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Staff Education Program to Reduce Medication Noncompliance in Patients Diagnosed with Schizophrenia

Patience Madu
Walden University

Walden University

College of Nursing

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Patience Madu

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and that any and all revisions required by
the review committee have been made.

Review Committee
Dr. Mary Martin, Committee Chairperson, Nursing Faculty
Dr. Melissa Rouse, Committee Member, Nursing Faculty

Chief Academic Officer and Provost
Sue Subocz, Ph.D.

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Executive Summary: Staff Education Project

Staff Education Program to Reduce Medication Noncompliance in Patients Diagnosed with Schizophrenia

by

Patience Madu

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Summary

Medication noncompliance is a significant challenge in managing schizophrenia, a chronic and severe mental health disorder characterized by symptoms such as delusions, hallucinations, disorganized thinking, and impaired functioning. Schizophrenia presents both positive symptoms, which involve exaggerated thoughts or behaviors, and negative symptoms, which reflect a lack of normal mental activity. Consistent medication management is important for stabilizing this condition. However, research shows that many patients with schizophrenia struggle with medication adherence. In this executive summary, I outline the staff education program I designed to equip mental health nurses with skills, knowledge, and strategies to address medication noncompliance. The practice-focused question I sought to answer was, does an educational program delivered to staff nurses increase nurses' knowledge of how to encourage medication adherence among patients diagnosed with schizophrenia?

I based the program on the health belief model (HBM) with the intent to help participating nurses understand the factors contributing to noncompliance and provide actionable strategies to promote adherence. The program's effectiveness was assessed through pre- and post-surveys, with the data analyzed using a paired *t* test and Pearson correlation. The results demonstrated a significant increase in knowledge, with a *p* value of less than 0.05, indicating the program's success in improving nurses' ability to manage medication adherence. Medication noncompliance has serious consequences for both individuals and society, including symptoms exacerbation, frequent hospitalizations, and a decline in patients' quality of life. By enhancing nurses' knowledge, this program may enable nurses to better educate patients and promote medication compliance.

Background

Patients with schizophrenia often struggle with medication noncompliance, which is a major barrier to effective treatment. Nonadherence rates in U.S. patients with schizophrenia are between 63% to 74% (Loots et al., 2021). Approximately 25% of patients stop taking their medication within the 1st week after their discharge from the hospital (Loots et al., 2021). Noncompliance is associated with a variety of factors, including debilitating side effects of antipsychotic medications, poor insight into one's illness, and lack of support systems. Patients who do not adhere to their medication protocol may also be susceptible to cognitive impairment and memory issues, depression, and paralysis (Semahegn et al., 2020).

Practice-Focused Question

The practice-focused question underpinning this project was, "Does an educational program delivered to staff nurses increase nurses' knowledge of how to encourage medication adherence among patients diagnosed with schizophrenia?". Does an educational program delivered to staff nurses increase based on the HBM for staff nurses increase nurses' knowledge of how to encourage medication adherence among patients diagnosed with schizophrenia? Nurses, as frontline health care providers, play an essential role in supporting medication adherence through education, encouragement, and monitoring. However, their effectiveness in this role can be limited by insufficient training and skills. This knowledge gap can result in suboptimal interventions that fail to promote adherence, leading to relapse, hospital readmissions, and increased health care costs (Cahaya et al., 2022). Implementing a targeted educational program for nurses, specifically one based on a theoretical model like the HBM, could enhance their ability to

support medication adherence. Improved adherence could lead to better patient outcomes, a reduced likelihood of relapse, and optimized use of health care resources.

Significance and Purpose

Improving medication adherence in patients with schizophrenia is an important component of enhancing overall treatment outcomes. Noncompliance with prescribed antipsychotic medications can lead to relapse, hospitalization, and worsening of symptoms, placing a significant strain on patients, caregivers, and the health care system (Cahaya et al., 2022). By implementing a targeted staff education program, nurses can gain a deeper understanding of the factors contributing to medication nonadherence, such as side effects, stigma, cost of treatment, and lack of insight into the illness (Mohammed et al., 2024). Other factors associated with noncompliance are substance abuse, cultural factors, lack of family support, and cognitive problems (Cahaya et al., 2022). Individuals with schizophrenia often experience cognitive impairments from the onset of the illness, which leads to lower academic performance and reduced likelihood of pursuing high education compared with their peers without the condition (Zhu et al., 2023).

Following medication guidelines is essential for patients with schizophrenia to achieve effective treatment. It helps them recover better, lowers the chances of relapse, and reduces the financial strain on both families and society (Guo et al., 2023). I developed this training to provide nurses with strategies, including psychoeducation and personalized care approaches, to more effectively engage patients in their treatment. Enhanced nursing support can foster stronger therapeutic relationships, improve patients' confidence in managing their symptoms, and increase adherence to medication regimens. Subsequent outcomes include more stable patient outcomes, reduced relapse rates, fewer

hospitalizations, and lower overall health care costs, ultimately alleviating the burden on health care resources while improving patients' quality of life.

Health Belief Model

The HBM is a psychological model that explains and predicts health behaviors by focusing on attitudes and beliefs. According to the HBM, an individual's likelihood of engaging in a health behavior is influenced by their perceptions of the severity of a health problem, their susceptibility to it, the benefits of taking a preventive action, and the barriers to taking that action (Alagili & Bamashmous, 2021). In the context of medication adherence, the HBM suggests that nurses' understanding of these perceptions can help them address patients' concerns and improve adherence. In the context of schizophrenia, medication noncompliance often stems from patients' perceptions of their illness and the side effects of their medication, alongside other cognitive and psychological barriers (Muiruri et al., 2023).

With these components integrated into the training, the education program may enable nurses to identify and address these barriers. The interactive aspects of the training reinforce the theoretical knowledge of schizophrenia and the practical application of the HBM. This insight may help nurses to understand the challenges of patient behaviors and to better engage with patients in meaningful conversations about their health. The HBM provides a framework for addressing patients' beliefs and attitudes towards their medication. By recognizing and addressing patients' concerns about medication side effects, perceived severity of their condition, and the benefits of adherence, nurses can tailor their educational and support efforts to improve medication compliance.

Summary

In this section, I provided the background and context of the education program, highlighting the importance of the HBM in addressing medication noncompliance. The first aim of the program is to enhance nurses' knowledge of schizophrenia, medication noncompliance, and the factors that influence adherence. Schizophrenia is a complicated disorder, and medication adherence is essential for stabilizing patients (Guo et al., 2023). The training ensures that nurses have a deep understanding of these dynamics and can identify both patient related and medication related barriers to adherence. The second aim of the program is to improve patient outcomes by fostering better management practices among nurses. By equipping nurses with the tools to engage patients and develop tailored strategies to address noncompliance, the program contributes to efforts to reduce relapse rates and hospital readmissions. Improved outcomes also stem from enhanced therapeutic alliances between nurses and patients that are cultivated through effective communication and understanding. In the Staff Education Project Development section, I further discuss the relevance of the HBM to nursing practice and the local context, along with my role as the Doctor of Nursing Practice student in the project.

Staff Education Project Development

Seven staff nurses from a mental health facility participated in the program. They were chosen based on their roles in managing schizophrenia patients and their willingness to take part in the educational intervention. I structured the program around a Microsoft PowerPoint presentation, focusing on different aspects of HBM. The training sessions included an overview of schizophrenia, an exploration of the HBM, and practical strategies for improving medication adherence through enhanced patient communication

and engagement. Participants were provided with tools to assess barriers to medication adherence and develop individualized approaches for overcoming these obstacles. To measure the program's effectiveness, I administered pre- and post-training surveys. The results were analyzed using *t* tests to identify statistically significant improvements, if any, in nurses' knowledge and skills.

Doctoral Student Role

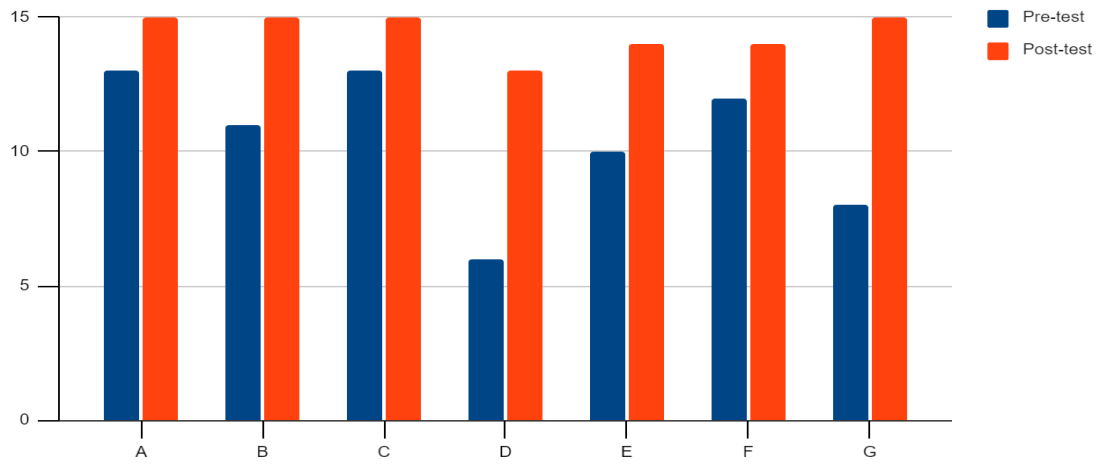
Medication noncompliance is a pressing issue in the management of schizophrenia. The high rate of nonadherence among patients with schizophrenia necessitates targeted interventions to support and educate health care providers. I designed the education program to address this need by providing nurses with the knowledge and skills required to effectively support medication adherence. I played a central role in developing and implementing the education program. My responsibilities included designing the curriculum, delivering the training sessions, and evaluating the program's effectiveness.

Results

The pretraining survey revealed a varied understanding of schizophrenia, medication compliance, and the practical application of the HBM among participants. Although some nurses had a good grasp of the theoretical components, they struggled with implementing practical strategies to manage noncompliance effectively. The post training survey, however, showed substantial improvements in the nurses' knowledge. Nurses reported feeling more equipped to engage patients in meaningful conversations about medication compliance, address patient concerns, and navigate barriers to adherence. Figure 1 shows the pre- and post-training results.

Figure 1

Pre- and Post training Results



I conducted a paired *t* test to determine whether there was a significant difference between the two variables (pretest and posttest) under study (see Table 1). The sample included seven paired observations. The mean of the pretest was 10.43, and the mean of posttest was 14.43, resulting in an observed mean difference of -4. The variance for the pretest was 6.95. The posttest had a much lower variance of 0.62. The Pearson correlation between the paired samples was 0.62, indicating a moderate positive relationship. The *t*-statistic was calculated as -4.73 with 6 degrees of freedom. At an alpha level of 0.05, the critical value for a one-tailed test 1.94, whereas the critical value for a two-tailed test was 2.45.

Table 1

Paired t*–Test Results*

Statistic	Results	
	Pretest	Posttest
M	10.42857143	14.42857143
Variance	6.952380952	0.619047619
Observations	7	7
Pearson *r*	0.6197487509	
Observed *M* difference	-4	
Variance of the differences	5	
df	6	
t	-4.732863826	
p (T <= *t*) one-tail	0.001607504493	
t critical one-tail	1.943180281	
p (T <= *t*) two-tail	0.003215008985	
t critical two-tail	2.446911851	

The *p* value for the one-tailed test was 0.0016, and for the two-tailed test, it was 0.0032. Because both *p* values are less than the alpha level of 0.05, the null hypothesis was rejected. The result suggests that there is a statistically significant difference between the pretest and posttest, with a mean difference of -4. The results indicate strong evidence that the two variables differ in a meaningful way.

Strengths and Limitations

One of the strengths of the staff education program is its use of the HBM, which provided a structured and evidence-based approach to understanding and addressing medication noncompliance. The HBM's focus on individual perceptions and barriers allows for personalized interventions that are more likely to succeed (Alagili & Bamashmous, 2021). However, the project also has some limitations. The sample size of seven nurses was relatively small, which limits the generalizability of the results. The program's focus on short-term knowledge gains does necessarily guarantee long-term

behavioral change or improved patient outcomes. Future iterations of the program should include long-term follow-up to assess whether the improvements in knowledge and skills are sustained over time and whether they translate into better patient adherence and outcomes.

Conclusions

Impact on Organization

The program may have a positive impact on the organization by enhancing nurses' knowledge, communication skills, and ability to apply the HBM in clinical practice. The increase in nurses' knowledge of schizophrenia and its associated treatment challenges was recognized, as many participants reported having a better understanding of the factors that contribute to medication noncompliance. The improvement in compliance skills was another important outcome. Nurses felt more confident in discussing medication adherence with patients and were better able to address patient concerns. This change may result in better patient engagement and, ultimately, improved adherence to treatment regimens.

Interdisciplinary collaboration plays an important role in preventing medication noncompliance in patients with schizophrenia. Professionals working in interdisciplinary teams depend on the expertise of each discipline, leading to the development of shared goals for patient care (Bendowska & Baum, 2023). This involves the expertise of various health care professionals, including psychiatrists, psychiatric nurse practitioners, pharmacists, social workers, and case managers to ensure coordinated care. Psychiatrists and psychiatric mental health nurse practitioners are critical in providing accurate diagnoses, prescribing appropriate medications, and monitoring treatment efficacy.

Pharmacists offer valuable insight into medication management, ensuring patients understand their prescriptions, potential side effects, and the importance of adherence. Social workers and case managers help to address psychosocial barriers such as housing instabilities, unemployment, or lack of family support, which often contribute to noncompliance (Löwe et al., 2022). They can also connect patients with community resources, such as housing programs or financial assistance, that promote stability and adherence. Therapists and counselors can assist patients in understanding their illness and treatment, providing education and support to manage symptoms and develop coping strategies (Reist et al., 2022).

It is important for health care professionals to inform patients about their health conditions and treatment, building relationships based on empathy and support, and to encourage personal reflection on communication and teamwork across different disciplines (Mata et al., 2021). Regular communication and collaboration among team members ensure a holistic approach, addressing both the medical and social factors that influence medication adherence. Interdisciplinary collaboration enhances patient outcomes, as it promotes trust, shared decision-making, and patient-centered interventions to reduce the risk of relapse and hospitalization. This program holds importance beyond the private practice that served as the project site because increasing adherence to psychotropic medications may improve patients' stability and functionality in society.

Recommendations

To build on the success of this program, I recommend that ongoing training be provided to ensure that nurses stay informed about the best practices and new research in

the field of medication adherence. Regular refresher courses can help maintain the skills and knowledge gained during the program. The continued use of the HBM as a framework for patient-centered approaches is important, as it allows nurses to tailor their strategies to the unique needs of each patient. Developing support systems and additional resources for nurses can further reinforce the application of these strategies in everyday practices, ensuring that the improvements in knowledge and skills lead to sustained changes in patient outcomes. Psychoeducation for families about schizophrenia has been found effective in positively influencing family members' responses and indirectly improving patients' adherence to their treatment plan (Budiono et al., 2021).

Therapeutic Communication and Patient Care

The staff education program demonstrated the effectiveness of using the HBM to guide nurse training on medication adherence in schizophrenia patients. This education program emphasizes effective communication between nurses and patients. Often, patients with schizophrenia may struggle with insight into their illness or may have misconceptions about their treatment (Ali et al., 2023). Training nurses to engage patients in open, nonjudgmental conversations about their concerns, the program helps nurses build trust and encourage adherence. Therapeutic communication boosts patients' understanding, helping them to use self-care strategies that improve their health and well-being. Ultimately, effective communication between nurses and patients can lead to better treatment outcomes through meaningful interaction (Lee et al., 2022). Communication is not only about conveying information; it also involves listening to patients, addressing their fears and concerns, and finding collaborative solutions. The pre- and postsurvey results emphasize the value of targeted education in enhancing nurses'

understanding of schizophrenia and their ability to manage medication noncompliance. Continuing to focus on education and skills development, participants can make meaningful strides in improving patient care and reducing the negative consequence of medication compliance in schizophrenia.

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