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Implementing a Medication Preference Questionnaire in Schizophrenia to Decrease the Risk of Relapse

Chelsea Aldridge

IMPLEMENTING A MEDICATION PREFERENCE QUESTIONNAIRE IN SCHIZOPHRENIA TO DECREASE THE RISK OF RELAPSE

by

Chelsea Aldridge

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Dr. Anita Greer, Committee Chair
Dr. Lisa Morgan

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ABSTRACT

Schizophrenia is a debilitating disorder that affects the mind causing individuals to have delusions, hallucinations, disorganized thought processing, and or negative symptoms ranging from isolation to anhedonia. Schizophrenia has capabilities of becoming a disabling disorder if symptoms are not properly managed with appropriate psychotropic medications. Psychiatrists, Primary Care Providers (PCPs), and Psychiatric-Mental Health Nurse Practitioners (PMHNPs) typically treat the symptoms of schizophrenia with antipsychotics. Antipsychotics fall into two drug classes: first-generation or typical antipsychotics and second- generation or atypical antipsychotics that can be given orally or intramuscularly. Typical antipsychotics generally have more side effects than atypical antipsychotics. However, both classes of antipsychotics are used to treat the positive and negative symptoms of schizophrenia.

The leader of this Doctor of Nursing Practice (DNP) project performed research in Hinds County of the state of Mississippi, particularly the city of Jackson and possibly surrounding areas. Participants were members of a community- based behavioral health treatment program aging from 18-64 with a clinical diagnosis of schizophrenia. A maximum of 30 clients, possibly less, were obtained for research purposes. The leader of this doctoral project invited clients to participate in a research opportunity while explaining to them the purpose of the research and the importance of medication adherence in the schizophrenia community. Clients then signed an informed consent and completed a Medication Preference Questionnaire (MPQ) while the leader reviewed charts to retrieve current medication lists, diagnoses, and hospitalization history. The leader of this doctoral project provided education to the PMHNP that prescribes

medications to this client population and the RN on the use of the MPQ. Results from the MPQ and retrospective chart review determined if patient's preference of LAIs or OAPs helped to decrease the risk of relapse in clients with schizophrenia. These findings revealed to the researcher which route for antipsychotic medication is preferred and has the potential to better manage the schizophrenia symptoms.

ACKNOWLEDGMENTS

I would like to personally thank the members of the Programs of Assertive Community Treatment (PACT) team at Hinds Behavioral Health Services for all their hard work managing many seriously ill clients in the community. Thank you for allowing me to use your patient load for my research. I would like to extend my gratitude to two of my mentors, LaTarshia Harris, PMHNP-BC and Roderick Green, PMHNP-BC, who allowed me to step outside of my role as a Registered Nurse and challenged me to think as an Advanced Practice Registered Nurse.

DEDICATION

I would like to recognize my late uncle, Timothy Aldridge who battled with schizophrenia. You are the reason for my passion. I would like to also recognize my beloved sister, Cassi Aldridge for always being my biggest fan and my support system from start to finish. To my wonderful children, Teverick, Tristan, and Camille, I do everything for you three. Thank you for being patient with me during this process.

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LIST OF ABBREVIATIONS

DNP	Doctor of Nursing Practice
DSM-5	Diagnostic and Statistical Manual 5th Edition
IRB	Institutional Review Board
LAI	Long- Acting Injectable Antipsychotic
MPQ	Medication Preference Questionnaire
NAMI	National Alliance for Mental Illness
OAP	Oral Antipsychotic Pills
PACT	Programs of Assertive Community Treatment
PDSA	Plan-Do-Study-Act
PMHNP	Psychiatric- Mental Health Nurse Practitioner
RN	Registered Nurse
WHO	World Health Organization

CHAPTER I - INTRODUCTION

Schizophrenia is a mental disorder that affects a person's ability to function properly cognitively, behaviorally, and emotionally. According to the World Health Organization [WHO] (2022), Approximately 24 million people or 1 in 300 people (0.32%) worldwide are diagnosed with Schizophrenia. Per the National Alliance for Mental Illnesses [NAMI] (2020), in the United States, there are approximately 1.5 million people, which is less than 1% of the population that has been diagnosed with schizophrenia. This data indicated that schizophrenia is not a very common mental illness occurrence. Schizophrenia is a long-term illness, meaning there is no cure available. Symptoms of schizophrenia include, but are not limited to delusions, hallucinations, disorganized speech and behaviors, and negative symptoms. According to the American Psychiatric Association's latest publication of the DSM-5 (2013), to be diagnosed with schizophrenia, one must present with two or more symptoms, each presenting for a significant portion of time during a one- month period. At least one of the symptoms must be delusions, hallucinations, or disorganized speech.

Symptoms associated with schizophrenia can become manageable with proper medications. Antipsychotics, or neuroleptics are the drugs of choice for treating psychosis specifically in schizophrenia. To date, there are many antipsychotics that are used to help clients manage their positive and negative symptoms of schizophrenia. Schizophrenic clients have the choice of taking antipsychotics orally or intramuscularly to help manage psychotic features. Although many methods of medications are available to treat schizophrenia, relapse and hospitalization is very common creating an economic burden for the nation.

Schizophrenia ranks within the top 15 global sources of disability. “Relapse rates are higher than usually recognized when antipsychotics are discontinued, even after a single episode of psychosis. There are serious psychosocial risks associated with illness relapse. There is a risk of self-harm and harm to others. In addition, relapses may disrupt friendships and relationships, and impact negatively on education and employment. They may also restrict autonomy, contribute to stigma, and cause patients and their families much distress” (Emsley, 2018, p. 168). Living with untreated schizophrenia has the potential to be very uncomfortable due to poor quality of life. During schizophrenia relapses, individuals cannot maintain employment or independent living skills.

The sole purpose of this Doctor of Nursing Practice (DNP) project is to consider client preference while comparing long-acting antipsychotics to oral antipsychotics when treating schizophrenia clients to decrease the risk of relapse. Relapse and hospitalizations related to schizophrenia have created an economic burden nationwide. It is imperative for healthcare providers to determine which medications would be a better choice to help decrease this unnecessary burden. Determining medication preference, lowering hospitalizations, decreasing the risks of relapse, and increasing medication adherence is the overall goal of this project. To lower the risk of relapse in schizophrenia, one must be knowledgeable on what relapse looks like. Relapse in schizophrenia is the return of symptoms after partial recovery. When prescribing new medications and changing medications, it is ideal for the healthcare provider to assess and consider the preference of the client. The MPQ is a simple questionnaire that asks clients what the reasons for general treatment preference are based on goals/ outcomes and medication preference based on personal experience. Understanding client preferences on medications could

increase medication adherence and lower relapse and hospitalization rates in schizophrenia.

Background and Significance

Relapse associated with schizophrenia has created a burden economically not only for the client with the illness, but for family members, caregivers, hospitals, and society. In the United States, the economic burden of schizophrenia is summed to be over $60 billion U.S. dollars per year (Chong et al., 2016). Chong et al. conducted a systematic review that condensed the overall effect that schizophrenia has created economically for the nation. Not only has schizophrenia cost the U.S. to lose billions of dollars directly, the disorder also accounts for many indirect costs relate to the "deterioration in quality of life to patients, families, and friends due to other factors, such as pain or suffering" (Chong et al., 2016, p. 360).

Problem Statement/ Clinical Question/ PICO

This doctoral project was led by a single PICO question- Population (P), Intervention (I), Control (C), Outcomes question: In adults with schizophrenia that receive aggressive community- based treatment (P), how effective are long- acting injectable antipsychotics (I) compared to oral antipsychotic pills (C) in reducing the risk of relapse (O) based on patient medication preference?

Purpose of Project/ Specific Aims

The purpose of this doctoral project was to compare long- acting injectable antipsychotics to oral antipsychotics based on client preferences, determining which reduces the risk of relapse in schizophrenic clients. The MPQ was utilized to aid the potential prescriber in determining if LAIs or OAPs would be a proper choice of

medication to help manage symptoms of schizophrenia. This doctoral project aimed to educate healthcare providers on using the MPQ prior to starting and/ or changing medications. The questionnaire can help guide the provider with prescribing antipsychotic medications based on the client's preference and that can help determine which treatment the client would adhere to best. The retrospective chart review gathered data to determine if LAI use has a lower risk of relapse compared to OAP use in schizophrenia.

Objective and Expected Outcome

The objective outcome was to educate healthcare providers on use of the MPQ during the initial assessment and when prescribing medications to clients with schizophrenia to determine if considering the client's medication preference has the potential to reduce the risk of relapse. The expected outcome was to encourage the use of the MPQ upon initial assessment and before medication changes to determine if the client prefers OAPs or LAIs to manage symptoms associated with schizophrenia. The MPQ results paired with the retrospective chart review yielded results that determine if LAIs or OAPs are better in lowering relapse and/or hospitalization risks in schizophrenia. The overall goal was to provide appropriate medications that would help schizophrenic clients remain in the community.

Conceptual Framework: Plan-Do-Study-Act Framework

The Plan-Do-Study-Act (PDSA) cycle was used to guide this doctoral project. The PDSA cycle provides a simple, stepwise approach to quality improvement into practice (Hall, 2019).

Figure 1. The PDSA Cycle.

(Hall, 2019)

There are four steps of the PDSA cycle:

1. Plan: Develop the plan.
2. Do: Execute your plan.
3. Study: Investigate the results.
4. Act: Adjust the process based on the results found in the Study phase (Hall, 2019).

Plan

The planning stage of the PDSA cycle involved planning the use of the MPQ in this aggressive community- based treatment program. The DNP leader of this doctoral project conducted a needs assessment with the director and the healthcare provider to determine if the MPQ would be an assistive tool for the providers to use. The planning stage also included coordinated times for the researcher to audit charts and collect

information sensitive to this project, including non-identifying information such as medications, diagnosis, and hospitalizations within the last year.

Do

The do phase of the PDSA cycle consisted of executing the plan. The DNP project leader engaged with the program team leader, healthcare provider, and registered nurses after the daily morning meeting to conduct a brief educational session. This educational session basically educated the team on how to use the MPQ and why it is important to initiate into practice. After rendering education, the DNP project leader invited clients to participate in this research opportunity via flyer and phone. Informed consents were gained and signed for participation. After gaining consent, the clients were provided with a paper copy of the MPQ which they filled out in entirety and returned to the DNP project leader. The DNP project leader began chart audits and data collection of diagnosis, medications, and recent hospitalizations within the last year for the purposes of this doctoral project.

Study

The study phase of the PDSA cycle involved the DNP project leader analyzing the data collected from the participants. Results were produced in the study phase of the PDSA cycle. During this phase, the DNP project leader determined if long- acting injectable antipsychotics were better than oral antipsychotic pills in reducing relapse in schizophrenic patients based on the retrospective chart review. The MPQ's results determined if clients prefer LAIs or OAPs more to manage symptoms of schizophrenia.

Act

The act phase of the PSDA cycle involved determining if the MPQ is viable to be implemented as an assessment tool for use at this aggressive community- based treatment program. During the act phase of the PSDA cycle, the plan can be adopted, adapted, or abandoned based on the assessment of the data collected.

DNP Essentials

In accordance with the American Association of Colleges of Nursing (AACN, 2006), the DNP program prepares graduates to maintain the standards of the eight essentials of doctoral education. The eight DNP essentials are the framework of the fundamental skills necessary for all roles in advanced nursing professions. The DNP Essentials that are pertinent to this doctoral project are DNP Essential I (Scientific Underpinnings for Practice), DNP Essential III (Clinical Scholarship and Analytical Methods for Evidence- Based Practice), and DNP Essential VI (Interprofessional Collaboration for Improving Patient and Population Health Outcomes).

DNP Essential I: Scientific Underpinnings for Practice emphasizes the significance of utilizing science-based ideas to assess and better health care delivery and enhance patient outcomes (AACN, 2006). DNP Essential I uphold utilizing evidence-based practices to improve patient health outcomes. Incorporating evidence- based theory along with patient preference into practice allows the DNP graduate to produce the best informed patient- care decisions.

DNP Essential III: Clinical Scholarship and Analytical Methods for Evidence-Based Practice guided this DNP project leader's position in employing scholarly nursing practice. According to the American Association of Colleges of Nursing (AACN, 2006), scholarly nursing practice is described by the discovery of new phenomena and the use of

new discoveries in increasingly intricate practice circumstances. DNP Essential III centers on the DNP graduate's responsibility for upholding the standard of care and patient safety as well as a critical analysis of the ethical conundrums that arise in relation to patient care, healthcare institutions, and scientific research. Encouraging the use of the MPQ prior to prescribing antipsychotics could potentially lower the risk of relapse and/ or hospitalization for clients with schizophrenia diagnoses because the patient is more likely to continue to take medications of his or her preference. DNP Essential III best described this project because it is supportive of evidence- based practice and improving healthcare outcomes.

DNP Essential VI: Interprofessional Collaboration for Improving Patient and Population Health Outcomes encourages the use of an interprofessional team to improve patient outcomes. This DNP Essential is important for this doctoral project because effective communication and collaborative skills equips an interprofessional team with the necessary tools to develop and implement practice guidelines and standards of care (AACN, 2006). Through effective communication and teamwork skills, DNP Essential VI equips the DNP graduate to lead interprofessional teams in the study of complex practice and system problems. Relapse rates and hospitalization rates in schizophrenia are considered major problems in healthcare. Incorporating the use of the MPQ into practice allows the prescriber to potentially improve patient outcomes by improving patient medication adherence and population outcomes by decreasing relapse and hospitalization in patients with schizophrenia solely by considering the preference of the client.

Needs Assessment

The DNP project leader conducted a needs assessment at an aggressive community- based behavioral health treatment program in Jackson, Mississippi. This program sees 71 clients total with 36 clients having a diagnosis of schizophrenia. According to the Mississippi Department of Mental Health (MDMH), the Programs of Assertive Community Treatment (PACT) supports communal life, psychological restoration, and rehabilitation for individuals suffering from the most serious and chronic mental illnesses who have not profited from conventional outpatient programs. encourages (DMH, 2022). This patient population uses long-acting injectable antipsychotics and oral antipsychotic pills to manage symptoms associated with schizophrenia. The DNP project leader educated these clients on the importance of medication adherence and considered their preferences with the MPQ while identifying the type of medication (long- acting injectable antipsychotics or oral antipsychotic pills) used to manage psychotic symptoms aimed to prevent relapse. The results of the retrospective chart review determined if long- acting injectable antipsychotics are better than oral antipsychotic pills in reducing relapse in schizophrenia.

Synthesis of Evidence

Medication nonadherence in the schizophrenia population is a major problem for society. Clients with a diagnosis of schizophrenia have created a national economic burden. According to a systematic review by Chong et al., (2016), between 1.6% and 2.6% of overall healthcare spending, or 7% to 12% of the gross domestic product, is considered to be the direct expense of schizophrenia in Western nations. The burden the United States holds economically from schizophrenia estimated to be more than $60

billion yearly (Chong et al., 2016). This sum includes costs derived from direct (medical and nonmedical) costs, indirect costs, and intangible costs (Chong et al., 2016). To prevent furthering this economic crisis, healthcare providers are treating schizophrenia with medications that have properties to prevent psychosis. Typically, antipsychotics are used to manage these psychotic symptoms.

The risk of relapse is up to six times higher without the use of antipsychotics (Kishimoto et al., 2018). Long- acting injectable antipsychotics are frequently suggested for individuals with schizophrenia with known or anticipated noncompliance to oral antipsychotic pills. The supported text notes that long- acting injectable antipsychotics are more effective compared to oral antipsychotic pills in decreasing the hospitalization rate overall (Kishimoto et al., 2018). Clients with a schizophrenia diagnosis who take long- acting injectable antipsychotics are less likely to discontinue treatment compared to clients who take orals antipsychotic pills. This reasoning may be because of the psychopharmacological properties of long- acting injectable antipsychotics. Although the literature suggests that long- acting injectable antipsychotics are more effective at decreasing the risk of relapse when compared to oral antipsychotic pills, long-acting injectable antipsychotics are typically prescribed to those who are more severely ill or likely to relapse and require hospitalization more frequently (Kishimoto et al., 2018).

According to Kane et al. (2013), client compliance in taking prescription medication is one of the most difficult attributes of health care. There has been much research published of schizophrenia that shows that nonadherence is a major issue leading to a common cause of relapse and/ or rehospitalization (Kane et al., 2013). Kane et al. (2013) states refusal of medication may not be the leading cause of nonadherence.

Schizophrenic clients could possibly forget to take medications, which could be reasoning for exacerbations of schizophrenia. Additionally, adverse effects, costs associated with medications, stigma, and lack of insight all could be factors of nonadherence. Long-acting injectable antipsychotics offer guaranteed medication delivery for clients with schizophrenia compared to oral derivatives. When patients are taking oral antipsychotics, it is much more difficult to detect medication noncompliance, being that the first sign may be worsening condition, which is usually a late sign of nonadherence (Kane et al., 2013). Overall, Kane et al. (2013) suggested the use of long-acting injectable antipsychotics over oral antipsychotic pills in reducing relapse. Use of the MPQ helps healthcare providers learn which medication route the client prefers and why. The questionnaire shows the prescriber how important certain aspects of medication adherence are to clients such as patient empowerment, quality of life, treatment adherence, and symptom improvement. Clients can be an active participant of their treatment by verbalizing their medication preference and providing insight on their choices. This information alone has the potential to increase medication adherence and lower the risk of relapse in schizophrenia.

By eliminating the need for daily dosage and keeping steady therapeutic drug levels for extended periods due to pharmacokinetic characteristics, long-acting injectable antipsychotics lessen adherence stressors and decrease the risk of recurrence and/or hospitalization due to treatment cessation. (Blackwood et al., 2020). Regardless of these advantages, long- acting injectable antipsychotic prescription rates in most Western countries are low and are limited to patients who are previously nonadherent to oral antipsychotics pills and those who prefer and most likely would accept long- acting

injectable antipsychotics (Blackwood et al., 2020). Being that the benefits are evident, healthcare prescribers should look more into offering long- acting injectable antipsychotics to patients with a diagnosis of schizophrenia, in hopes of lowering the risk of relapse.

Focus Topics and Evidence- Based Findings

Attempting to measure nonadherence to detect relapse is difficult. One cannot solely rely on feedback from patients or family members and expect true responses. Compared to oral antipsychotic pills, it is suggested that long- acting injectable antipsychotics are more effective in reducing the risk of relapse in patients with schizophrenia. Correll and Lauriello (2020) determined that long- acting injectable antipsychotics should be considered as a substitute to oral formulations of antipsychotics because these drugs offer more consistent drug delivery, lower peak- through level differences, and offer superior dosing precision. The supportive text mentions a substantially higher medication compliance rate and lower relapse rate with long- acting injectable antipsychotics compared to oral antipsychotic pills. More importantly, long-acting injectable antipsychotics have shown to reduce the risk of mortality more than oral antipsychotic pills compared to no antipsychotic use at all in people with schizophrenia (Correll & Lauriello, 2020).

Compared to the academic highlights published by Correll and Lauriello (2020) and Stevens et al. (2016), the publications support the use of long- acting injectable antipsychotics over oral antipsychotic pills for treating schizophrenia to decrease the chance of relapse. The text supports the use of long- acting injectable antipsychotics over the use of oral antipsychotic pills for the initial episode of psychosis and for early

introduction of treatment for schizophrenia (Stevens et al., 2016). Currently, many healthcare providers utilize long- acting injectable antipsychotics for complex cases of schizophrenia. Typically, prescribers will initiate long- acting injectable antipsychotic treatment for schizophrenia cases where the use of oral antipsychotic pills have failed or in cases where relapse is common. Stevens et al. (2016) recommends long-acting injectable antipsychotic for treating the initial episode of psychosis related to schizophrenia to reduce rates of relapse, hospitalizations, and comorbidities and complications of untreated or undertreated ailment. LAIs lower adherence demands by removing the need for daily dosing and retaining stable therapeutic drug levels for longer periods and reduce the risk of relapse and rehospitalization due to treatment interruption (Blackwood et al., 2020).

Encouraging healthcare providers to use the MPQ to discover medication preference in schizophrenia could encourage clients to adhere to medication regimens of their preference lowering the risk for relapse. Recognizing preference could prompt a response to educate clients on what is working and what is not working to manage their symptoms and empower clients to be in control of their medication adherence. Preventing relapse lowers hospitalization rates and keeps people with schizophrenia in the community, thus improving quality of life.

Rational, Framework, Models, Concepts/Theories

When comparing long- acting injectable antipsychotics to oral antipsychotic pills in reducing the risk of relapse in patients with schizophrenia, research supports the use of long- acting injectable antipsychotics over oral antipsychotic pills. It is evident that long- acting injectable antipsychotics are superior to oral antipsychotic

pills in managing psychotic symptoms, increasing adherence, and reducing relapse. Healthcare providers are prone to offering oral medications prior to initiating injectable antipsychotics because it is believed that long- acting injectable antipsychotics are for clients who have poor medication adherence and higher rates of relapse. Truthfully, clients with schizophrenia prefer treating psychotic symptoms with long- acting injectable antipsychotics instead of oral antipsychotic pills because long- acting injectable antipsychotics are easier and do not require day-to-day usage (Blackwood et al., 2020).

Summary

The overall goal of treating schizophrenia is for patients to get better and live better, decrease psychotic symptoms, increase functioning and quality of life, thus improving well-being (Stevens et al., 2016). Living with untreated schizophrenia could lead to a debilitating lifestyle. Impairments in functional performance are characteristic of schizophrenia. The schizophrenia population has trouble with maintaining independent living skills such as meal preparation, medication administration, preparing laundry, caring for children, and managing funds for independent living. Schizophrenia can also increase suicidal thoughts and behaviors. The economic burden associated with the relapse rates of clients with schizophrenia has the world is a financial chokehold. This burden could end when more clients diagnosed with schizophrenia adhere to medication regimen thus lowering the risk of relapse. It is imperative for healthcare providers to choose the appropriate medication regimen for the client and identify signs of relapse early. This doctoral project will determine if medication preference can help a provider determine if long- acting injectable antipsychotics are better compared to oral antipsychotics in reducing the risk of relapse in clients with schizophrenia. In Chapter I,

the DNP project leader provided the introduction, background, significance, purpose of project, objective and expected outcomes, PICO statement and theoretic framework. The leader of this doctoral project also included DNP Essentials, needs assessment, synthesis of evidence, focused topics and evidence- based findings, and rationale- framework. Chapter II will discuss the potential methods to be utilized in this doctoral project.

CHAPTER II - METHODS

The purpose of this doctoral project was to determine if long- acting injectable antipsychotics (LAIs) are better at managing symptoms compared to oral antipsychotics pills (OAPs) in reducing the risk of relapse in patients with schizophrenia based on patient medication preference. The goal was to bring awareness to the Medication Preference Questionnaire (MPQ) during assessment, prior, and after medication trials to assess how clients feel about taking their antipsychotic medications. It is imperative for healthcare providers to consider the client's preference of medication to manage schizophrenia symptoms so that they can identify what is working and what needs to change. Responding to a client with schizophrenia quickly can prevent a psychotic break and/ or relapse. The use of the MPQ would aid the healthcare provider in identifying which medications the client has a higher chance of maintaining adherence to, potentially determine which antipsychotics would be most appropriate for the patient in hopes of lowering the risk of relapse.

Setting

The doctoral project took place at an aggressive community- based behavioral health treatment program in Jackson, Mississippi. This program sees 71 clients total with 36 clients having a diagnosis of schizophrenia. The program is staffed by a Program Director, one Psychiatric- Mental Health Nurse Practitioner (PMHNP), two Registered Nurses (RNs), and two therapists, and one secretary. The program only allows adult clients who have the most severe and persistent mental illnesses and have not benefited from traditional outpatient services. This program is an assertive community- based treatment program that is mobile, delivering services to people in their homes and

communities. This program nor does the prescriber use a questionnaire to determine medication preference prior to prescribing antipsychotics. There was a great opportunity to initiate the use of the MPQ in this setting.

Population/Sampling

The population of interest consisted of mental health clients with a diagnosis of schizophrenia. This population included adult clients ages 18-64. Each of these clients were prescribed long- acting injectable antipsychotics or oral antipsychotics to manage psychotic symptoms associated with schizophrenia. This project excluded clients with bipolar disorders, schizoaffective disorder, and autism spectrum disorders. This project also excluded adolescent clients who were younger than 18 years of age and geriatric patients who were older than 64 years of age. The PACT team has a total of 71 clients total. 35 clients were excluded from the research due to having a mental illness diagnosis other than schizophrenia. Out of the 36 clients with schizophrenia, a total of 30 clients inquired about the research opportunity, but only 20 clients (66.67%) agreed to provide informed consent. A convenience sample of 20 clients (N=20) was determined eligible to participate in this project.

Data Collection, Procedures, and Design

The University of Southern Mississippi's Institutional Review Board (IRB) granted permission to conduct the doctoral project on February 20, 2023 (IRB Protocol # 23-0031). After receiving IRB approval, the DNP project leader hosted a 30- minute educational afternoon session for the PMHNP and RN. The primary purpose of the educational session was to educate the prescriber and the RN about the MPQ and the importance of considering a client's preference when starting or changing medications.

The DNP project leader also posted invitations on flyers and extended telephone calls to recruit potential clients to participate in this research opportunity. A total of 20 clients agreed to consent and complete the questionnaire. After informed consent was gained, a retrospective chart review was completed. The DNP project leader confirmed that all clients' psychiatric diagnosis was schizophrenia, and reviewed psychiatric medications, specifically antipsychotics and recent hospitalizations within the last year.

Instruments

1. Informed Consent

All participants were required to sign a consent to participate. The informed consent form explained the purpose of the research, procedures, risks, benefits, costs, and confidentiality. All participants were educated that a retrospective chart review would be done, and the consent allows the DNP project leader access to review medical records for data collection.

2. The Medication Preference Questionnaire (MPQ)

The Medication Preference Questionnaire (MPQ) is comprised of two subdimensions: nine statements on reasons for general treatment preference based on goals/ outcomes and five to six statements on preference based on personal experience. The statements regarding general treatment preference are answered with "important" or "not important". The statements regarding preference based on personal experience are answered with "yes" or "no". This questionnaire is completed by the client regarding his or her preference on long- acting injectable antipsychotics or oral antipsychotic pills, and why. For accurate interpretation, clients were deterred from answering statements with "not sure". The MPQ can be used as self- administered questionnaire.

Ethical Considerations

All participants who met the criteria appropriate for this doctoral project were provided with a written consent form including information regarding confidentiality, objective of project, processes, risks, benefits, and the DNP project leader's contact information. No sensitive patient health information or HIPAA identifiers were disclosed. Participants were informed in writing and verbally that at any time, they could terminate their consent to participate without any repercussions.

Data Analysis

Data from this doctoral project included a retrospective chart review and the Medication Preference Questionnaire (MPQ) which is a brief self- administered questionnaire that identifies clients' preference for long- acting injectable antipsychotics or oral antipsychotic pills. The MPQ is classified as a Likert scale. A Likert scale is a type of rating scale that is used mostly in questionnaires for research purposes.

Summary

Chapter II of this doctoral project discussed the setting, population/ sampling, data collection, procedures and design, ethical considerations, data analysis and summary. The MPQ was used at the instrumentation for this doctoral project. Chapter III will discuss the results of this doctoral project.

CHAPTER III - RESULTS

The purpose of this doctoral project was to determine if client preference for long-acting injectable antipsychotics compared to oral antipsychotic pills relates to lowering relapse rates in schizophrenia. The results of this data will improve medication adherence and increase the usage of long-acting injectable antipsychotic in clients with schizophrenia. This doctoral project will provide evidence of best practices and quality improvement for recognizing client medication preference related to lowering relapse rates in schizophrenia.

Analysis of Data

Descriptive Statistics

Twenty (N=20) clients were found to be eligible to participate in this doctoral project. Twelve (60%) participants preferred long- acting injectable antipsychotics over oral antipsychotic pills. There were eight (40%) participants who preferred oral antipsychotics pills over long- acting injectable antipsychotics. Based on the retrospective chart review, six out of eight (75%) participants who preferred oral antipsychotic pills (OAPs) required two or more psychiatric hospitalizations within the last year, while only three out of twelve (25%) participants who preferred long- acting injectable antipsychotics (LAIs) required two or more psychiatric hospitalizations within the last year. The data collection revealed that 75% of clients who preferred OAPs alone were getting monthly long- acting injectable antipsychotics. Twenty (100%) participants were African American. A total of fifteen (75%) clients were male, while the other five (25%) were female.

Table 1

Medication Preference: LAIs vs OAPs

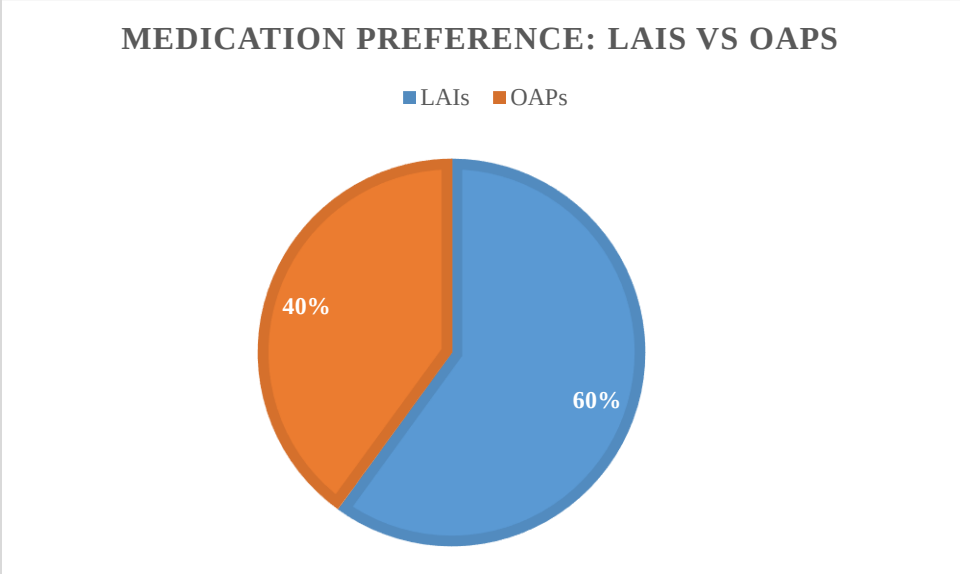
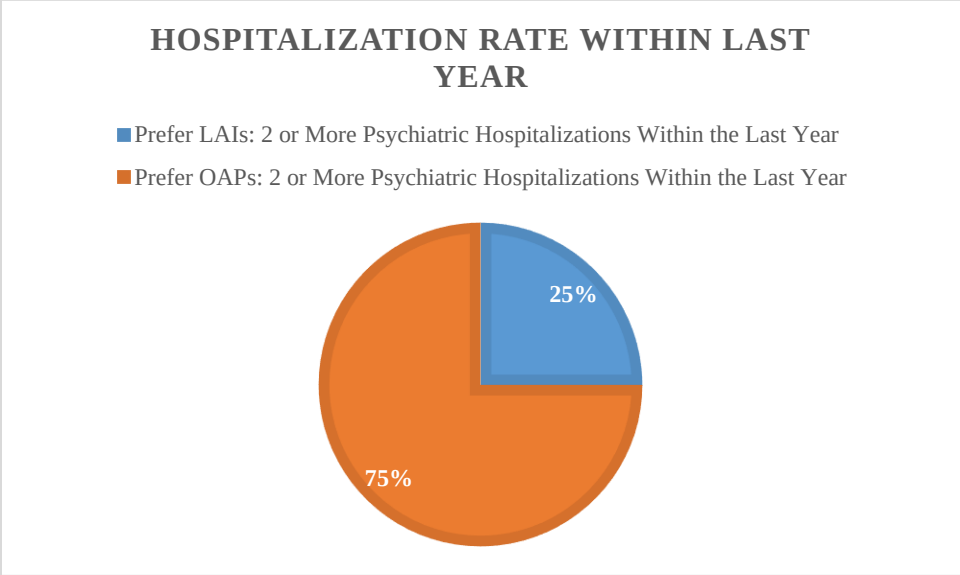


Table 2

Hospitalization Rate Within Last Year



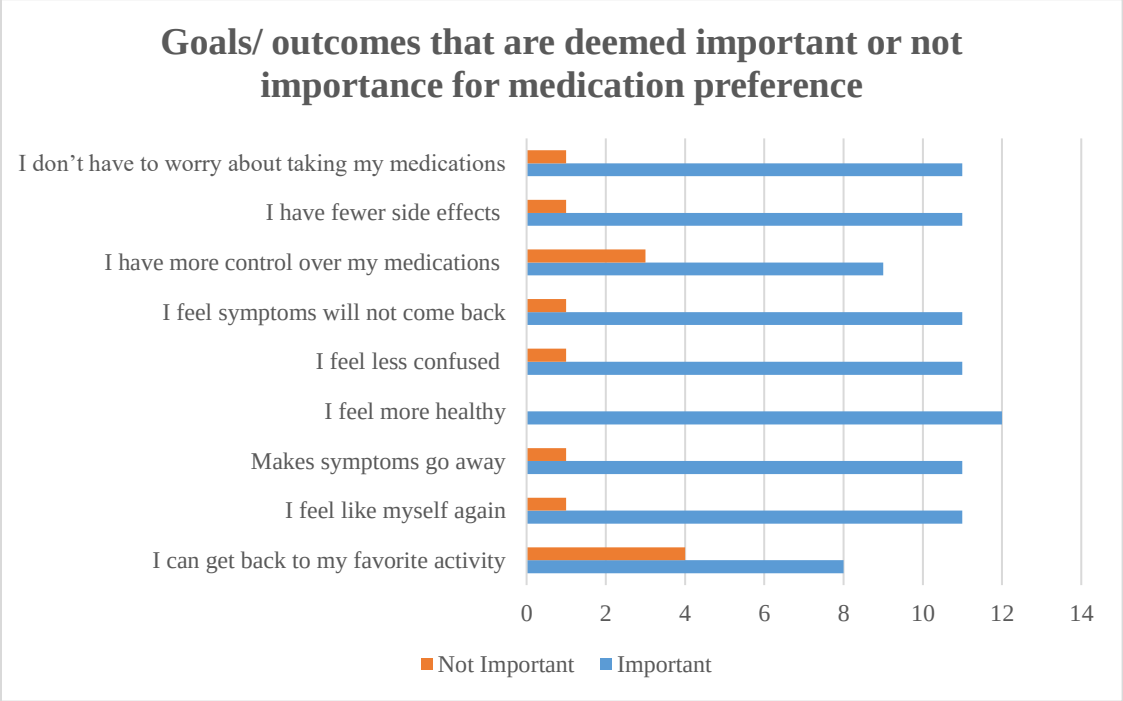
Discussion

Majority of the PACT participants preferred long- acting injectable antipsychotics (LAIs) over oral antipsychotic pills (OAPs) to manage symptoms associated with schizophrenia. The first subdimension of the Medication Preference Questionnaire allowed the clients to determine what aspects of general treatment preference is important to them. Based on the results, many clients who prefer LAIs find that their antipsychotic medication does make a difference and improves their quality of life and makes them feel empowered.

There were nine statements that participants were asked to answer using "important" or "not important" to describe the importance of each. 66.67% of participants who preferred LAIs listed "I can get back to my favorite activities" as important. 91.6% of participants who preferred LAIs listed "I feel like myself again", "It makes my symptoms go away", "I feel less confused", "I feel my symptoms will not suddenly come back", "I have few side effects from my medicine, and "I don't have to think about taking my medicine" as important. 100% of participants who preferred LAIs listed "I feel more healthy" as important. 75% of participants who preferred LAIs listed "I feel more in control over the medicine I take" as important.

Table 3

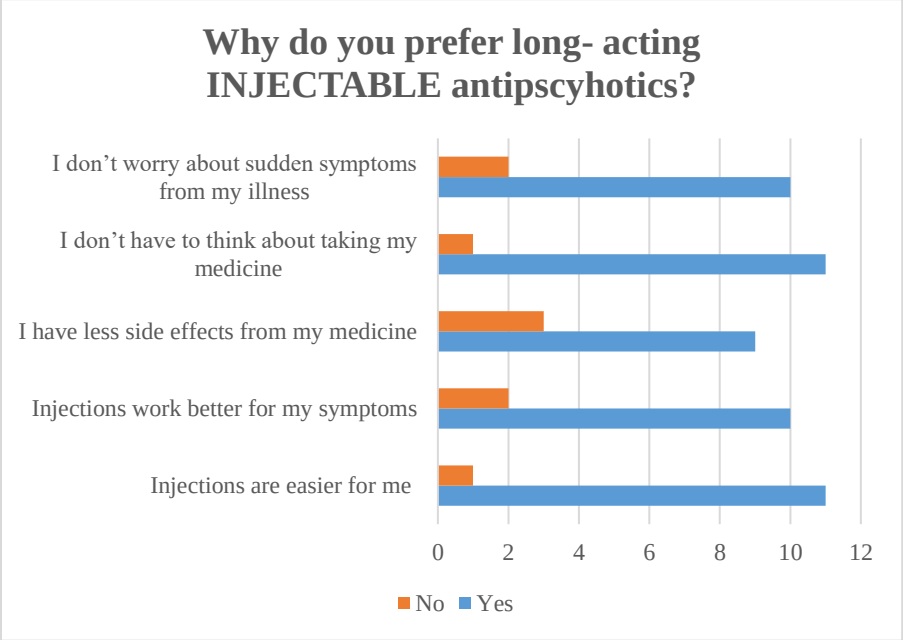
LAI preferred Goals/ Outcomes



Participants also completed the second subdimension of the MPQ, which asked for preference based on personal experience. There were five statements regarding LAI preference that participants were asked to answer using "yes" or "no". 91.6% of participants who preferred LAIs listed "Injections are easier for me" and "I don't have to think about taking my medicine" as "yes". 83.3% of participants who preferred LAIs listed "Injections work better for my symptoms" and "I don't worry about sudden symptoms from my illness" as "yes". 75% of participants who preferred LAIs listed "I have less side effects from my medicine" as "yes".

Table 4

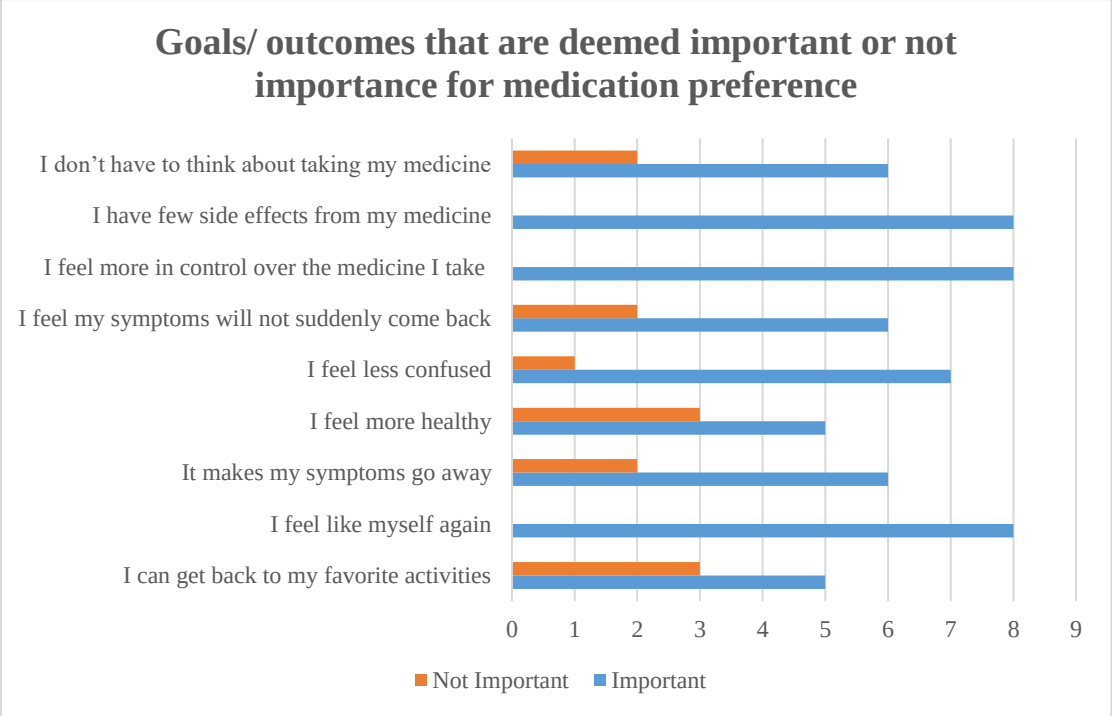
LAI preferred



62.5% of participants who preferred OAPs listed "I can get back to my favorite activities" and "I feel more healthy" as important. 100% of participants who preferred OAPs listed "I feel like myself again", "I feel more in control over the medicine I take", and "I have few side effects from my medicine" as important. 75% of participants who preferred OAPs listed "It makes my symptoms go away", "I feel my symptoms will not suddenly come back", and "I don't have to think about taking my medicine" as important. 87.5% of participants who preferred OAPs listed "I feel less confused" as important.

Table 5

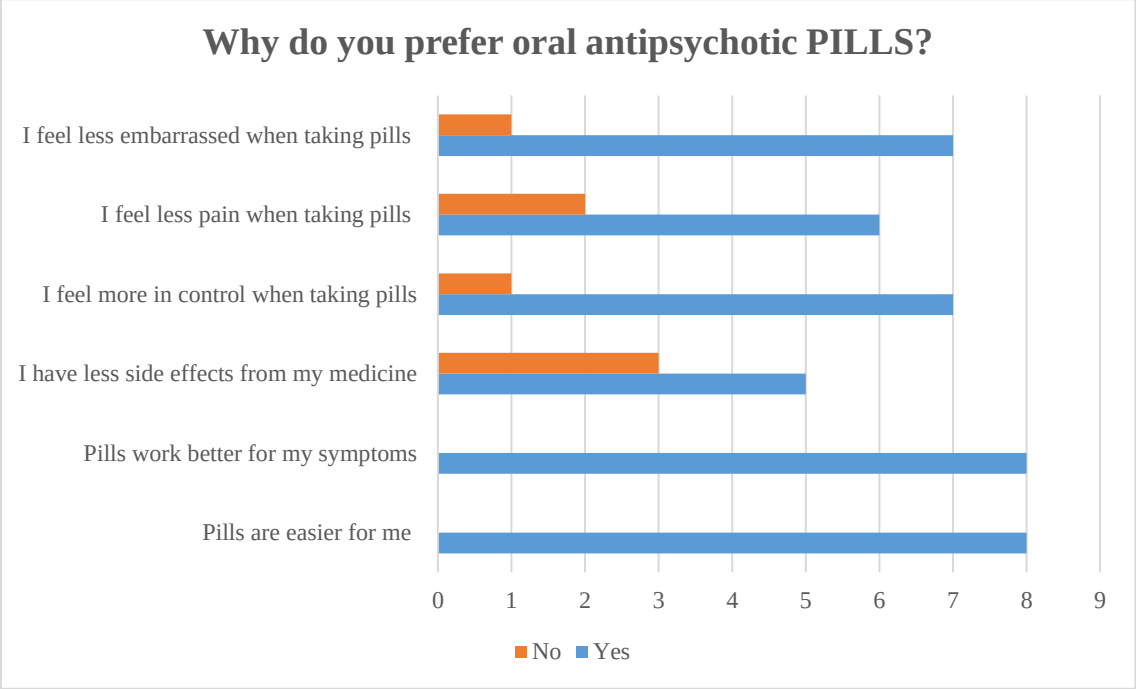
OAPs preferred Goals/ outcomes



The second subdimension of the MPQ had six statements regarding OAP preference that participants were asked to answer using "yes" or "no". 100% of participants who preferred OAPs listed "pills are easier for me" and "pills work better for my symptoms" as "yes". 62.5% of participants who preferred OAPs listed "I have less side effects from my medicine" as "yes". 87.5% of participants who preferred OAPs listed "I feel more in control when taking pills" and "I feel less embarrassed when taking pills" as "yes". 75% of participants who preferred OAPs listed "I feel less pain when taking pills" as "yes".

Table 6

OAP Preferred



The results of this project suggest that medication preference for long- acting injectable antipsychotics or oral antipsychotic pills do have a relationship with the risk of relapse in schizophrenia. Participants who were taking medications that they preferred tend to have lower psychiatric hospitalizations compared to those who were taking medications outside of their preference. The results also suggest that long- acting injectable antipsychotics are better at reducing relapse and lowering hospitalizations than oral antipsychotic pills. The clients who preferred LAIs had better insight and judgement based on the results from the Medication Preference Questionnaire compared to those that preferred OAPs to manage symptoms of schizophrenia. This project supports that there is a need for prescribers to identify patient medication preference prior to starting or changing antipsychotic medications. This project also supports that long- acting

injectable antipsychotics should be used more with schizophrenia to reduce the risk of relapse and/ or hospitalization.

Summary

Chapter III presented an overview of the findings and analysis of results in this research. The MPQ was deemed a reliable tool to determine if preference related to relapse in schizophrenia. Chapter IV will discuss limitations and future practice implications.

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CHAPTER IV – DISCUSSION

The purpose of this Doctor of Nursing Practice (DNP) project was to determine how effective long- acting injectable antipsychotics were compared to oral antipsychotic pills in reducing the risk of relapse in schizophrenia in relation to patient medication preference. The Medication Preference Questionnaire (MPQ) was used to determine if clients receiving aggressive- community- based treatment preferred long- acting injectable antipsychotics (LAIs) or oral antipsychotic pills (OAPs) to manage symptoms associated with schizophrenia. A retrospective chart review was also completed to determine number of psychiatric hospitalizations within the last year.

. The results from this doctoral project suggest that there is correlation between patient medication preference for LAIs or OAPs and relapse and/ or hospitalization. The results indicate that using the Medication Preference Questionnaire (MPQ) that LAIs are preferred over the use of OAPs for managing symptoms of schizophrenia. Clients who were taking the medication of their preference has lower rates of psychiatric hospitalizations within the last year. Results suggest that implementing the MPQ into practice could be an asset for prescribers.

Limitations

This project was completed in a limited time of one week. Time certainly limited the number of participants that were invited to participate in this research study. The Programs of Assertive Community Treatment (PACT) team manages 36 clients with a diagnosis of schizophrenia, resulting in a small population size. Another limitation to note is the client's thought process and insight. Some clients with schizophrenia have poor insight and judgement leading to medication nonadherence.

Future Practice Implications

The design and implementation of a medication preference questionnaire into the project led to the integration of a medication preference questionnaire which will continue to be used as an assessment tool prior to starting or changing medications on the PACT team. The staff had inadequate knowledge of the questionnaire prior to this doctoral project. The provider found the results to be beneficial and agreed that the questionnaire would be a successful tool to implement prior to starting or changing antipsychotic medications on PACT clients with schizophrenia, schizoaffective disorder, and bipolar disorder. The provider also recognized that preference does relate to medication adherence in the schizophrenia community.

Conclusion

Clients who participated in this project generally preferred long- acting injectable antipsychotics (LAIs) over oral antipsychotic pills (OAPs) as a choice of treatment to manage symptoms of schizophrenia. The MPQ showed that patients who preferred LAIs had higher rates of maintain quality of life goals compared to those who preferred OAPs. Relapse associated with schizophrenia creates a tremendous burden financially, physically, and emotionally. Antipsychotic medications combat the symptoms of schizophrenia. It is important to be able to identify a client's preference for long- acting injectable antipsychotics or oral antipsychotic pills when managing schizophrenia symptoms to lower the risk of relapse. The previously stated text notes that long- acting injectable antipsychotics are more effective compared to oral antipsychotic pills in decreasing the hospitalization rate overall (Kishimoto et al., 2017).

APPENDIX A – Institutional Review Board Approval

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:	23-0031
PROJECT TITLE:	Implementing a Medication Preference Questionnaire In Schizophrenia to Decrease the Risk of Relapse
SCHOOL/PROGRAM	Leadership & Advanced Nursing
RESEARCHERS:	PI: Chelsea Aldridge Investigators: Aldridge, Chelsea~Greer, Anita~
IRB COMMITTEE ACTION:	Approved
CATEGORY:	Expedited Category
PERIOD OF APPROVAL:	20-Feb-2023 to 19-Feb-2024

Donald Sacco, Ph.D.
Institutional Review Board Chairperson

APPENDIX B – Medication Preference Questionnaire

1. Reasons for general treatment preference based on goals/outcomes (Page 1)

Medication Preference Questionnaire for Patients

This questionnaire asks you about the medicine you take for your illness.
For each question, please *tick the box* that best describes your opinion.

How important is each of the following statements?	Not important	Not sure	Important
1. I can get back to my favorite activities	☐	☐	☐
2. I feel like myself again	☐	☐	☐
3. It makes my symptoms (such as hearing voices) go away	☐	☐	☐
4. I feel more healthy	☐	☐	☐
5. I feel less confused	☐	☐	☐
6. I feel my symptoms (such as hearing voices) will not suddenly come back	☐	☐	☐
7. I feel more in control over the medicine I take	☐	☐	☐
8. I have few side effects from my medicine	☐	☐	☐
9. I don't have to think about taking my medicine	☐	☐	☐

2. Preference based on personal experience (Page 2)

Based on your experience with both pills and injections, which ONE you prefer?

☐ **Pills**

Why do you prefer PILLS?

↓ Answer the following questions

I prefer PILLS because:	No	Not sure	Yes
A) Pills are easier for me	☐	☐	☐
B) Pills work better for my symptoms (such as hearing voices)	☐	☐	☐
C) I have less side effects from my medicine	☐	☐	☐
D) I feel more in control when taking pills	☐	☐	☐
E) I feel less pain when taking pills	☐	☐	☐
F) I feel less embarrassed when taking pills	☐	☐	☐

☐ **Injection**

Why do you prefer INJECTIONS?

↓ Answer the following questions

I prefer INJECTIONS because:	No	Not sure	Yes
A) Injections are easier for me	☐	☐	☐
B) Injections work better for my symptoms (such as hearing voices)	☐	☐	☐
C) I have less side effects from my medicine	☐	☐	☐
D) I don't have to think about taking my medicine	☐	☐	☐
E) I don't worry about sudden symptoms from my illness	☐	☐	☐

If you have other reasons why you prefer pills or injections, please describe them:

APPENDIX C – Informed Consent

CONSENT TO PARTICIPATE

This Doctor of Nursing Practice project has been approved by the University of Southern Mississippi Institutional Review Board Protocol # 23-0031

Title: Comparing Long- Acting Injectable Antipsychotics to Oral Antipsychotic Pills in Patients with Schizophrenia

Principal Investigator: Chelsea Aldridge

I. Purpose: You are invited to participate in a research study. The purpose of this Doctor of Nursing Practice (DNP) project is to conduct a retrospective chart review to determine if patient preference of long- acting injectable antipsychotics compared to oral antipsychotics pills can reduce the risk of relapse in schizophrenia with the use of a Medication Preference Questionnaire (MPQ). A retrospective chart review is an analysis of existing data. The data that will be used for this research project includes psychiatric diagnosis, medications, and recent hospitalizations. The data will be used in this retrospective chart review to help the researcher understand treatment patterns and view clinical outcomes in a real-world setting.

II. Procedures: A retrospective chart review will be done to determine diagnosis, medications, and recent hospitalizations. Clients with schizophrenia will complete a Medication Preference Questionnaire (MPQ). The results of the questionnaire will be used to determine if medication preference is a factor in relapse.

III. Risks: There are no risks associated with the use of this questionnaire.

IV. Benefits: No benefit can be promised to you from your participation in this study. The knowledge gathered from your participation in this study will have the potential of assisting the mental health professional with considering patient's medication preference in hopes of identifying and reducing the risk of relapse in this population. This tool can potentially guide a health care provider in choices of medications such as long- acting injectable antipsychotics or oral antipsychotic pills for patients with schizophrenia.

VI. Confidentiality: This DNP project will not include any identifying information.

V. Voluntary Participation: Participation in this study is completely voluntary. You may refuse to participate in this study or withdraw at any time.

VI. Costs: There are no costs associated with your participation in this study.

VII. Contact Persons: For any questions about this study, please contact the DNP project leader Chelsea Aldridge by email at chelsea.aldridge@usm.edu or cell phone 601-595-1613. I will gladly be of any assistance to you regarding any questions, concerns, or complaints about this study.

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