*
- *Psychological risk: You will be asked questions about compliance with medications which could cause some minimal anxiety or stress.*
- *There are no occupational*

All patient surveys will be confidential. All patient information will be stored in a locked drawer inside the facility and will be placed in a secure shred box upon completion of the research.

I/We do not anticipate any risks from participating in this research.

6. Privacy/Confidentiality/Data Security:

All patient surveys will be confidential. All patient information will be stored in a locked drawer inside the facility and will be placed in a secure shred box upon completion of the research.

- *I will completely de-identify data, or keep identifying information separate from research data (e.g. signed consent forms kept separate from the survey data and the two will not be connected);*
- *I plan to keep identifying information with the data, locked in a drawer inside the facility.*
- *All findings of this study will be presented anonymously.*
- *Only staff such as providers and a few selective nurses will have access to identifying information.*

De-identified data from this study may be shared with the research community at large to advance science and health. We will remove or code any personal information that could identify you before files are shared with other researchers to ensure that, by current scientific standards and known methods, no one will be able to identify you from the information we share. Despite these measures, we cannot guarantee the anonymity of your personal data.

7. Alternative Procedures:

There are no alternative procedures offered.

8. Taking part is voluntary:

Participation in this research is voluntary, and you have the right to refuse to participate before the study begins, discontinue at any time, or skip any questions/procedures that may make them feel uncomfortable, with no penalty to them, or their academic standing, record, or relationship with the university or other organization or service that may be involved with the research.

If you are uncomfortable with any of the conditions, you may choose not to participate in this research.

9. Participant's Assurance:

Participants can contact me with questions or concerns. A standard statement follows:

The main researcher conducting this study is *Regina Taylor*, a *Psychiatric Mental Health graduate student* at The University of Southern Mississippi. Please ask any questions you have now. If you have questions later, you may contact *Regina Taylor* at regina.d.taylor@usm.edu or at 662-561-4032. You may also contact my facility advisor, Anita Greer at Anita.greer@usm.edu or 601-266-5042.

This project and this consent form have been approved by The University of Southern Mississippi's Institutional Review Board, which ensures that research projects involving human subjects follow federal regulations. If you have any questions or concerns regarding your rights

as a subject in this study, you may contact the Institutional Review Board (IRB) at 601-266-5997 or:

Chair of the Institutional Review Board
The University of Southern Mississippi
118 College Dr. #5116
Hattiesburg, MS 39406

All participants will receive a copy of this consent and any other information discussed.

10. Resources if needed:

Suicide Hotline - 988
Communicare Sardis – 100 East Frontage Road Sardis, MS 38666 phone 662-487-2746
Communicare Oxford – 152 MS-7, Oxford, MS 38655 phone 662-234-7521
Region 1 Charleston – 135 N Market St, Charleston, MS 38921 phone 662-647-3240
Region 1 Marks – 400 Locust St, Marks, MS 38646 phone 662-326-4445

Statement of Consent
I have read the above information and have received answers to any questions I asked. I consent to take part in the study.

Your Signature_____ Date_____

Your Name (printed)_____

Signature of person obtaining consent_____ Date_____

Printed name of person obtaining consent_____

APPENDIX D – Letter of Support

Panola
Medical Center

[redacted]

Date: 04/05/23

RE: Letter of Support for Regina Taylor, BSN, RN

Attn: Facility Nursing Research Council Application Process-DNP BSN-DNP Student

To: Nursing Research Council Chair and Committee

This letter is in reference for Regina Taylor, BSN, RN who is applying to the FGH Nursing Research Council for application and approval of her Clinical Doctoral Project. The focus and title of her evidenced-based project is *Encouraging Medication compliance by Implementing a Medication Adherence Tool.* The site is in the adult psychiatric setting.

I have discussed this topic with Regina Taylor and support and recommend the need for these psychoeducation interventions. I understand that these (education of staff on equipping patients with better self-care qualities such as medication adherence, what to do if side effects occur, and compliance with outpatient follow up to decrease psychiatric rapid hospital readmissions) would be done for 30-45 days.
After data analysis, I understand that Regina will present her findings to the ID team.

I understand that following approval by the Nursing Research Council, she will seek approval from the to The University of Southern Mississippi Institutional Review Board (IRB) for final approval of her Clinical Doctoral Project proposal. At present, I understand that Regina Taylor is a full-time BSN-DNP (Psychiatric Mental Health Nurse Practitioner) student in the Doctor of Nursing Practice Program at the University of Southern Mississippi, Hattiesburg campus.

I am the Administrator-at Panola Med Behavioral Health at 155 Keating Road Batesville, MS 30606. I am offering this letter of support to the doctoral student, Regina Taylor, in her doctoral project as titled above and look forward to hearing her findings.
I understand that participation by the ID team members is completely anonymous and voluntary. There is no compensation for their participation.
I understand the planned dates are 30 days from USM IRB approval is received.
I understand that letter of support will be included in the University of Southern Mississippi Institutional Review Board (IRB) application.

Her Chair contact information is Dr. Anita Greer, anita.greer@usm.edu and cell 601 266 5042.

Panola
Medical Center

As Director of Behavioral Health at Panola Med Behavioral Health, I would like fully support Regina Taylor to achieve her academic endeavor in this clinical practice project. I look forward to hearing the results of this study and the implications on clinical practice.

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

Sincerely,

[redacted]

APPENDIX E – IRB Approval Letter

Office *of*
Research Integrity

THE UNIVERSITY OF SOUTHERN MISSISSIPPI

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

NOTICE OF INSTITUTIONAL REVIEW BOARD ACTION

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

- The risks to subjects are minimized and reasonable in relation to the anticipated benefits.
- The selection of subjects is equitable.
- Informed consent is adequate and appropriately documented.
- Where appropriate, the research plan makes adequate provisions for monitoring the data collected to ensure the safety of the subjects.
- Where appropriate, there are adequate provisions to protect the privacy of subjects and to maintain the confidentiality of all data.
- Appropriate additional safeguards have been included to protect vulnerable subjects.
- Any unanticipated, serious, or continuing problems encountered involving risks to subjects must be reported immediately. Problems should be reported to ORI using the Incident form available in InfoEd.
- The period of approval is twelve months. If a project will exceed twelve months, a request should be submitted to ORI using the Renewal form available in InfoEd prior to the expiration date.

PROTOCOL NUMBER:	23-0670
PROJECT TITLE:	Encouraging Medication Compliance by Implementing a Medication Adherence Tool
SCHOOL/PROGRAM	School of Leadership & Advance Nursing Practice
RESEARCHERS:	PI: Anita Greer Investigators: Greer, Anita Shunielle~Taylor, Regina~
IRB COMMITTEE ACTION:	Approved
CATEGORY:	Expedited Category
PERIOD OF APPROVAL:	16-Aug-2023 to 15-Aug-2024

Donald Sacco Jr.

Donald Sacco, Ph.D.
Institutional Review Board Chairperson

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