2022

Nurses' Knowledge of Cognitive Behavioral Therapy as a Treatment for Schizophrenia

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Abstract

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by

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MS, Walden University, 2020

BS, Morgan State University, 2012

Project Submitted in Partial Fulfillment

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Abstract

Existing evidence indicates that medications alone are not able to fully manage the psychotic symptoms associated with schizophrenia. Inadequately treated schizophrenia not only affects a patient's physical and mental health but also can lead to the onset of more complex issues such as substance and alcohol abuse disorders, homelessness, family conflicts, and violent behavior. Cognitive behavioral therapy (CBT) can assist in bridging the gaps associated with the use of medications in the treatment of schizophrenia. The purpose of this project was to increase the knowledge of nurses working at a private healthcare facility regarding the effective utilization of CBT as a treatment for schizophrenia. The Johns Hopkins nursing evidence-based practice model and Lewin's change theory were used to guide the development and implementation of a staff education program. Pre- and postintervention surveys were used to assess the providers' readiness to adopt the proposed change in practice. Prior to their administration, the surveys were assessed for credibility and approved by two CBT - certified psychiatrists practicing in another mental health facility located in the state. The results of the surveys showed that the educational intervention was effective in improving the providers' knowledge about CBT treatment and willingness to refer patients with the psychotic disorder to CBT-certified social workers and therapists by 40%. Improving providers' knowledge of CBT for schizophrenia and their readiness to apply it may result in positive social change by potentially optimizing the treatment outcomes of patients with a psychotic disorder such as schizophrenia. Improving treatment outcomes may prevent the various social challenges related to inadequately treated schizophrenia.

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Dedication

I would like to dedicate this project to my husband, children, family, and friends. Their encouragement and motivation during this journey have been immeasurable.

I would also like to dedicate this project to the Almighty God, for guiding me throughout the project.

Acknowledgments

I would like to express my profound gratitude to Dr. Courtney Nyange, Dr. Margaret Harvey, Dr. Susan Hayden, and Ms. Yetunde Adegoroye for their guidance and support during the project. The feedback you gave me ensured the development of the project to the desired standards.

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Section 1: Nature of the Project

Introduction

Schizophrenia is a severe disabling psychotic disorder characterized by disruptions in social interactions, emotional responsiveness, perceptions, and thought processes (National Institute of Mental Health, 2018). Some of the main symptoms of schizophrenia include cognitive impairment, delusions, hallucinations, and difficulties in social relationships. Schizophrenia is a significant public health challenge in the United States, considering that about 3.2 million Americans, or 1.2% of the country's population, have been diagnosed with the psychotic disorder (Ayano et al., 2019). Apart from being characterized with severe clinical manifestations such as anxiety and depression, it is also associated with significant social challenges. For instance, it can result in homelessness, diminished academic and economic productivity, social isolation, an onset of substance use and alcohol use disorders, aggressive behaviors, interfamilial conflicts, and suicide (Caqueo-Urízar et al., 2017). The need for effective treatment is made more compelling given these clinical outcomes and impacts on social welfare.

Currently, pharmacological therapy is the primary treatment approach for schizophrenia (Kruse & Schulz, 2016). Second-generation antipsychotics (SGAs) such as asenapine, iloperidone, and lumateperone are usually prescribed to patients with schizophrenia to increase adaptive functioning, prevent relapse, and target the symptoms following the first psychotic episode (Atkinson et al., 2014). Despite the continued use of drug therapies in the treatment of schizophrenia, medications for the disorder have significant limitations. Antipsychotics are effective in managing positive symptoms of

schizophrenia such as disorganized speech or behavior, hallucinations, and delusions; however, their use is usually characterized by the persistence of residual symptoms such as conceptual disorganization, illogical thinking, eccentric behavior, constant low energy levels, social withdrawal, and lack of emotion (Atkinson et al., 2014). Pharmacotherapy's central role in schizophrenia management is problematic due to these shortcomings.

The literature indicates that nonpharmacological therapies such as cognitive-behavioral therapy (CBT) can be applied to fill the limitations of medications and enhance patients' adherence to prescribed medications to optimize the treatment outcomes (Atkinson et al., 2014). The enhanced treatment of schizophrenia may result in positive social change in terms of improving the overall health and quality of life of affected patients due to the reduction of the severity of psychotic symptoms such as hallucinations, delusions, and social withdrawal. In addition, the enhanced treatment of schizophrenia may reduce the occurrence of social challenges that characterize patients with the psychotic disorder, such as suicide, reduced productivity, the onset of alcohol and substance abuse disorders, family conflicts, homelessness, and aggressive behavior. An aim of this project was to educate healthcare providers about the benefits of utilizing CBT as an intervention of optimizing the treatment outcomes of patients with schizophrenia. An outcome may be improved competence in treating the psychotic disorder, improved clinical outcomes of the patient population, and resulant positive social change. In this section, I provide an overview of the project, including the problem, purpose, and nature. I also further discuss the project's implications for positive social change.

Problem Statement

The lack of adequate knowledge among psychiatric mental health practitioners about CBT as an effective treatment for schizophrenia was the main problem that this doctoral project addressed (Peters et al., 2017). Research indicates that CBT can be effective in improving the outcomes of patients with schizophrenia and can be used to target and intervene in the positive symptoms of schizophrenia, such as delusional beliefs and hallucinations (Atkinson et al., 2014) Also, CBT offers a means to address the depression/anxiety that characterizes psychotic symptoms (Atkinson et al., 2014). However, most mental health practitioners are unaware about these benefits (Currid et al., 2011).

According to Peters et al. (2017), the inability of nurse practitioners to accommodate or consider CBT in the treatment of schizophrenia can be attributed to several factors. First, CBT for schizophrenia requires additional training and the acquisition of new knowledge. Second, unlike administering medications, CBT is characterized by a unique interaction between the patient and the nurse. Third, nurses also lack the motivation to administer CBT because they often feel that their patients perceive that they lack the expertise to utilize psychotherapeutic interventions. Fourth, nurses are also demotivated to administer CBT for schizophrenia due to the fear of failure of the therapy and that their clients might resist the treatment and fail to adhere to the prescribed CBT sessions. Last, they are also discouraged by the likelihood of having administered CBT on a client with schizophrenia comorbid with other conditions such as obsessive-compulsive disorder, posttraumatic

stress disorder, and generalized anxiety disorder due to the complexity of administering CBT to a patient with comorbid psychiatric disorders (Buckley et al., 2009).

Another factor that impedes nurses from administering CBT for schizophrenia is personal beliefs and biases against the psychotherapeutic intervention (Atkinson et al., 2014). Nurses may prefer medications because they have an immediate impact of decreasing the hostility of a psychotic episode and returning the patient to normal function in terms of eating and sleeping (Atkinson et al., 2014). However, according to researchers, it is necessary for nurses to know that as effective as medications are in managing the acute phase of schizophrenia, the combination therapy of CBT and medication is more effective in the long run (Atkinson et al., 2014). The combination therapy is recommended because, as the medications intervene on the psychotic symptoms, CBT aims at improving the patient's mood, self-care, and the quality of their social interactions, thus, resulting in a holistic improvement of the patient's outcomes both clinically and socially (Atkinson et al., 2014). Nurses' failure to prescribe or administer CBT for schizophrenia due to knowledge gaps, personal biases, and lack of motivation is therefore a significant problem for patients, the nursing profession, and the whole mental health system.

The practice problem should be addressed especially considering that schizophrenia is regarded as one of the most disabling conditions that can affect an individual because it is a chronic and severe brain disorder that interferes with a person's ability to relate to others, make decisions, manage emotions, and think clearly (Holder & Wayhs, 2014). Apart from being a severe disorder, schizophrenia also affects a

significant portion of the U.S. population. Annually, it is estimated that close to 2.6 million persons aged 18 and above have schizophrenia, of whom only 40% are undergoing treatment (National Institute of Mental Health, 2020). Furthermore, schizophrenia imposes a significant burden on the socioeconomic welfare of U.S. society. This is because schizophrenia affects one's cognition and social capabilities, which results in vocational difficulties, thus reducing the affected person's ability to generate income (Liu-Seifert et al., 2017). In addition, some patients with schizophrenia might have suicidal thoughts, violence, substance abuse disorders, and homelessness, which can all be described as social challenges (Vaskinn & Horan, 2020). Schizophrenia is therefore a significant challenge to the well-being of many, especially the affected patients and their immediate family members and communities. Hence, it is important for nurses to acquire the knowledge needed to manage this psychotic disorder.

Suboptimal treatment in schizophrenia is not only witnessed in the larger healthcare delivery system but also at the local context. The practitioners practicing in the psychiatric unit in which the doctoral project was undertaken had a tradition of utilizing medications in the treatment of schizophrenia. This means that the affected patients were usually prescribed antipsychotics like lumateperone, iloperidone, and asenapine because these medications are able to intervene on delusions, hallucinations, and disorganized speech or behavior, as well as improve adaptive functioning. Despite being able to intervene on the cited symptoms, a review of the patients' records indicated that some symptoms such as illogical thinking, conceptual disorganization, and social withdrawal persisted in 1 in 3 patients following the use of antipsychotics. Apart from failing to

intervene on some the symptoms of schizophrenia, the records indicated that the use of medications-alone among patients with schizophrenia was characterized with nonadherence. At least half of the patients prescribed medications did not fully observe the doses and did not attend follow-up clinical visits.

Nonadherence is a major challenge because it often causes the onset of complications such as family conflicts, crime, aggressive behavior, homelessness, suicide, as well as alcohol and substance abuse disorders. One fourth of the nonadhering patients cited cost implications as one of the main reasons which they were unable to observe the doses. For example, the monthly dosage of lumateperone is $1,406, which means that some of the patients might not have the financial capacity to acquire the dosages consistently as required. The use of medications among patients with schizophrenia has been a problematic issue at the local context. To address this issue, I sought to increase psychiatric nurse practitioners' abilities to care for patients with schizophrenia by educating them on how CBT could help to reduce the severity of the psychotic condition.

Purpose Statement

Various researchers have recommended that CBT be adopted in treating schizophrenia to complement medications due to its ability to target and intervene on psychotic symptoms such as hallucinations and delusions, prevent relapse, increase vocational function, and enhance a patient's adherence to the prescribed medications (Atkinson et al., 2014).Still, nurses practicing in the private health facility lacked previous experience on the use of CBT in the treatment of schizophrenia because the use

of medications was the preferred method of treating schizophrenia in the facility, something that is common in such settings (Atkinson et al., 2014). Some of the staff reported a basic understanding of CBT but had never utilized it, which explains their lack of knowledge. Thus, some of the practitioners were not familiar with the use of CBT in the treatment of schizophrenia due to their overreliance on antipsychotics. Hence, the primary aim of this doctoral project was to educate the facility's psychiatric nurses on the benefits of CBT in treating schizophrenia so that they might consider fully adopting the intervention in the treatment of the psychotic disorder whenever necessary. With sufficient awareness regarding the benefits of CBT in the treatment of schizophrenia, the nurses may have greater willingness to refer patients with schizophrenia to CBT-certified social workers and therapists. The facility's management approved the project and provided the environment for further assessment.

Practice-Focused Question

The practice-focused question that informed the development and implementation of this project was as follows: Does the provision of an education program to psychiatric mental health nurse practitioners (PMHNPs) regarding the benefits of CBT in treating schizophrenia enhance their knowledge about the treatment and their willingness to refer patients with the psychotic disorder to CBT-certified social workers and therapists? The purpose of the doctoral project was to address the gap in practice by providing staff education about the importance of CBT in the treatment of schizophrenia.

Nature of the Doctoral Project

To develop this doctoral project, I relied on evidence acquired from various empirical studies conducted within the past 5 years. I based the literature search on the practice-focused question. The empirical studies that are cited in this project were obtained from the following databases: PsycINFO, EBSCOhost, Cochrane, Science Direct, Medline, and PubMed. I used the following search terms: *nurses*, *education*, *cognitive behavioral therapy*, *treatment*, and *schizophrenia*. The information deduced from the reviewed studies was then appraised and ranked based on the level of evidence. I used the following three Johns Hopkins evidence levels to formulate the staff education program on the benefits of CBT when treating schizophrenia: Level I (systematic reviews and meta-analysis), Level II (randomized controlled trials), and Level III (well-designed controlled trials without randomization).

In addition to evidence deduced from the reviewed studies, I relied on data obtained from the nurses who took part in the staff education program. I composed the pre and postsurveys. They were assessed by a team of psychiatrists to determine their validity. In this case, the participants were administered pre-post surveys to determine (a) their level of knowledge regarding the utilization of CBT to treat schizophrenia and (b) their willingness to use CBT before and after the provision of the education program. I conducted a comparative analysis of the mean scores of the preintervention surveys and the postintervention surveys to determine whether the doctoral project attained its intended outcome. That objective was to equip the project facility's nurses with adequate

knowledge regarding the effective utilization of CBT for schizophrenia so that they can competently utilize the intervention among the affected patients whenever necessary.

Significance

This doctoral project may have a significant impact on the various stakeholders who are addressed by the initiative. The main stakeholders in this undertaking included PMHNPs, psychiatrists, CBT-certified social workers and therapists, patients, and the healthcare facility's administration. First, the doctoral project may reduce the personal biases and beliefs that prevent PMHNPs from utilizing CBT when attending to patients with schizophrenia. From my interactions with the PMHNPs, I detected that they had a bias towards medications when treating patients with various psychiatric disorders at the expense of psychotherapeutic interventions such as CBT due to the ease of prescribing medications. The PMHNPs attributed this preference to a high nurse-to-patient ratio, which prevents them from having adequate time to schedule their patients to attend routine CBT sessions. This means that the project will have to have an impact on the facility's administration in order for the proposed change in practice to be attained. This is because the facility's administration will have to hire CBT-certified therapists or facilitate the referral of patients with schizophrenia to CBT-certified social workers. Hence, this doctoral project may have significant financial implications for the healthcare organization due to the need to hire more therapists to safeguard the effective implementation of CBT.

Despite its costs, the doctoral project will optimize the quality of health care provided in the psychiatric department, particularly among patients with schizophrenia.

This is because the effective utilization of CBT in treating schizophrenia will be crucial in targeting and intervening on the core symptoms of the psychotic disorder such as disorganized speech, suicidal ideations, impaired functioning, hallucinations, and delusions, which are often resistant to medications, especially if medications are utilized in the long run after the initial psychotic episode (Morrison, 2019). Furthermore, apart from targeting and treating the various symptoms of schizophrenia which could be resistant to medications, CBT also complements the pharmacologic approach since it improves a patient's adherence to the prescribed dosages Therefore, the ability of the staff education program to sensitize nursing practitioners on the need to prescribe CBT to patients with schizophrenia will have a significant positive impact on the affected patients.

According to Morrison (2019), adherence to medications in the long term is a major challenge among patients, especially considering that schizophrenia is a chronic condition. This challenge is emphasized by a study which showed that the discontinuation rate from antipsychotic medications is usually 70 to 80%, within the first 18 months of treatment. Through a component of CBT known as compliance therapy, the beliefs and thoughts of a non-adhering patient can be altered so that they can become more appreciative of the importance of adhering to the prescribed medications (Morrison, 2019). This doctoral project may have a positive impact on the patient population; the proposed CBT intervention may assist staff in treating drug-resistant symptoms of schizophrenia as well as improve the patients' level of adherence to the prescribed medications.

Transferability

Although the existing evidence indicates that overreliance on medications in the treatment of schizophrenia is common in most mental health facilities in the United States, the outcomes of the pre-postintervention surveys might not reflect the perspectives of other mental health practitioners practicing in the various facilities in the country (Laws et al., 2018). This doctoral project only involved 15 mental health practitioners. The perspectives of this sample might not be generalizable to the larger healthcare delivery system.

Summary

The creation of awareness regarding the effective utilization of CBT in treating schizophrenia may result in significant positive social change. CBT is effective in treating negative symptoms of schizophrenia such as inattention to social or cognitive input, lack of social interest, loss of motivation, apathy, and poverty of speech, which diminish the quality of patients' social interactions (Mitra et al., 2016). Hence, the application of CBT in treating schizophrenia may result in improved family and friend relationships among the affected patients (Mitra et al., 2016). Furthermore, the effective management of the negative symptoms may translate into improved occupational functioning, especially considering that some of the negative symptoms, such as impaired thoughts and speech, diminish an individual's ability to perform their vocational or academic responsibilities (Mitra et al., 2016). Hence, the adoption of CBT may improve the economic productivity of affected individuals.

In addition, improvement in the adherence rate of prescribed treatments due to the use of CBT may reduce the rate of hospitalization among the affected patients because the likelihood of relapse or the manifestation of more severe symptoms will have been reduced due to the enhanced adherence (see Morrison, 2019). Thus, the project may potentially positively impact the affected patients and their family members due to the reduced hospitalization rates. Last, the ability of CBT to improve the overall outcomes of a patient with schizophrenia may reduce the occurrence of social challenges such as suicide ideation, homelessness, and stigmatization, as well as alcohol and substance abuse behaviors that often manifest among patients with inadequately treated schizophrenia (Caqueo-Urízar et al., 2017). Therefore, the doctoral project has several implications for positive social change.

Section 2: Background and Context

Introduction

Schizophrenia is a severe psychotic disorder that results in hallucinations, delusions, and cognitive impairment, which affect an individual's occupational capabilities and quality of social interactions (Holder & Wayhs, 2014). However, despite schizophrenia being a severe psychotic disorder, patients with the condition are not usually adequately treated. Pharmacological therapy, which is currently the main treatment for schizophrenia, has major limitations. Medications, particularly antipsychotics, are not able to adequately address the symptoms of the disorder such as constant low energy levels, illogical thinking, conceptual disorganization, eccentric behavior, lack of emotion, and social withdrawal (Atkinson et al., 2014). In this doctoral project, I sought to assess how the provision of a care provider's education program regarding the utilization of CBT for schizophrenia might assist in addressing the limitations of medications among affected patients to optimize their treatment outcomes.

I based the project on the following practice-focused question: Does the provision of an education program to PMHNPs regarding the benefits of CBT in treating schizophrenia enhance their knowledge about the treatment and their willingness to refer patients with the psychotic disorder to CBT-certified social workers and therapists? In addition, it is crucial to note that this section entails a detailed description of the theories, models, and concepts upon which the project was founded. This section also touches on the relevance of the doctoral project to nursing practice, the local background, and the

context within which the project was undertaken. I also discuss my role in the doctoral project.

Concepts, Models, and Theories

Johns Hopkins Nursing Evidence-Based Practice Model

The Johns Hopkins nursing evidence-based practice model provided an ideal framework for the doctoral project. The model facilitates the adoption of emerging evidence and best practices into patient care (Wilson et al., 2016) As shown in Figure 1, the model facilitates the adoption of emerging evidence based on three crucial: practice question formulation (Phase 1), review of the evidence (Phase 2), and translation of the deduced evidence (Phase 3; Wilson et al., 2016). I completed all three steps as follows:

1. The practice area was assessed to identify a healthcare delivery challenge that merited an intervention. (Phase 1)
2. The practice question was then formulated based on the identified healthcare delivery challenge. (Phase 1)
3. An internal and external search of evidence was conducted. (Phase 2)
4. The level and quality of each piece of evidence was appraised. (Phase 2)
5. All the evidence was then synthesized and summarized. (Phase 2)
6. The recommendations were then formulated based on the best evidence. (Phase 2)
7. The feasibility and appropriateness of the developed recommendations, in the context of the area of practice, were determined. (Phase 3)

8. An action plan to implement the feasible recommendations was created. (Phase 3)
9. The needed resources to facilitate an effective implementation were identified. (Phase 3)
10. The recommendations were implemented. (Phase 3)
11. The outcomes of the implementation were evaluated. (Phase 3)

Figure 1

The Johns Hopkins Nursing Evidence-Based Practice Model

Note. (Howe & Close, 2017)

Application of the Johns Hopkins Nursing Evidence-Based Practice Model in Previous Studies

Researchers applied the Johns Hopkins nursing evidence-based practice model to assess how a culture of implementing research findings into practice might be developed among the nursing staff of a Magnet-designated hospital in the United States (Speroni et al., 2020). The researchers applied the model in the course of the study, particularly in the areas of evidence-based practice and research fellowships, education, and training. The researchers also applied the model in identifying which nursing professionals would be ideal in leading the process of implementing research findings into practice. For instance, the authors established that advanced practice nurses, clinical nurse specialists, and nurse

managers should play a leading role in translating research into practice. The study demonstrates how a culture might be fostered that emphasizes the use of emerging evidence in nursing clinical practice.

Wilson et al. (2016) also applied the Johns Hopkins nursing evidence-based practice model is research that aimed to demonstrate how nurses' contribution to global health can be maximized (Wilson et al., 2016). The authors described nursing as an improvement, implementation, and translational science rather than a profession based on rigid practices. The authors also indicated that the structuring of nursing as a transformative or progressive profession will be crucial in ensuring that the profession presents maximum benefits to the global population. Wilson et al. stated that there is numerous knowledge related to nursing, but this knowledge remains unexploited because it is rarely translated into practice. Hence, the researchers noted that the Johns Hopkins nursing evidence-based practice model can be applied in training nurses on how to appraise the existing knowledge or research findings to identify which knowledge is worth translating into practice. The authors also presumed that the model could be applied in identifying and mitigating the various barriers that can impede the translation of research into patient care. Therefore, the study supported the utilization of the Johns Hopkins nursing evidence-based practice model in translating the existing knowledge or research concerning the benefits of utilizing CBT in the treatment of schizophrenia into practice.

Lewin's Change Theory

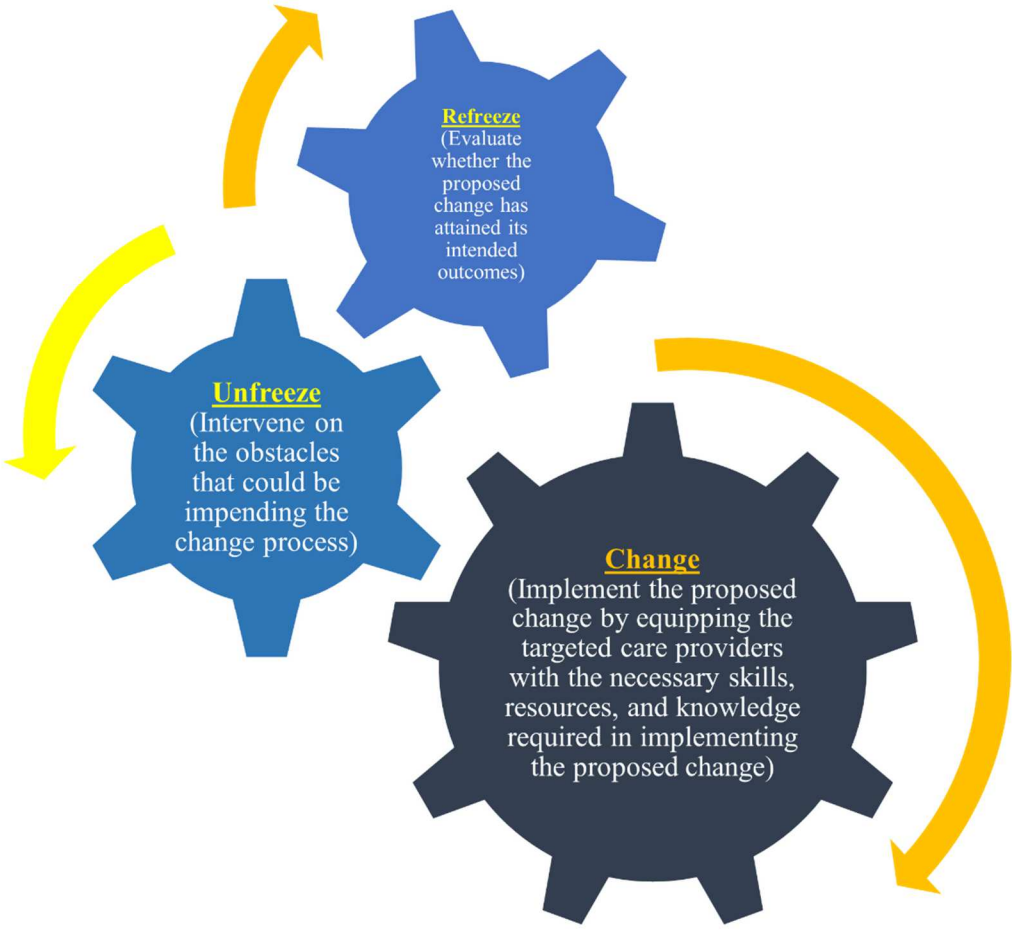
I used Lewin's change theory as the theoretical framework for initiating the change in practice. Based on the change theory, for a new practice to be effectively adopted, it is fundamental for the previous learning to be replaced or disregarded (Saleem et al., 2019). The change is undertaken in three phases known as unfreeze-change-refreeze phases (Saleem et al., 2019). The three phases are usually characterized by driving forces, restraining forces, and a state of equilibrium. The driving forces can be regarded as the efforts directed towards ensuring that a change in practice is effectively implemented, while the restraining forces can be described as the barriers against the effective implementation of the proposed intervention (Saleem et al., 2019). In contrast, a state of equilibrium is a scenario in which both the driving and the restraining forces are equal, and such a scenario means that the change does not take place. The state of equilibrium can be overcome using the unfreezing process in order to facilitate change. Unfreezing entails providing the necessary knowledge or resources required to ensure that the targeted care providers overcome the various personal, group, or organizational factors that could be impending the change process (Saleem et al., 2019). For instance, as the initiator of change, I can provide a training program that enables the care providers to overcome the knowledge gaps, personal beliefs, and attitudes that could be acting as barriers against the proposed change. The effective implementation of the unfreezing phase will result in a change in practice based on the proposed clinical guidelines and organizational policies.

After implementing the change, it is also important to observe the refreezing phase. Refreezing entails an evaluation of the outcomes of the implemented change to ensure that the change was able to attain its intended objectives and ensure that it was implemented effectively (Saleem et al., 2019). An evaluation may show that the intended objectives were not attained or that the implementation was defective. In this case, the refreezing enables the initiator of change to review the whole process and alter the identified shortcomings that prevented the intended outcomes from being attained (Saleem et al., 2019). If the evaluation indicates that the outcomes were defective, the initiator can opt to forego or abandon the proposal altogether.

In summary, the change theory provided a appropriate framework for ensuring that the various obstacles impeding the change process, such as personal beliefs and biases and knowledge gaps, were effectively intervened upon. In addition, the theory is also an ideal theoretical framework since it facilitates a review of the outcomes of the implementation process to determine whether the intended objectives were attained. A review of the outcomes of the proposed change in the targeted clinical setting will be important to ensure that the project can be disseminated to the broader healthcare delivery system. Figure 2 shows how I applied Lewin's change theory in conducting the project.

Figure 2

A Diagrammatic Representation of the Application of Lewin's Change Theory



Application of Lewin's Change Theory in Previous Studies

Hussain et al. (2018) applied Lewin's change theory to assess how effective organizational change can be implemented. The authors noted that, as much as various entities, including healthcare organizations, may strive towards change, they may be held back by the status quo or the opposing factors. Hence, the authors indicate that the initiators of change should collaborate with the other stakeholders affected by the change process in order to attain the desired outcome. According to the authors, failure to

collaborate with the various stakeholders would diminish their willingness to overcome the obstacles that might impede the change process. Therefore, similar to the cited article, the DNP student applied Lewin's change theory in lobbying the relevant stakeholders so that they could overcome the various barriers that could have prevented the change in practice concerning the adoption of CBT in the treatment of schizophrenia from being implemented in the facility.

Another study that has applied Lewin's change theory aimed to assess the role of organizational leaders in implementing change in private health care organizations (Sehar et al., 2019). The authors were appreciative of the fact that the change process is affected by various obstacles; thus, it is crucial for the initiator to be aware of the potential barriers before implementing the desired change. The identification of potential obstacles should be followed by creating a mitigation plan. Therefore, I assessed the various factors that could affect the adoption of CBT in the treatment of schizophrenia in the psychiatric clinic and come up with recommendations on how to overcome the identified barriers.

Relevance to Nursing Practice

Over the years, medications are regarded as the first-line treatment of schizophrenia (Patel et al., 2014). The main purpose of medications in the treatment of schizophrenia is to alter brain dopamine neurotransmitters in order to intervene on psychotic symptoms such as hallucinations and delusions (Patel et al., 2014). Traditionally, first-generation antipsychotics (FGAs) were utilized in intervening in the psychotic symptoms by acting on the dopaminergic system by blocking the dopamine type 2 (D2) receptors (Spooner et al., 2017). This approach of intervening on

schizophrenia symptoms often results in various side effects, particularly the manifestation of extrapyramidal symptoms, such as dystonia, akathisia, slurred speech, and tremor among the treated patients (Spooner et al., 2017). Furthermore, despite their ability to effectively intervene on the positive symptoms of schizophrenia such as movement disorders, concentration troubles, delusions, and hallucinations, FGAs are not able to adequately intervene on the negative symptoms of schizophrenia, including lack of social interest or reduced social drive, inattention to cognitive input, loss of motivation, apathy, as well as poverty of thought and speech (Spooner et al., 2017). Inability to effectively intervene on the cited symptoms is a major shortcoming, especially considering these symptoms usually result in diminished vocational and social functioning among patients with schizophrenia. Therefore, the cited limitations of FGAs led researchers to reconsider the development and adoption of alternative medications for schizophrenia.

SGAs were developed to address the limitations of FGAs. However, despite being developed to improve on the FGAs, SGAs are characterized by significant side effects such as sexual dysfunction, weight gain, hypotension, and sedation (Spooner et al., 2017). SGAs are also linked with metabolic side effects, including developing type II diabetes mellitus and elevated lipids. Furthermore, the existing evidence indicates that, just like FGAs, SGAs cannot intervene on the negative symptoms of schizophrenia effectively. SGAs, which are the first-line treatment of schizophrenia, are characterized with significant limitations that affect their capability to optimize the treatment outcomes of the affected patients.

Another major challenge that has characterized the use of medications among patients with schizophrenia is treatment resistance. According to Lowe et al. (2017), over 40% of the patients with schizophrenia who are prescribed antipsychotics usually depict an inadequate response to treatment. Research shows that a significant portion of the patients do not usually report improvements in clinical outcomes or social and occupational functioning after being prescribed antipsychotics for schizophrenia (Lowe et al., 2017). The fact that medications for schizophrenia are characterized by treatment resistance and various side effects necessitated various scholars to reconsider the adoption of alternative treatments for schizophrenia.

Owing to the limitations of medications, one of the therapeutic alternatives that have been considered in the treatment of schizophrenia is CBT. According to Morrison (2019), CBT is able to adequately intervene on symptoms of schizophrenia, which are resistant to medications. The author indicates that CBT is particularly effective in treating the negative symptoms of schizophrenia, such as social withdrawal and apathy that usually result in weak family and social ties and reduced occupational functioning (Morrison, 2019). Furthermore, patients with schizophrenia also usually have to cope with comorbid mood and anxiety disorders and past traumas, which can be effectively intervened using CBT. Apart from intervening on the symptoms, CBT for schizophrenia is able to equip a patient with the necessary life skills required in coping with the stress and anxiety associated with psychosis symptoms (Laws et al., 2018). In this case, CBT enables the patient to normalize or make sense of the psychotic symptoms, thus, reducing the anxiety and depression associated with such episodes (Laws et al., 2018). The

absence of anxiety and depression significantly improves the affected patient's educational, vocational, and social functioning.

According to Laws et al. (2018), the effectiveness of CBT in managing the core symptoms of schizophrenia is often debatable. Hence, the authors conducted a meta-analysis of randomized controlled trials (RCTs) to determine the effectiveness of CBT in reducing distress and enhancing the quality of life and functioning among patients with schizophrenia. Thirty-six RCTs were included in the meta-analysis (Laws et al., 2018). The meta-analysis entailed a sample size of 2,636 patients diagnosed with schizophrenia (Laws et al., 2018). The results of the study indicated that CBT is effective in improving the core symptoms of schizophrenia, particularly the positive symptoms, which are delusions and hallucinations.

The results also indicated that CBT is effective in complementing medications in the treatment of schizophrenia. However, the study indicates that CBT should only complement but not substitute the use of medications among patients with schizophrenia (Laws et al., 2018). The authors indicate that CBT complements medications since CBT assists in improving the symptoms, reducing social anxiety and depression, promoting educational and social recovery, reducing distress associated with psychosis symptoms, and preventing relapse among patients with schizophrenia (Laws et al., 2018). The cited benefits related to CBT in the treatment of schizophrenia are attributed to the fact that CBT helps the affected patients to normalize and make sense of their psychotic symptoms (Laws et al., 2018). Thus, reducing the distress associated with schizophrenia symptoms, a factor that in effect improves functioning and quality of life among the

affected patients. Therefore, the cited study supports the adoption of CBT in the treatment of schizophrenia since it enables the affected patients to cope with psychotic symptoms effectively as well as improves their quality of life.

A study by Candida et al. (2016), aimed to assess the effectiveness of CBT as the gold standard treatment of addressing the needs of patients with schizophrenia. The study was a narrative review, which aimed to synthesize published information concerning the use of CBT in the treatment of schizophrenia. The reviewed studies were obtained from Cochrane, Web of Science, and PubMed electronic databases. The following search terms were used: *psychotherapy*, *cognitive-behavioral therapy*, *psychosis*, and *schizophrenia*. Results of the review indicated that there is adequate evidence that highlights the effectiveness of CBT for schizophrenia. The review showed that CBT can target and effectively intervene on the positive symptoms of schizophrenia, particularly delusions and hallucinations.

Furthermore, the review also established that CBT also intervenes on the negative symptoms of schizophrenia, such as social withdrawal, loss of emotional expression, loss of motivation towards achieving various goals or activities of daily living, and diminished verbal output (Candida et al., 2016). However, the authors noted that as much as CBT can intervene on the negative symptoms of schizophrenia, the treatment is more effective in intervening on the positive symptoms (Candida et al., 2016). The review also established that compared to medications, CBT's treatment effects and benefits are more long-term than immediate. For instance, in the long-term, CBT for schizophrenia assists a patient to develop adaptive strategies, that enables them to effectively cope with

psychotic symptoms and maintain a quality life (Candida et al., 2016). Majority of the patients are at the facility for years so it will be easy to track and monitor the effectiveness of the CBT. In addition, the review deduced that though CBT is not characterized with immediate benefits, its long-term use prevents relapse, re-hospitalization, as well as the adverse effects associated with the prolonged use of antipsychotics (Candida et al., 2016). This is an ideal trait of CBT, especially considering that the setting of the doctoral project is an outpatient facility that provides short- and long-term care, which means that the patients will have enough time to finish the CBT treatment. As demonstrated, CBT is an effective treatment for schizophrenia, particularly in the long-term.

A study by Wykes (2016), aimed to assess the effectiveness of CBT as a psychotherapeutic treatment for schizophrenia. The study was in the form of a meta-analysis of 26 RCTs (Wykes, 2016). The study established that CBT enables a patient to self-evaluate, reflect, and question delusional beliefs, which could be causing distress and reducing their quality of life (Wykes, 2016). CBT also enables a patient to evaluate the psychotic symptoms and identify new strategies for responding to them. The study also established that CBT is effective in enhancing adherence to the prescribed antipsychotics among patients with schizophrenia.

Furthermore, the author indicates that CBT results in positive social outcomes since the therapeutic relationship instills the patient with various social skills that reduce apathy and social withdrawal (Wykes, 2016). In addition, the study also established that CBT is effective in intervening on medication-resistant symptoms of schizophrenia,

particularly hallucinations (Wykes, 2016). Integration of CBT in the treatment of schizophrenia is merited due to its ability to effectively intervene in medication-resistant symptoms, improve social functioning, and equip a patient with various coping skills.

A study by Addington and Lecomte (2016) aimed to determine the effectiveness of CBT in the treatment of various phases of schizophrenia. The study indicates that significant limitations characterize the use of medications in the treatment of schizophrenia, and this results in persistence of symptoms, relapse, as well as diminished functional recovery (Addington & Lecomte, 2016). According to the study, the limitations of medications necessitate the integration of CBT so that it complements or fills the gaps related to pharmacology. The study established that a combination of CBT and medications is more effective in the acute phase of schizophrenia or during the first episode of psychosis compared to medications alone (Addington & Lecomte, 2016). The study deduced that CBT delivery with medications for five weeks during the acute phase of schizophrenia significantly improves a patient's overall wellness, particularly in terms of social support, coping strategies, self-esteem, and positive symptoms. CBT is also effective among individuals at clinical high risk of developing psychosis since it assists in preventing the symptoms related to schizophrenia from developing into a full-blown psychotic illness (Addington & Lecomte, 2016). Therefore, the cited study supports the use of CBT in the treatment of schizophrenia since it results in improved clinical outcomes both in the pre-psychotic and the acute phases of the illness.

A study by Wang et al. (2019) aimed to determine the effectiveness of CBT for personal recovery in patients with schizophrenia. The study was in the form of a

systematic review that relied on RCTs obtained from Web of Science, Embase, Cochrane, PubMed, and PsycINFO, and that addressed the impacts of CBT on personal recovery among patients with schizophrenia (Wang et al., 2019). Twenty-five studies met the inclusion criteria (Wang et al., 2019). The review established that the use of CBT significantly improved the quality of life among the sampled patients. The use of CBT was also characterized by a resultant increase in the level of satisfaction with general activities of life and the length of time a patient with schizophrenia feels positive (Wang et al., 2019).

The study also established that CBT improved hope and self-esteem among the affected patients, which was retained for a long-term period, which in this case was six months after treatment (Wang et al., 2019). This was established using the hope scale that determined that CBT for schizophrenia improves meaning in life, confidence in life, as well as positive expectations for the future (Wang et al., 2019). The research also established that CBT for schizophrenia also improves empowerment among the affected patients, particularly in terms of access to resources, education, and employment (Wang et al., 2019). Empowerment also means being in control during the recovery period and initiating efforts that improve self-efficacy and control (Wang et al., 2019). As this research indicates, CBT for schizophrenia improves the overall quality of life and psychological wellness among affected patients.

Local Background and Context

The site of the doctoral project is a private health facility that attends to patients with mental health issues. This facility is located within a city in the Eastern United

States. At the time of the project, the outpatient mental health facility had 15 health care providers, of whom five were psychiatrists and 10 were PMHNP. At 1:8, the nurse-patient ratio is high, implying that the PMHNPs lack sufficient time to schedule psychotherapy sessions for the affected patients. Furthermore, that most of the practitioners in the facility prescribe medications when treating various mental health issues indicates that they may lack previous experience in administering psychotherapy interventions like CBT. Hence, the current constraint of inexperience and time limitations that prevent practitioners at the facility from administering CBT may be addressed by collaborating with CBT-certified social workers so that they can complement medications using the psychotherapeutic approach, among patients with schizophrenia. The support from the health facility has been unwavering for the purpose of this project. The staff was ready and willing to provide useful information on their knowledge of CBT and how it is applied in schizophrenic cases. The facility's management was equally willing to provide room and resources to attain the project's set objectives. They approved the project and agreed to provide the environment for further assessment.

The majority of the patients who are attended in the facility have to cope with various health disparities, which means that there is a high incidence of various health conditions among the local community. The health disparities could be attributed to the fact that 63% of the city's population are comprised of African Americans (U.S. Census Bureau, 2019). Race is one of the risk factors of mental health issues. According to Schwartz and Blankenship (2016), African Americans have a 44% higher prevalence rate of psychotic disorders compared to non-Hispanic Whites at 21%. African Americans

have five times more likelihood of being diagnosed with schizophrenia compared to non-Hispanic Whites (Schwartz & Blankenship, 2016). In addition, other scholars indicate that African Americans also have a higher prevalence of various comorbid conditions of schizophrenia, such as major depressive disorder, anxiety disorders, and trauma (Taylor & Chatters, 2020). The factors that attribute to the high incidence rates of mental health conditions in African American neighborhoods include poverty, the existence of various stressors such as crime and violence, homelessness, and high rates of substance abuse disorders (Taylor & Chatters, 2020).

According to U.S. Census Bureau (2019) data, the city where the project site is located has one of the highest poverty rates in the country, considering that 21.2% of the residents live below the poverty line, compared to 9.9% in the project site state and 11.8% at the national level. The high poverty rate in the city means that a significant portion of the residents have to cope with various financial stressors and lack the necessary resources required in adhering to a healthy lifestyle, such as nutritious meals and routine access to healthcare facilities. The rate of poverty diminishes both the physical and mental health outcomes of the population. I undertook this doctoral project in a community characterized by high incidence rates of various mental health issues and psychiatric disorders such as schizophrenia. Improving the quality of care provided to patients with the psychotic disorder may improve the overall wellness of the local community, in terms of clinical outcomes, quality of life, social relationships, and occupational productivity, particularly among the affected patients.

It is crucial to note that various medical professional organizations and federal agencies have provided various regulatory guidelines and recommendations regarding the effective treatment of schizophrenia. To start with, based on the Diagnostic and Statistical Manual of Mental Disorders (DSM-5) by the American Psychiatric Association (APA), an individual is diagnosed with schizophrenia if they have two or more core symptoms that are disorganized speech, delusions, or hallucinations for more than a month (Tandon et al., 2016). Other core symptoms upon which the diagnosis is based include diminished emotional expression and gross disorganization (Tandon et al., 2016). An individual can be diagnosed with schizophrenia if they have reduced levels of self-care or interpersonal relationships as well as signs of disturbance that have lasted for 6 months and is not attributable to depression, bipolar, and substance abuse disorders (Tandon et al., 2016).

The APA (2020) guidelines regarding the treatment of schizophrenia indicate that the utilization of CBT has several potential benefits. Such benefits include that CBT reduces the severity of the core symptoms of schizophrenia as well as assists in improving the quality of life, social, and occupational function of the patients (APA, 2020). For instance, the guidelines indicate that CBT assists an individual to develop healthier and more realistic maladaptive assumptions which assist in overcoming hallucinatory experiences or delusional beliefs (APA, 2020). This is because CBT entails the creation of a collaborative nonjudgmental relationship in which a patient is trained on how to monitor their behaviors, feelings, and thoughts and avoid various beliefs and perceptions that could trigger or worsen schizophrenia symptoms. The APA guidelines recommend that patients with schizophrenia should be prescribed antipsychotic

medication (APA, 2020). However, the effectiveness and side effects of the prescribed antipsychotics should be monitored in order to determine whether the medication should be continued or another one should be introduced (APA, 2020). The guidelines also indicate that treatment-resistant patients, as well as patients with suicidal ideations and aggressive behavior, should be prescribed clozapine (APA, 2020). Therefore, APA guidelines support the use of medications combined with CBT in the treatment of schizophrenia.

Role of the DNP Student

I currently practice in a health facility that services a significant number of patients with various mental health issues. Hence, I usually attend to patients with various mental health challenges. One of the mental health issues that I normally attend to is schizophrenia. Although cases of schizophrenia are not as many as those of other psychiatric conditions such as depression and anxiety disorders, from experience, schizophrenia is one of the most complex psychotic disorders to treat. I regard schizophrenia as a complex disorder since it is characterized by severe symptoms that often have a devastating impact on a patient's wellness and dignity. Such symptoms include paranoia, delusions, hallucinations, depressive episodes, and thought distortions. Apart from having adverse symptoms, schizophrenia manifests in a wide variety of symptoms. This means that at a given point a patient with schizophrenia may have to cope with symptoms such as disordered movement, odd beliefs, social withdrawal, apathy, disorganized speech, as well as catatonic symptoms like stereotypic movements,

bizarre posturing, and mimicking the movements of other people. These symptoms have a major impact on the functionality and quality of life of patients with schizophrenia.

Despite having to cope with severe symptoms, my colleagues and I did not usually effectively attend to patients with schizophrenia. The psychiatric unit has a tradition of utilizing medications in the treatment of schizophrenia. SGAs such as iloperidone, asenapine, and lumateperone are usually prescribed so that they can enhance adaptive functioning; target symptoms such as hallucinations, disorganized speech or behavior, and delusions; as well as prevent relapse. However, despite being able to adequately intervene on the mentioned symptoms, the prescribed medications do not respond to the negative symptoms of schizophrenia such as social withdrawal, illogical thinking, constant low energy levels, lack of emotion, conceptual disorganization, and eccentric behavior. As a healthcare professional, the inability to treat the mentioned symptoms is a major shortcoming since these symptoms particularly affect the quality of a client's social interactions as well as their vocational capabilities.

Since the treatment of schizophrenia is primarily provided on an outpatient basis, unless in scenarios where a psychotic episode needs to be managed, it is common for patients to fail to adhere to the prescribed medications. The records indicate that at least half of the patients with schizophrenia do not usually fully adhere to the prescriptions. Failure to adhere to the medications increases the severity of the psychotic symptoms and this causes the onset of aggressive behavior, alcohol and substance abuse disorders, family conflicts, and homelessness. Furthermore, even some of the patients who usually fully adhere to the medications often develop tolerance and this results in treatment-

resistant schizophrenia. Therefore, I have witnessed the disadvantages associated with the utilization of medications as the sole treatment of schizophrenia.

From my interaction with patients with schizophrenia, I realized the financial burden associated with schizophrenia medications. For instance, the cost of a 1-month dosage for olanzapine is $1,405; this is a major financial burden especially among the vulnerable populations residing within the facility's locality. It is crucial to note that at least 21.2% of the local community's population live below the poverty line, which means that a significant portion of the treated patients might not be able to acquire all the prescribed dosages for schizophrenia, hence, leading to non-adherence. Therefore, based on my interaction with the patients, I have been able to establish the importance of a more affordable and accessible treatment option in order to optimize the treatment outcomes of schizophrenia.

The challenges regarding the prescription of medications alone motivated me to research on an alternative, complementary, or supplementary treatment that would fill the gaps associated with antipsychotics in the treatment of schizophrenia. I identified CBT as a potential alternative due to its ability to target and intervene on some of the symptoms of schizophrenia such as hallucinations, delusions, and disorganized behavior, as well as its ability to enhance a patient’s adherence to the prescribed medications; thus, diminishing the likelihood of relapse. Likewise, CBT equips a patient with schizophrenia with various social skills and this eliminates the likelihood of antisocial behaviors such as apathy and social withdrawal. Even though CBT can optimize the treatment outcomes among patients with schizophrenia, it is crucial to note that my colleagues lack adequate

past experiences that would enable them to effectively apply the CBT treatment when attending to patients with schizophrenia. Hence, from my assessment, I hold that a staff education program would assist in educating my colleagues about the benefits of CBT in the treatment of schizophrenia as well as persuading them to adopt or incorporate the treatment.

Therefore, my role in the doctoral project was to review the existing literature pertaining to the utilization of CBT as a treatment for schizophrenia, appraise the evidence, and deduce the best evidence. I then utilized the deduced evidence in formulating an education program regarding the benefits and effective application of CBT as an intervention for schizophrenia. I then assessed the participants of the education program to determine if the initiative was effective in enlightening and persuading them. The assessment was in the form of questionnaires. I also provided various recommendations that would facilitate the effective adoption of CBT in the treatment of schizophrenia as deduced from the existing literature. Lastly, after providing the recommendations, I then disseminated the results of the project to the larger nursing profession through a journal article.

While I strongly believe that CBT would assist in optimizing the treatment outcomes of patients with schizophrenia, I must admit that I possess a personal bias for CBT over medications. I believe that various psychotherapeutic interventions such as CBT have more lasting results than psychotropic medications. I hold that psychotherapy equips an individual with various coping skills that enable the individual to identify unproductive thoughts and behaviors. Hence, I believe that psychotherapy presents a

long-term solution while the benefits of medications are short-term since they mainly suppress the symptoms without eliminating them entirely. However, although I have a personal bias for CBT, I ensured that the preference did not manifest on the doctoral project. Thus, I maintained optimal objectivity during the project. I remained objective by ensuring that all my recommendations and conclusions were drawn from the existing empirical studies pertaining to the application of CBT in the treatment of schizophrenia. Furthermore, I remained objective by ensuring that the study's findings were drawn from the participants' feedback in the form of their responses to the administered questionnaires and not my personal opinion. Therefore, the project was based on scientific evidence and not my personal opinion.

Summary

The section demonstrated the relevance of the doctoral project to the nursing practice. I also described the local context in which the project was undertaken and my role in the project. A suboptimal treatment outcome is a common challenge among patients with schizophrenia who are attended in the facility. The current approach of utilizing medications in the treatment of schizophrenia often results in the persistence of some symptoms such as hallucinations and delusions. Medications are also characterized by the risk of tolerance and nonadherence. Furthermore, the cost of antipsychotics results in a financial burden among the affected patients. In Section 3, I describe the collection and analysis of evidence. I also address the sources of evidence, including the participants, procedure, and protections, and procedures for analysis and synthesis.

Section 3: Collection and Analysis of Evidence

Introduction

Schizophrenia is a severe psychotic disorder that results in extremely disordered thinking and behavior, delusions, and hallucinations. The condition is often disabling given that it impairs daily functioning. Currently, at least 3.2 million Americans have been diagnosed with schizophrenia in then United state. (Ayano et al., 2019). The condition poses a significant public health challenge because it results in mental health issues such as anxiety and depression. Furthermore, it can result in socioeconomic challenges such as interfamilial conflicts, social isolation, diminished academic and economic productivity, the onset of substance use and alcohol use disorders, homelessness, aggressive behaviors, and suicide (Ayano et al., 2019). Despite the health and social welfare challenges posed by schizophrenia, its current first-line mode of treatment, medications, has significant limitations.

Medications do not adequately intervene on the negative symptoms of schizophrenia, including illogical thinking, constant low energy levels, conceptual disorganization, lack of emotion, eccentric behavior, and social withdrawal (Atkinson et al., 2014). In addition, medications for schizophrenia are associated with side effects that diminish treatment adherence. Likewise, the medications can also result in dependence and tolerance. These limitations of medications have resulted in poor outcomes among patients receiving treatment for schizophrenia in the healthcare facility in which the doctoral project was based. The healthcare providers in the facility were not able to

adequately manage some symptoms of schizophrenia, particularly illogical thinking and conceptual disorganization.

It is common for patients to fail to adhere to the prescribed medications, especially considering that it is an outpatient setting, which makes it difficult for the providers to monitor the affected patients routinely. Nonadherence to treatment results in the manifestation of psychotic episodes among the patients. Therefore, in conducting the doctoral project, I aimed to sensitize the health care providers about the need to adopt CBT in the treatment of schizophrenia due to its ability to complement and supplement antipsychotics. In this section, I describe the sources of evidence as well as how the evidence was analyzed and synthesized.

Practice-Focused Question

I undertook the doctoral project in a healthcare facility located in Eastern United States. The facility attends to a significant number of patients with various mental health issues. At least 63% of the local community is African American (U.S. Census Bureau, 2019)**.** African Americans have a high incident rate for various mental health issues compared to other racial groups in the United States; according to Schwartz and Blankenship (2016), African Americans have a five times higher likelihood of being diagnosed with schizophrenia than non-Hispanic Whites. The higher prevalence rate for psychotic disorders and other mental health issues among African Americans can mainly be attributed to socioeconomic stressors such as high rates of substance abuse disorders, homelessness, poverty, crime, and violence, as well as diminished access to routine

healthcare (Taylor & Chatters, 2020). Patients diagnosed with schizophrenia are not optimally treated in the healthcare facility where the doctoral project took place.

Medications, particularly SGAs such as iloperidone, asenapine, and lumateperone, are currently the standard treatment of schizophrenia in the facility. Although these medications are effective in intervening on some schizophrenia symptoms such as hallucinations, disorganized speech or behavior, and delusions, they do not adequately intervene on the negative symptoms of schizophrenia, including social withdrawal, illogical thinking, lack of emotion, and conceptual disorganization (Tandon et al., 2016). Worse, these medications are associated with metabolic side effects such as high blood pressure and high cholesterol, resulting in weight gain (Tandon et al., 2016). Other side effects include shuffling gait, rigidity, reduced facial expressions, and tremors (Tandon et al., 2016). These side effects often result in nonadherence to treatment (Tandon et al., 2016). The nonadherence in effect causes the onset of psychotic episodes. Therefore, the current approach of utilizing medications in the treatment of schizophrenia has resulted in diminished clinical outcomes among the affected patients.

CBT might effectively fill the gaps that characterize medications in the treatment of schizophrenia, such as inability to intervene on positive symptoms like hallucinations and delusions. However, the healthcare providers practicing in the facility lack sufficient knowledge regarding the utilization of CBT in the treatment of the psychotic disorder. The providers were not adequately informed about the benefits of the treatment among patients with schizophrenia. Therefore, the doctoral project aimed to bridge the current knowledge gap concerning the advantages of CBT in the treatment of schizophrenia.

Improvement of the providers' knowledge about the benefits of CBT would encourage them to refer patients with schizophrenia to CBT-certified social workers and therapists so that the patients can benefit from the psychotherapeutic intervention. The doctoral project was based on the following practice-focused question: Does the provision of an education program to PMHNPs regarding the benefits of CBT in treating schizophrenia enhance their knowledge about the treatment and their willingness to refer patients with the psychotic disorder to CBT-certified social workers and therapists?

Sources of Evidence

I relied on evidence deduced from previous scientific studies that have been undertaken to determine the benefits of integrating CBT in the treatment of schizophrenia. Thus, I searched for evidence on the utilization of CBT in managing schizophrenia and the need to create providers' awareness on the importance of utilizing CBT among patients with the psychotic disorders. The cited studies were obtained from the following electronic databases: Science Direct, Education Resources Information Center (ERIC), PsycINFO, PubMed, Cochrane, Medline, Scopus, and ResearchGate. The following search terms were utilized: *CBT*, *treatment,* and *schizophrenia*. All the studies related to the practice-focused question. Furthermore, a study must have been conducted within the past 5 years and be published in English for it to be included.

I also relied on data acquired from surveys that I administered to the participants. The surveys were composed by me and reviewed by a team of psychiatrists in order to determine their validity. The surveys were in the form of pre/postintervention questionnaires. These questionnaires were administered to the participants to determine

their level of knowledge concerning the benefits of CBT in the treatment of schizophrenia before and after the provision of the providers' education program. The results of the surveys were also crucial in determining whether the education program enhanced the providers' readiness to integrate CBT in the treatment of schizophrenia. Therefore, the participants' mean scores in the two sets of questionnaires were crucial in determining whether the education program was effective in improving their knowledge of the benefits of utilizing CBT in treatment of schizophrenia as well as their willingness to prescribe the treatment.

Evidence Generated for the Doctoral Project

Participants

At the time of the project, the outpatient mental health facility had 15 health care providers, of whom five were psychiatrists and 10 were PMHNP. These providers were the intended beneficiaries of the education program that was delivered during the doctoral project. Their participation was voluntary. I emailed invitations to the targeted participants and provided them with an overview of the education program as well as its benefits and left them to make an individual decision regarding their participation. The participants were targeted because they have been utilizing medications alone in the treatment of schizophrenia, and this has been resulting in poor treatment outcomes among the affected patients, particularly in terms of symptoms persistence, relapse, and non-adherence to the prescribed medications. Therefore, participation in the providers' education program might improve their knowledge about the benefits of integrating CBT in the treatment of schizophrenia and persuade them to adopt the intervention. Hence, the

targeted participants' optimal participation in the education program should result in improved treatment outcomes among patients with schizophrenia.

Procedures

The healthcare providers' education program was in the form of a PowerPoint presentation. I formulated the presentation using the best evidence deduced from the literature review. The presentation addressed various aspects related to the use of CBT in the treatment of schizophrenia; such aspects included the benefits, the effective application, and how to effectively combine the psychotherapeutic approach with other therapies for schizophrenia antipsychotics. The participants were made aware of the selected date, and they were also reminded a day before the presentation. The PowerPoint presentation was scheduled on the monthly staff meeting day so that the presentation would not collide with the participants' care delivery schedules. The PowerPoint presentation lasted an hour, and it was delivered in the healthcare facility's boardroom. Pre/postintervention surveys in the form of questionnaires were administered to the participants to determine their knowledge of CBT for schizophrenia and readiness to utilize the treatment before and after the provision of the education program.

I administered the preintervention questionnaire before the PowerPoint presentation and the postintervention questionnaire after the presentation. Each questionnaire consisted of 20 questions, and participants were allocated 10 minutes to complete it. The first three questions related to the participants' background information in terms of age, gender, and level of experience; the participants were requested to provide their age and gender so that it could be deduced whether there was a correlation

between a providers' age and gender and their preference for CBT. The other questions enquired about the participants' knowledge of CBT and willingness to utilize the treatment.

Two psychiatrists practicing in another mental health facility located in the state assessed the quality of the PowerPoint presentation and the pre-postintervention surveys. The two psychiatrists are certified to use CBT in the treatment of schizophrenia. They indicated that the information presented on the PowerPoint was accurate and evidence-based. However, though they found the presentation to be satisfactory and credible, they recommended that the questionnaires should be revised. They indicated that the multiple-choice answers provided regarding the ideal duration that CBT for schizophrenia should be administered was inaccurate. This means that none of the multiple-choice answers provided regarding the duration for CBT treatment was accurate. The questionnaires were revised as required, and this, I believe, improved the overall quality of the staff education program.

Protections

Several principles and procedures were observed to ensure that the project met the relevant ethical guidelines. For instance, as much as the targeted participants were sent invitations requesting them to attend the presentation and respond to the questionnaires, their participation was voluntary. I also ensured that the project was approved by the healthcare facility's administration as well as obtained approval from the Institutional Review Board (IRB) of Walden University. Furthermore, the participants were provided with unique identifiers during the pre/postintervention data collection to ensure that

optimal confidentiality was maintained. The participants were also provided with consent forms before taking part in the education program. They were also adequately informed about the various aspects of the project, particularly in terms of duration, interventions, and its implications to positive social change, so that they could make an informed decision regarding their willingness to participate. Furthermore, the participants were also informed that they could opt to discontinue their participation at any stage of the project without being subjected to any consequences. Lastly, it is crucial to note that the participants' data and responses to the surveys will be stored in a password-protected folder for 5 years, and only I will have access to the content. The folder will then be deleted after the 5-year period has lapsed.

Analysis and Synthesis

The effectiveness of the education program in enlightening the providers about the benefits of CBT for schizophrenia as well as enhancing their willingness to recommend the intervention was determined using pre/postintervention surveys. In this case, the accuracy of the participant's responses was graded on a scale of 0-10. This means that each question was graded, and a cumulative total established for each participant. Participants were requested to indicate their willingness to prescribe CBT for schizophrenia using a ‘yes or no’ question. Any questions on the pre/post-test that were left unanswered were deemed incorrect. The cumulative total was then used to determine the mean scores for all the participants. The mean scores for the preintervention surveys were compared with those of the postintervention ones. The education program would be regarded as effective if the mean score for the postintervention surveys exceeded that of

the preintervention surveys by at least 20%. Descriptive statistics, particularly measures of central tendency, were utilized in analyzing the data. The results were presented using charts, graphs, and tables generated using Excel.

Summary

This section elaborated on how the data and evidence required for the project was collected, analyzed, and synthesized. This section indicated that the project relied on evidence deduced from the existing literature concerning the benefits of CBT in the treatment of schizophrenia. This evidence was utilized in formulating the healthcare providers' education program. This section also demonstrated that the effectiveness of the project was determined using data obtained using pre/postintervention surveys. In this case, a higher mean score in the post-intervention surveys, by at least a margin of 20%, would indicate that the providers' education program was effective in enhancing their knowledge about the benefits of CBT for schizophrenia and their readiness to utilize the intervention. The next section focuses on findings and recommendations of the doctoral project.

Section 4: Findings and Recommendations

Introduction

Schizophrenia is a serious mental disorder that leads to an abnormal interpretation of reality. The condition is characterized by delusions, hallucinations, and extremely disordered thinking and behavior, which impair an individual's daily functioning (Atkinson et al., 2014). Hence, schizophrenia can be described as a disabling condition that necessitates lifelong treatment. Despite schizophrenia leading to severe outcomes among the affected individuals, its current mode of treatment is characterized by significant shortcomings. Medications, particularly SGAs such as asenapine, iloperidone, and lumateperone, which are currently the primary treatment for schizophrenia, have several limitations. They do not intervene on the negative symptoms of schizophrenia such as illogical thinking, constant low energy levels, conceptual disorganization, lack of emotion, and social withdrawal (Atkinson et al., 2014). Furthermore, SGAs are characterized by dependence and tolerance, as well as metabolic side effects such as dyslipidemia, weight gain, and hyperglycemia, which diminish adherence to the prescribed medications (Atkinson et al., 2014).

Therefore, the existing limitations that characterize the use of medications in the treatment of schizophrenia necessitated the provision of an education program to healthcare providers practicing in the mental health facility in which the doctoral project was undertaken. In conducting the project, I sought to educate staff about the benefits of integrating CBT in the treatment of schizophrenia. The use of a psychotherapeutic approach may fill the gaps that characterize the reliance on a pharmacologic intervention.

The project was based on the following practice-focused question: Does the provision of an education program to PMHNPs regarding the benefits of CBT in treating schizophrenia enhance their knowledge about the treatment and their willingness to refer patients with the psychotic disorder to CBT-certified social workers and therapists?

I relied on evidence deduced from the existing literature following a literature review. I sought to incorporate the best evidence to formulate a providers' education program. Surveys were used to determine the effectiveness of the education program in enlightening the providers about the benefits of CBT in the treatment of schizophrenia as well as increasing their willingness to refer patients with the psychotic disorder to CBT-certified social workers and therapists. A higher mean score in the postintervention survey compared to preintervention one would indicate that the education program was effective.

Findings and Implications

Summary of Findings From Published Outcomes and Research

I relied on evidence from the existing literature concerning the benefits of utilizing CBT in treating schizophrenia. One of the cited studies indicates that CBT is effective in intervening on the core symptoms of schizophrenia which are hallucinations and delusions (Laws et al., 2018). The study also indicates that CBT should complement but not substitute for medications in the treatment of schizophrenia (Laws et al., 2018). Therefore, the researchers (Laws et al., 2018) supported the adoption of CBT as a complementary treatment for schizophrenia.

The authors of another study established that CBT is more effective in targeting and intervening on the positive symptoms of schizophrenia such as delusions and hallucinations, than the negative symptoms like loss of motivation towards achieving various goals or activities of daily living, social withdrawal, diminished verbal output, and loss of emotional expression (Candida et al., 2016). More importantly, the study established that the treatment benefits of CBT among patients with schizophrenia are retained longer compared to the use of medications. According to the authors, Candida et al., CBT equips a patient with various adaptive strategies that enable them to maintain a quality life and deal with psychotic symptoms after being diagnosed with schizophrenia. Hence, the study established that CBT for schizophrenia presents a long-term solution while medications are mainly effective in managing a psychotic episode in the short term. Thus, the outcomes of the study conclude that CBT for schizophrenia is beneficial because it is not associated with any major side effects, as well as prevents relapse and rehospitalization.

Wykes (2016) established that CBT reduces distress and improves the quality of life among patients with schizophrenia. This is because CBT helps a patient to reflect, self-evaluate, and question delusional beliefs that could be distressing them following a psychotic episode. In this case, CBT enables a patient to identify and effectively respond to psychotic symptoms. The researchers concluded that CBT sessions can be utilized to make a patient aware of the need to adhere to the prescribed antipsychotic medications. Thus, this finding reinforces the need to integrate CBT in the treatment of schizophrenia since the psychotherapeutic approach complements the use of medications. Furthermore,

the therapeutic relationship that is established during CBT sessions can be utilized to instill various social skills that can be used to eliminate antisocial behaviors among the affected individual (Wykes, 2016). The authors also deduced that symptoms of schizophrenia like hallucinations that are often medication-resistant could be effectively intervened using CBT. This study reinforces the need for the adoption of CBT among patients with schizophrenia because it improves social function, intervenes in medication-resistant symptoms, and equips an individual with relevant coping skills.

In their review of the existing literature, Lecomte and Addington (2016) found that CBT should complement medications among patients with schizophrenia because the treatment fills the gaps that characterize the use of medications such as relapse, diminished functional recovery, and persistence of symptoms. Hence, the existing empirical evidence demonstrates that, in the treatment of schizophrenia, CBT combined with medications is more effective than medications alone. According to the authors, CBT compliments medications by intervening on the positive symptoms, improving a patient's self-esteem, as well as equipping them with various social skills and coping strategies. Furthermore, CBT also compliments antipsychotics by preventing a full-blown psychotic episode from occurring. Therefore, based on this evidence, the integration of CBT in the treatment of schizophrenia optimizes the treatment outcomes of the affected patients.

Last, the existing evidence also demonstrates that CBT improves the quality of life among patients with schizophrenia. This is because CBT makes a patient more satisfied with general activities of life as the psychotherapeutic approach improves hope

and self-esteem in an individual (Wang et al., 2019). CBT instills in a patient positive expectations for the future and confidence in life, as well as improved meaning in life (Wang et al., 2019). Furthermore, the CBT sessions can also be used to empower a patient by encouraging them to access various social support resources that may optimize the individual's quality of life (Wang et al., 2019). Hence, the use of CBT among patients with schizophrenia may prevent occurrences such as homelessness because the affected individuals are encouraged to access the existing social support opportunities. Therefore, based on the evidence, the use of CBT among patients with schizophrenia improves psychological wellness and quality of life.

Outcomes From the Pre/postintervention Surveys

Preintervention Survey

I administered a preintervention survey (see Appendix A) to the 15 healthcare providers who attended the staff education program regarding the benefits of adopting CBT in treating schizophrenia and its effective utilization. The aim of the survey was to establish their preintervention level of knowledge regarding the use of CBT among patients with schizophrenia and their willingness to refer patients with the psychotic disorder to CBT-certified social workers and therapists. The outcomes of the presurvey were compared with the postintervention outcomes to determine the effectiveness of the education program in enhancing the providers' knowledge on the use of CBT among patients with schizophrenia and their readiness to refer patients with the psychotic disorder to CBT-certified social workers and therapists. An analysis of the preintervention survey indicated that all the healthcare providers practicing in the clinic

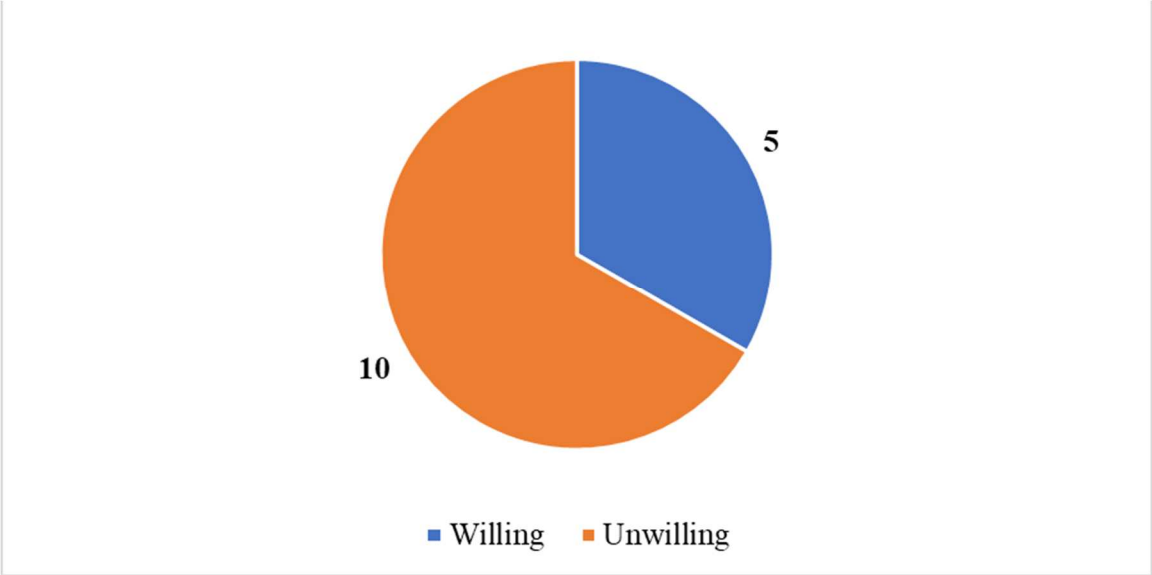
participated in the education, which translates to 15 participants. There were nine women and six men. The median age of the participants was between 32 and 38 years. The youngest participant was aged 28 while the oldest was 53. Ten participants were PMHNPs while five were psychiatrists. The preintervention survey had 10 gradable questions. Each question was graded individually and a cumulative total for each participant deduced. The cumulative totals for each participant were then combined to establish the mean score of the group. The participants had a mean score of 48% in the preintervention survey. Furthermore, the survey also established that only five participants were willing to refer patients with the psychotic disorder to CBT-certified social workers and therapists, compared to 10 who were unwilling.

Postintervention Survey

I administered the postintervention survey (see Appendix B) at the end of the staff education presentation. The aim of the survey was to establish whether there was a significant improvement in the participants' knowledge on the application of CBT in the treatment of schizophrenia as well as their willingness to refer patients with the psychotic disorder to CBT-certified social workers and therapists before and after the education program. Hence, all the participants who answered the preintervention survey were given the postintervention survey to complete. The preintervention survey results show that five of the 15 participants were willing to refer patients with psychotic disorder to CBT-certified social workers and therapists (see Figure 3).

Figure 3

Number of Participants Willing to Refer Patients to CBT-Certified Social Workers and Therapists Preintervention

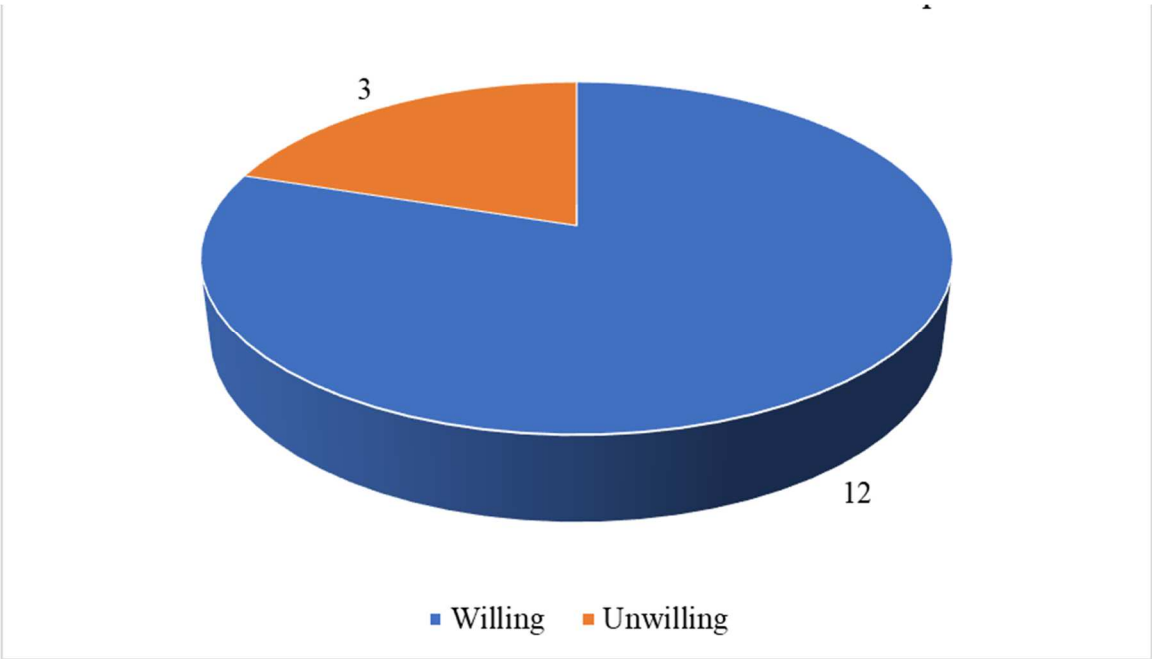


Note. CBT = cognitive-behavioral therapy.

Based on their response to the postintervention survey, 12 of the 15 participants were willing to refer patients with the psychotic disorder to CBT-certified social workers and therapists (see Figure 4). The two surveys were identical to optimize their comparability.

Figure 4

Number of Participants Willing to Refer Patients to CBT-Certified Social Workers and Therapists Postintervention

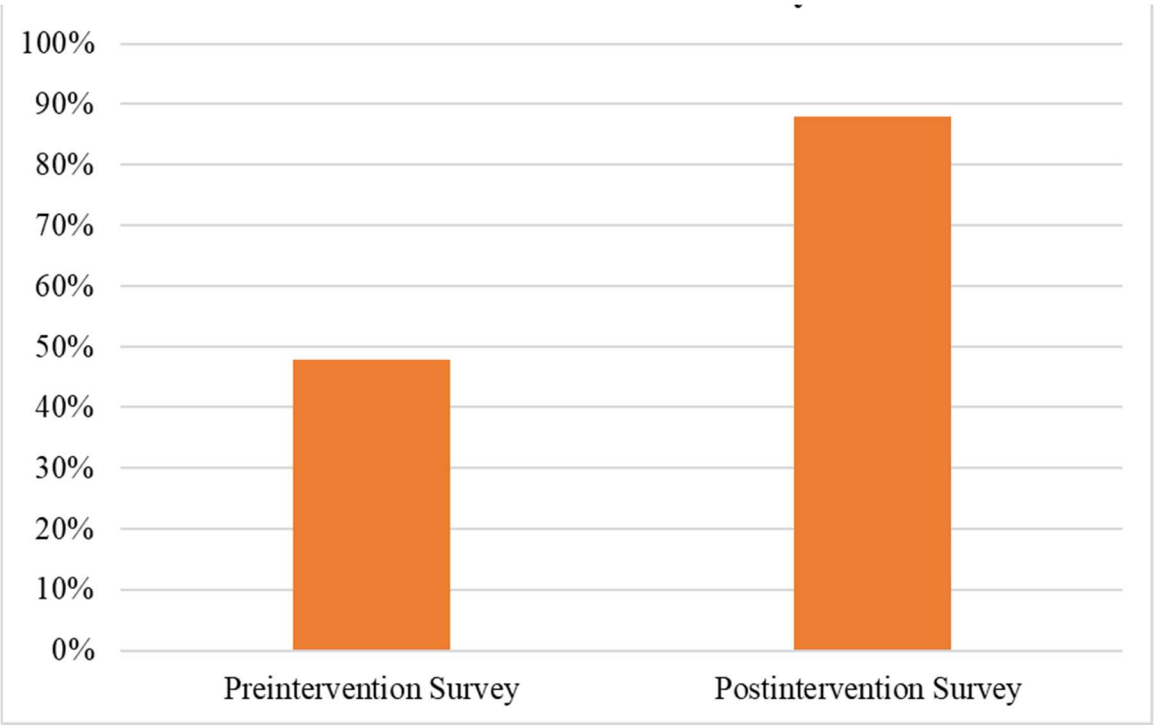


Note. CBT = cognitive-behavioral therapy.

A comparison of the preintervention and the postintervention surveys mean scores indicate that the staff education program was effective in enhancing the participants' knowledge on the benefits of utilizing CBT among patients with schizophrenia and the effective utilization of the treatment (see Figure 5). The mean score for the postintervention survey was 88% compared to the mean score of preintervention survey 33%

Figure 5

A Comparison of the Participants' Mean Scores in the Preintervention Survey Versus the Postintervention Survey



Equally important, the results indicate that the education program was effective in enhancing the participants' readiness to refer patients with the psychotic disorder to CBT-certified social workers and therapists. Therefore, the surveys show that the staff education program attained its aim.

Unanticipated Limitations or Outcomes and Their Potential Impact on the Findings

One of the main limitations that characterized the staff education program was time constraints. The education presentation was allocated 40 minutes, while each set of questionnaires was administered in 10 minutes. The education program was provided in a short period because the participants have tight clinical schedules, making it impossible

for them to avail themselves for a longer period. A short presentation could have affected the level of awareness created among the providers. Furthermore, the 10 minutes allocated for each questionnaire could have affected the accuracy of the participants' responses. Apart from time, another limitation that could have affected the results is the number of participants. Only 15 healthcare providers took part in the education program, which means the conclusions deduced from their responses in the two sets of questionnaires might not reflect the perspectives of a larger sample size. Hence, the small number of participants means that the results might not be generalized to reflect the overall healthcare delivery system. For instance, though the results indicate that the education program significantly improved the participants' willingness to apply CBT in schizophrenia, a larger sample size might not have a similar level of willingness. Therefore, the results might not be extrapolated to reflect the entire mental health delivery system.

Implications

Implications for Individuals

The outcomes of this project can have a significant positive impact on individual patients affected by schizophrenia. The results of the surveys indicate that the providers' education program significantly improved their knowledge of the benefits of using CBT in the treatment of schizophrenia and their readiness to utilize the treatment. The improved knowledge and readiness can significantly improve the treatment outcomes of the patient population. CBT can adequately intervene on the positive symptoms of schizophrenia, such as delusions and hallucinations. CBT can also instill the patients with

various strategies of coping with psychotic symptoms, thus reducing the distress associated with psychotic episodes. Furthermore, the therapeutic relationships that characterize CBT sessions can also assist the patients in acquiring various social skills that can reduce social anxiety, apathy, and other antisocial behaviors that result from schizophrenia. Equally important, CBT can improve the patients' adherence rate to the prescribed antipsychotics since the CBT sessions can be used to make the patient aware of the importance of adhering to the prescribed medications. In addition, the sessions can also be used to make the patient aware of how they can access various social support resources or opportunities to optimize their quality of life and normal functioning. Lastly, CBT can be beneficial to the patients since it is not characterized by any major side effects, as well as it prevents relapse and rehospitalization in the long run. The staff education program may improve providers' knowledge of the benefits of CBT in the treatment of schizophrenia and readiness to adopt the psychotherapeutic intervention. These changes may significantly improve the treatment outcomes, social function, occupational capabilities, and the overall quality of life of the affected patients.

Implications for the Community

The improved knowledge among healthcare providers on the benefits of CBT in treating schizophrenia and their enhanced willingness to utilize the psychotherapeutic intervention is likely to have a significant positive impact on the local community. The healthcare facility in which the doctoral project was undertaken is located in an area primarily dominated by African Americans. African Americans experience various socio-economic disparities that diminish their overall mental and physical health. For instance,

the existing evidence indicates that adult African Americans have a 20% higher likelihood of being diagnosed with a serious mental health complication like major depressive disorder compared to adult non-Hispanic whites (Barbosa et al., 2018). Hence, the high prevalence of mental health issues among the African American population means that the improved treatment of schizophrenia among the locals who are attended at the healthcare facility can have a significant positive impact on the overall wellness of the local community. For instance, improved treatment of schizophrenia can reduce the burden of social issues like homelessness, suicide, crime, and violence.

The existing literature indicates that persons with schizophrenia who are inadequately treated have a 4 to 6 times higher likelihood of engaging in violent crimes compared to the general population (Barbosa et al., 2018). Furthermore, 6% of homicide incidents are attributed to persons with untreated schizophrenia (Barbosa et al., 2018). Thus, the improved treatment of schizophrenia among the affected patients can significantly enhance the overall safety of the local community. The use of CBT in the treatment of schizophrenia is likely to improve the community's economic welfare. This is because the use of CBT can enhance the vocational functioning of the affected individuals since CBT intervenes on the emotional, cognitive, and psychological barriers, such as apathy and disorganized speech, that can prevent an individual from retaining or accessing employment. Hence, CBT enables an individual to be productive, thus, reducing dependence which can strain the family caregivers of persons with schizophrenia.

In addition, apart from reducing dependence, CBT also reduces the use of antipsychotics, which are often characterized by a significant financial burden. For instance, the cost of a one-month dosage for olanzapine is $1,405, which poses a major financial burden on the affected patients as well as their families (Barbosa et al., 2018). Thus, the integration of CBT in the treatment of schizophrenia can significantly reduce the use of medications as well as the resultant financial implication that characterizes the pharmacologic approach. Therefore, the adoption of CBT by healthcare providers may improve the overall socioeconomic welfare of the local community through the reduction of dependence, financial implications of antipsychotics, and antisocial behaviors.

Implications for the Healthcare Organization and the Entire Healthcare Delivery System

The ability of the healthcare providers practicing in the facility in which the doctoral project was undertaken to attend to patients effectively can significantly improve the reputation of the facility. Schizophrenia is categorized as one of the most difficult to treat mental health complications in any mental health facility. This difficulty is mainly attributed to the high number of symptoms that characterize the disease as well as the side effects, such as extrapyramidal side effects, cardiovascular events, and seizures that characterize the use of medications such as SGAs in the treatment of schizophrenia. Hence, the adoption of CBT in the treatment of schizophrenia among patients visiting the facility can target and intervene on some of the psychotic symptoms that cannot be treated by medications as well as reduce the use of medications, thus, reducing the resultant side effects that characterize the long-term use of antipsychotics. Therefore, with implementation of CBT referrals, the healthcare facility will rank among the

organizations that adequately attend to patients with schizophrenia, and this can improve the reputation of the facility and enhance the demand for its services by the public compared to its peers. Higher demand for its services can reflect on the facility's revenues.

The adoption of CBT in the treatment of schizophrenia by the larger healthcare delivery system could have a significant positive impact on the entire system. According to Teoh et al. (2016), schizophrenia is categorized as one of the conditions with the highest financial implications on the healthcare delivery system. For instance, 2.1% of the U.S. healthcare expenditure is spent on schizophrenia (Teoh et al., 2016). This cost implication is mainly incurred during the management of some of its often-persistent symptoms. Furthermore, some of the medications prescribed for schizophrenia are also quite expensive. For example, the cost of the monthly dosages of perphenazine and olanzapine is $960 and $1,404, respectively. Hence, the reduced use of medications in the treatment of schizophrenia through the integration of CBT is likely to significantly reduce the cost implication of the disease.

Potential Implications for Positive Social Change

The results of this doctoral project can translate into positive social change. This is because the adoption of CBT in the treatment of schizophrenia is likely to improve the overall wellness of the affected patients. For instance, the use of CBT can reduce distress and enhance vocational functioning among the patients. It can also instill the patients with various social skills that can improve the quality of interpersonal relationships between persons with schizophrenia and the larger population. Furthermore, the use of

CBT can enable the patients to acquire various strategies for coping with psychotic symptoms. Hence, improving their quality of life. The effective treatment of schizophrenia is likely to reduce the rate of occurrence of various social challenges that characterize the psychotic disorder, such as homelessness, suicide, homicide, family conflicts, and violent crime. Lastly, another potential implication of positive social change related to the use of CBT in the treatment of schizophrenia is that the psychotherapeutic approach can reduce the cost burden that characterizes the use of antipsychotics. Therefore, the doctoral project can result in positive social change in terms of individual patients, their family members or caregivers, and the larger community.

Recommendations

The healthcare organization should formulate and adopt several policies that will safeguard the adoption of CBT as the first-line treatment for schizophrenia in the facility. One of the issues that the facility's management should consider is staffing. Compared to prescribing medications, CBT for schizophrenia must be implemented by CBT-certified therapists, who are currently lacking at the facility. Hence, the administration should ensure that adequate CBT-certified therapists are hired to attend to patients in need of CBT for schizophrenia. Furthermore, since the existing organizational culture of the facility is biased against CBT in preference of medications, the management must provide routine educational sessions in the form of seminars, where the providers will be reminded about the benefits of CBT for schizophrenia, the appropriate strategy for prescribing it, as well as the strategies of assessing the patients' responsiveness to it.

Continuous learning will better ensure that the treatment is fully adopted in the long term and that the care providers have optimum competence regarding its effective application (Ringle et al., 2017). Therefore, I recommend hiring the necessary staff and providing a continuous training program.

Strengths and Limitations of the Project

One of the main strengths of the project was the level of collaboration that I had with the various parties involved in the project, particularly the participants of the education program. The participants responded to all the segments of the surveys and actively took part in the entire education session. Hence, all the providers were enlightened by the program. Furthermore, the facility's management adequately facilitated the project by permitting the providers to take part in the education program. The clinic staff also provided a projector for the presentation and allocated the boardroom as a convenient venue for the education session.

However, despite the cited strengths, the project was also characterized by several limitations. Due to time constraints, the education session was provided in 40 minutes, which was the maximum time limit provided by the administration because of the tight shifts. A greater time allocation would have been beneficial to ensure that the presentation contained more information. Lastly, another limitation is that the project only involved 15 care providers. The small number of participants means that the outcomes of the project, particularly the results of the preintervention and postintervention surveys, might not reflect the trends of a bigger sample size. Therefore, as much as several factors facilitated the project, some dynamics limited its undertaking.

Section 5: Dissemination Plan

Introduction

In the context of nursing, dissemination can be described as a scenario in which intervention material and information are distributed to a targeted clinical practice or public health audience (Curtis et al., 2017). Hence, the dissemination process entails the spread of evidence-based interventions to ensure that a certain healthcare delivery challenge is optimally addressed. I disseminated the findings of this project on two levels: at the healthcare organization in which the project was undertaken and at the larger healthcare delivery system. The dissemination at the healthcare organization level was crucial in ensuring that the providers practicing at the facility fully adopt the recommended intervention regarding the use of CBT in the treatment of schizophrenia. The disseminated content builds on the staff education program because it comprises recommended guidelines that might enable the providers to utilize the intervention in their facility. Dissemination to the larger healthcare delivery system may ensure that more mental health providers are sensitized to the need to adopt CBT in the treatment of schizophrenia in order to optimize the treatment outcomes of the affected patients. Hence, this form of dissemination would ensure that the results and the recommendations of the doctoral project reach various healthcare providers regardless of their practice settings and geographic locations.

Dissemination to the Healthcare Organization

I have disseminated the results of the doctoral project to the healthcare organization where the project was undertaken. The dissemination targeted the

administrators and providers practicing in the facility. Dissemination to the facility's administration was undertaken by presenting the doctoral project results via a PowerPoint presentation and indicating the recommended organizational policies that may facilitate the competent referral of patients with schizophrenia for CBT. Dissemination targeting the providers was conducted via email distribution; I presented the results of the surveys and provided the recommended practice guidelines that may enable them to effectively adopt the use of CBT in the treatment of schizophrenia. The plan for disseminating the project to the healthcare organization is shown in Table 1.

Table 1

Plan for Dissemination to the Healthcare Organization

Criterion	Component
Audience	The facility's administration Mental health providers practicing in the facility: Psychiatrists and psychiatric mental health nurse practitioners.
Objectives	To present the results of the doctoral project to both the healthcare providers practicing in the facility and the facility's administration. To inform the healthcare providers about various practice guidelines that will facilitate the effective utilization of CBT among patients with schizophrenia. To inform the facility's administration about the recommended organizational policies that will facilitate optimal adoption of CBT in the treatment of schizophrenia among clients visiting the facility.
Format	The results and recommendations of the doctoral project will be posted on the facility's noticeboard so that they can be accessed by all the providers practicing in the facility. The results and recommendations will also be posted on the facility's website. Furthermore, the providers who provided their emails during the staff education presentation were emailed the results and the recommended guidelines to enable them to adopt the CBT intervention. Dissemination to the facility's administration was in the form of a PowerPoint presentation which was provided during the board meeting.
Timelines	The dissemination targeting the administration, which was in the form of a PowerPoint presentation was done on 20th March 2022 during the board meeting. Tentatively, the dissemination to the providers in the form of emails, posting the results on the noticeboard, and the facility's website will be done by 14th March 2022.
Resources	Projector Pamphlets

Dissemination to the Larger Healthcare Delivery System

Suboptimal treatment of schizophrenia occurs in the healthcare delivery system in which the doctoral project was undertaken and in many other mental health settings. According to Atkinson et al. (2014), the use of medications alone is the primary approach of intervening in schizophrenia in most mental health facilities in the United States. This is an unfortunate scenario because medications alone result in the persistence of symptoms such as hallucinations and delusions. Furthermore, the use of antipsychotics is characterized by side effects, persistence, and tolerance, thus resulting in poor treatment outcomes among the affected patients (Atkinson et al., 2014). I plan to disseminate the results and recommendations to the larger healthcare delivery system so that the current challenge regarding the suboptimal treatment of schizophrenia can be addressed on a broader scale.

I will send a query letter to the *Journal of Excellence in Nursing and Healthcare Practice* requesting consideration for publication. This form of dissemination will ensure that the outcomes of the project reach a broad readership because the journal is dedicated to translating and disseminating evidence supporting improved outcomes in the nursing practice environment (Hand et al., 2016). Furthermore, the journal is peer-reviewed, which means that the readers should have high confidence or trust in the information presented (Hand et al., 2016). Due to the increasing influence of social media on healthcare policies (Curtis et al., 2017), I plan to post some of the content regarding the project on various social media pages of the nursing profession. In this way, the project findings can potentially reach a broader audience, particularly young nursing

professionals who are more tech-savvy (see Hand et al., 2016). Some of the social media pages through which the information will be disseminated include the following Twitter accounts:

- the American Academy of Nursing (@AAN_Nursing),
- the American Nurses Association (@myamericannurse), and
- National Nurses United, a leading union of registered nurses (@NationalNurses).

Analysis of Self

As a Practitioner

The doctoral project may have a significant impact on the quality of care that I provide to patients with schizophrenia. Initially, I used to rely on medications alone when attending to patients with psychotic disorders. I found that the use of medications alone was characterized with significant challenges, such as high cost of antipsychotics and the inability of antipsychotics to target and intervene on the positive symptoms of schizophrenia, including hallucinations and delusions, and side effects such as seizures, dependence, and tolerance (see Atkinson et al., 2014). Furthermore, medications do not instill the affected patients with various social skills that would enhance their quality of social interactions and vocational functioning (see Atkinson et al., 2014). Therefore, my continued use of medications alone resulted in suboptimal treatment outcomes among the affected patients.

Completing the doctoral project has allowed me to deduce sufficient evidence indicating that the integration of CBT in the treatment of schizophrenia would benefit the

affected patients. Some of the benefits of CBT sessions include instilling a patient with various skills that enable them to cope with psychotic symptoms without resulting in severe distress. CBT also targets and intervenes with symptoms like delusions and hallucinations which are untreatable using medications. Furthermore, CBT instills a patient with various skills that prevent antisocial behaviors like social withdrawal and apathy and enhance vocational functioning, hence eliminating dependence. Therefore, the experience and knowledge deduced from this doctoral project may significantly impact my competence as a nursing practitioner, particularly when attending to patients with schizophrenia.

As a Scholar

The doctoral project has enabled me to appreciate the role of scientific research in addressing various healthcare delivery challenges. In this case, I have established that integrating the best evidence into clinical practice assists in ensuring that nursing practice is evidence-based and responsive to the emerging needs or trends. Hence, I intend to embark on continuous scholarship in my nursing career. I will attain this by keeping myself informed about emerging evidence, appraising the evidence, and applying that evidence, if possible, to ensure that I always provide care reflective of the emerging evidence-based recommendations. Continued knowledge accumulation is a fundamental aspect in nursing, especially in the modern-day where the healthcare delivery system is rapidly evolving, and the patients' needs are becoming more diverse. Furthermore, new diseases and medical technologies are emerging, and this necessitates a healthcare professional to remain conversant with emerging concepts and challenges.

As a Project Manager

The doctoral project provided an opportunity in which I applied various leadership skills. Effective leadership was required, particularly in engaging the stakeholders or interested parties. In this case, I had to apply good communication skills to gain the support of stakeholders such as the healthcare organization's management. I applied the communication and collaboration skills so that the administration would grant me permission to provide the staff education program in the facility. Furthermore, the creation of a strategic alliance with these crucial stakeholders enabled me to gain access to some important resources such as a printer, projector, and the boardroom in which the staff education program was initiated. In addition, competent communication enabled me to convince all the providers practicing in the facility to attend the staff education program. Their full attendance means that all the providers are aware about the presented recommendations regarding CBT use among patients with schizophrenia.

Challenges, Solutions, and Insights

Some challenges have characterized the course of undertaking the doctoral project. One of the main challenges was time constraints. This challenge was brought about by the fact that as much as I had to attend to the project, I also had to attend to the course, professional commitments, and family responsibilities. These commitments meant I had to observe optimal time management to complete the project as required. Hence, I had to come up with a timetable in which I ensured that I allocated at least three hours of my day to undertake certain aspect of the project. I also avoided social gatherings, particularly over the weekend, and focused on my project. Therefore, the

project has enabled me to learn that optimal time management is crucial in ensuring that all tasks are attended to irrespective of their magnitude. I intend to apply effective time management in both my professional and academic life in the future.

I experienced resource constraints. For instance, I lacked the resources required to provide the education program and disseminate the results, such as a projector and a printer. I established that identifying and engaging strategic stakeholders such as the administrators was crucial for lobbying the needed resources. Hence, the establishment of strategic partnerships ensured that I had unlimited access to the needed resources. Therefore, I intend to apply effective communication and collaboration in order to lobby the patients' needs and the resources required in delivering optimal nursing care.

Summary

Schizophrenia is a devastating illness that affects a significant portion of the American population. Despite the severe consequences of the psychotic disorder, its current therapeutic approach of medication-alone is characterized by major limitations which result in poor treatment outcomes among the affected patients. The integration of CBT in the treatment of schizophrenia can assist in addressing the gaps related to the use of medications. CBT intervenes on medication-resistant symptoms such as hallucinations and delusions. It also intervenes on apathy and social withdrawal issues which diminish the quality of interpersonal relationships and vocational functioning among the affected patients. Furthermore, CBT also diminishes distress since it equips a patient with various cognitive skills that assist them in coping with psychotic symptoms. Therefore, all the relevant stakeholders should ensure that the recommendations of the project are adopted

in the treatment of schizophrenia to optimize the treatment outcomes, quality of life, social and vocational functioning of the affected patients.

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Appendix A: Preintervention Questionnaire

Unique Identifier: _____

1. How old are you? _____
2. What is your gender? _____
3. Have ever treated a patient with schizophrenia?
   a. Yes
   b. No
4. If yes to question 3 above, what intervention did you use?
   a. Antipsychotics
   b. CBT
   c. A combination of antipsychotics and CBT
   d. Other (please list)
5. Have you ever referred a patient with schizophrenia to a CBT-certified therapist or social worker?
   a. Yes
   b. No
6. Which is the most appropriate duration for administering CBT sessions to a patient with schizophrenia?
   a. 4 weeks
   b. 8 weeks
   c. 12 weeks

7. How should CBT sessions for schizophrenia be scheduled per week?

   a. 30 minutes each day

   b. 1 hour weekly

   c. 30 minutes three times per week

   c. Once every 2 weeks for 2 hours

8. In your opinion, is CBT effective in managing psychotic symptoms compared to medications?

   a. Yes

   b. No

9. On a scale of 0 to 10 how effective is CBT in treating schizophrenia compared to medications? _____

10. Which is the most important aspect of CBT in the treatment of schizophrenia?

    a. CBT for schizophrenia has no known side effects

    b. CBT for schizophrenia improves adherence to the prescribed antipsychotics

    c. CBT is effective in treating the positive symptoms of schizophrenia such as delusions and hallucinations

Appendix B: Postintervention Questionnaire

Unique Identifier: _____

1. How old are you? _____
2. What is your gender? _____
3. Have ever treated a patient with schizophrenia?

   a. Yes

   b. No
4. If yes to question 3 above, what intervention did you use?

   a. Antipsychotics

   b. CBT

   c. A combination of antipsychotics and CBT

   d. Other (please list)
5. Have you ever referred a patient with schizophrenia to a CBT-certified therapist or social worker?

   a. Yes

   b. No
6. Which is the most appropriate duration for administering CBT sessions to a patient with schizophrenia?

   a. 4 weeks

   b. 8 weeks

   c. 12 weeks

7. How should CBT sessions for schizophrenia be scheduled per week?

   a. 30 minutes each day

   b. 1 hour weekly

   c. 30 minutes three times per week

   c. Once every 2 weeks for 2 hours

8. In your opinion, is CBT effective in managing psychotic symptoms compared to medications?

   a. Yes

   b. No

9. On a scale of 0 to 10 how effective is CBT in treating schizophrenia compared to medications? _____

10. Which is the most important aspect of CBT in the treatment of schizophrenia?

    a. CBT for schizophrenia has no known side effects

    b. CBT for schizophrenia improves adherence to the prescribed antipsychotics

    c. CBT is effective in treating the positive symptoms of schizophrenia such as delusions and hallucinations