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The Effectiveness of Psychotherapy for Schizophrenia Spectrum Disorders in Community Residential Settings

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Abstract

The purpose of this research was to analyze the effectiveness of psychotherapy for individuals diagnosed with schizophrenia spectrum disorders who reside in community residential settings. The present body of literature did not address the utility of psychotherapy treatment for this population. A key area of focus for this research was whether psychotherapy has an impact on psychiatric hospitalization rates for the target population. An additional research question was whether significant differences exist in psychiatric hospitalization rates between males and females for the target population. Data analyses were conducted using archival data from the Blossom Hill Corporation and Sunrise Farm Corporation in the State of Minnesota. Research questions were analyzed with a 2x2 factorial analysis of variance (ANOVA). Results indicated no significant differences in hospitalization rates for individuals in the target population who received psychotherapy (n = 60) compared to those who did not (n = 76). Hospitalization rates also did not differ between gender in psychotherapy treatment response for individuals diagnosed with schizophrenia spectrum disorders in community residential settings. This study has implications for social change because it informs community residential providers in Minnesota serving individuals in the target population about the impact of psychotherapy on reducing psychiatric hospitalizations. Social change is further affected by providing data about how psychotherapy and theory can be used to better treat and understand the target population's mental health stability.

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Chapter 1: Introduction to the Study

Introduction

The purpose of this study was to contribute to closing a gap in the literature regarding the utility of psychotherapy for men and women diagnosed with schizophrenia spectrum disorders who reside in community residential settings. According to the *Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition* (DSM-5), schizophrenia spectrum and other psychotic disorders include schizophrenia and schizoaffective disorder and are defined by delusions, hallucinations, disorganized communication, and abnormal motor behavior. *Community residential settings* are facilities that provide accommodation and care for residents on an ongoing basis, including therapy treatment. There were reasons why this study needed to be conducted. First, the effectiveness of psychotherapy for this specific population within the context of a supportive environment was relatively unknown. There was significant research supporting the use of psychotherapy for patients with schizophrenia (Gregory, 2010). However, the current body of research does not focus on this specific context of psychotherapy treatment.

Second, the deinstitutionalization movement has had a significant impact on the mental health field (Šiška & Beadle-Brown, 2011). For the past few decades, the model of mental health care and treatment has moved away from large, institutionalized care to community-based alternatives. The trend of deinstitutionalization requires those in the mental health field to examine how this movement has impacted psychotherapy.

This chapter provides an overview of the research study. It provides brief background information regarding the use of psychotherapy for patients with schizophrenia spectrum disorders. It then summarizes the history of the deinstitutionalization movement. This chapter also presents a theoretical framework detailing the history of rehabilitation and psychotherapy use for patients with schizophrenia spectrum disorders. Additionally, it presents the problem statement, definitions, and a summary.

Background

Treatments for schizophrenia spectrum disorders are diverse. First-line treatments for those disorders have historically been antipsychotic medications (Tarrier, 2008). Often, this approach is used with case management services to promote mental health stability and maintain community living. However, there are instances when antipsychotic treatment is not sufficient, particularly when patients do not take medications consistently. Intensive case management, known as *targeted case management*, is sometimes used in an effort to increase treatment adherence (Addington et al., 2012). In some cases, schizophrenia may be treatment resistant, which can result in atypical treatment options such as electroconvulsive therapy (ECT; Garg, Chavan, & Arun, 2011).

Psychotherapy has emerged as a viable treatment option for schizophrenia spectrum disorders. Recent studies have found that a combination of psychotherapy and medication is more effective than these approaches used alone to treat patients (Kuller et al., 2010). Psychotherapy is an effective treatment option because it provides the patient

with a structured approach that is capable of addressing delusions, hallucinations, and negative symptoms within the context of a strong therapeutic alliance with the mental health professional (Rector & Beck, 2002).

As the body of research supporting psychotherapy as an effective treatment option continued to grow, the deinstitutionalization movement in the United States was also gaining momentum. The purpose of deinstitutionalization was to normalize community living for individuals with serious and persistent mental illnesses (Hickling et al., 2011). For the past 50 years, there has been a gradual shift toward moving large inpatient psychiatric populations to smaller community environments (Šiška & Beadle-Brown, 2011). The ultimate goal of deinstitutionalization is to improve quality of life for patients while reducing readmission rates (Irmiter et al., 2007). This movement has led to the development of unique residential facilities in Minnesota to serve deinstitutionalized patients in a structured community setting, such as Adult Foster Care Services (2006).

In Chapter 2, I evaluate pertinent studies related to the use of psychotherapy as a treatment option for individuals diagnosed with schizophrenia spectrum disorders. I also review other treatment options, such as psychotropic medications, and consider how psychotherapy fits along the treatment continuum. The review of the literature also contains a discussion of the deinstitutionalization movement for psychiatric patients. It provides support for the finding that no prior research has been conducted to specifically evaluate the utility of psychotherapy for patients diagnosed with schizophrenia spectrum disorders residing in community residential settings in the State of Minnesota.

Gap in the Literature

Psychotherapy has been thoroughly researched and found to be productive in treating mental disorders (Tarrier, 2010). It has been used across the field of clinical mental health as a practical approach to alleviating symptoms. Psychotherapy has also been found to be effective for treating symptoms of psychosis when used with psychotropic medications (Gregory, 2010). The rise of psychotherapy as a prominent treatment for mental disorders with psychotic features has paralleled the deinstitutionalization movement in the United States. A few studies have evaluated the impact of psychotherapy on patients in both inpatient and outpatient settings (Welfare-Wilson & Newman, 2013; Young, 2010). However, these studies have been vague regarding specific outpatient living environments of patients with similar disorders. The impact of psychotherapy on individuals with schizophrenia spectrum disorders who reside in community residential settings has not been researched. It is unknown whether psychotherapy has a significant impact on patients who reside in community residential settings and have schizophrenia spectrum disorders.

Necessity of This Study

This study was needed because it is necessary to establish the utility of psychotherapy for patients diagnosed with schizophrenia spectrum disorders who reside in community residential settings. It was unknown whether psychotherapy in addition to psychiatric medication and supportive residential services has better outcomes than psychiatric medication and supportive residential services alone. One way to examine the success of psychotherapy in this setting is to examine hospitalization rates among

those who do and do not participate in psychotherapy. In addition, this study examined gender, maturation of patients during treatment, and hospitalization rates. Maturation is important because it is possible for patients to demonstrate better adjustment to mental illness diagnoses and symptoms as they age (Meeks & Murrell, 1997).

Problem Statement

This study addressed the problem of lack of sufficient knowledge about the impact of any form of psychotherapy on patients with schizophrenia spectrum disorders who reside in community residential settings. The lack of research in this particular area has resulted in the absence of empirically sound treatment approaches for this population. Because the impact of psychotherapy has been relatively unknown for this population, it has been difficult for clinicians to use evidence-based practices when treating patients who are in this category. Hospitalization rates reflect whether psychotherapy has been effective, given that those patients who succeed in treatment may not need to be hospitalized. In response to the history of institutionalizing patients and subjecting them to poor treatment (Lysaker, Roe, & Kukla, 2012), a new way of understanding rehabilitation has emerged. Supportive community environments are the product of the deinstitutionalization movement. They have significantly changed treatment and rehabilitation for those with schizophrenia spectrum disorders (Šiška & Beadle-Brown, 2011). Deinstitutionalization has also resulted in integrative ways of treating psychiatric patients. Many of these treatments include a combination of psychotherapy and medication, as well as other rehabilitation methods (Lysaker et al., 2012).

Evidence of Consensus Regarding the Problem

It is beneficial to have additional treatments for schizophrenia spectrum disorders that complement the first-line treatment of psychotropic medication. For example, schizophrenia is more responsive to psychotherapy when it is combined with medication management (Kuller et al., 2010). This finding is important because it is difficult, if not impossible, to completely eradicate the symptoms of schizophrenia through medication alone (Kuller et al., 2010). It has also been found that psychotherapy has utility for both residual symptoms and exacerbations of the disorder for patients who take antipsychotic medication (Tarrier, 2010). Tarrier (2010) indicated that the structured approach used in psychotherapy provides benefits in addressing delusions, hallucinations, and negative symptoms of schizophrenia. Psychotherapy is an example of a viable treatment option, and it is necessary to expand the knowledge base regarding its use as a treatment.

One of the primary gaps in the literature was the lack of defined parameters regarding the populations of studied patients with mental illnesses that have psychotic features. For example, LeVine (2012) promoted a model of care that is psychobiosocial for individuals with schizophrenia, but did not provide residential parameters for that model. Delimiting studies by the use of the psychobiosocial model is insufficient because doing so does not adequately account for the setting in which the subjects reside. Outpatient individuals with psychotic disorders reside in a variety of settings. Those settings range from independent living settings such as apartments to highly structured residential environments with support staff. Outpatient demographics are further complicated when one considers the various state systems for placing patients with

psychotic disorders in supportive environments. Specific research was needed to evaluate the effectiveness of psychotherapy for patients with schizophrenia spectrum disorders who reside in supportive environments.

The structural variety of research studies for this population was also limited. Most of the research studies in this area were longitudinal studies with pre- and posttreatment data analysis. Longitudinal studies have an advantage because they allow researchers to study results over time. Cross-sectional studies also have utility but have seldom been used to study this population. In addition to longitudinal studies being evaluated, focus was placed on follow up with patients. Follow ups are necessary to assess the alleviation of symptoms based on patient reports.

It was found that the deinstitutionalization movement has benefited patients with psychotic disorders by promoting facilities that are more conducive to mental health stability in the community (Hickling et al., 2011). A review of the literature indicated that the study and evaluation of deinstitutionalization and psychotherapy for mental illnesses with psychotic features have been conducted separately. Studies to measure the correlations between these two variables and their impact on patients were not found. There was a need for research that investigates the usefulness and effect of psychotherapy for patients with schizophrenia spectrum disorders who are impacted by deinstitutionalization.

Framing the Problem

Some progress has been made in researching psychotherapy treatment for individuals with mental illnesses with psychotic features. However, the research has

tended to favor researching psychotherapy treatment for the population without addressing its utility in specific residential environments (Addington et al., 2012). Consequently, generalizations to unique living environments, such as corporate adult foster care, have not been possible.

It has been clear that psychotherapy for individuals with mental disorders with psychotic features is beneficial (Van Donkersgoed et al., 2014). However, there has been a research gap regarding the treatment effect of psychotherapy for individuals residing in supportive living environments in the State of Minnesota. Does psychotherapy have a similar impact on an individual with psychotic symptoms living in a supportive environment that it does on one residing independently in the community? Questions such as this cannot be answered at this time due to the absence of research with these specific parameters. Therefore, while individuals may live in supportive environments and receive psychotherapy, the actual impact of psychotherapy for this specific population has been unknown.

The literature also indicates that gender may have an impact on patient response to psychotherapy treatment in this population. Ulberg, Marble, and Høglend (2009) found that women had better long-term treatment effects than men when treated with psychodynamic psychotherapy. Donker et al. (2013) indicated that female gender was a positive predictor of psychotherapy response for major depressive disorder. Another study conducted by Parker, Blanch, and Crawford (2011) found that there was no consistent difference in psychotherapy response between males and females treated for depression. Literature regarding gender and treatment effect for patients with

schizophrenia spectrum disorders was not found. Generalization as to the difference in treatment effects between men and women for the target population was not possible due to a lack of research.

Purpose of the Study

The purpose of this quantitative study was to assess the effectiveness of psychotherapy treatments for individuals who reside in community residential settings who are diagnosed with schizophrenia spectrum disorders, as well as to determine whether there are significant differences in psychiatric hospitalization rates between males and females. The use of psychotherapy treatment with this group of patients merited further study.

Psychotherapy and rehabilitation have developed independently and therefore have separate histories with regard to how patients are treated (Hamm, Hasson-Ohayon, Kukla, & Lysaker, 2013). These treatment modalities have not been studied in conjunction with each other. This gap in the literature is problematic, given the recent treatment trend toward the integration of medications, psychotherapy, residential environments, and other forms of rehabilitation. Studies on community residential settings with psychotherapy could alter or improve treatment.

In the present study, a cross-sectional sample of patients was obtained using secondary data from a supportive residential provider. The sampling was assessed to determine the impact of psychotherapy on psychiatric hospitalization rates. The independent variables were participation in any form of psychotherapy treatment and gender. The dependent variable was the rate of hospitalization, which was a count and

was treated as continuous data. All patients whose records were used in this study were required to have a schizophrenia spectrum disorder as the primary diagnosis. Also, all patients were categorized based on whether they were actively involved in any form of psychotherapy. Patients included in the study resided in a community residential setting.

Research Questions and Hypotheses

RQ1: Are there significant differences in hospitalization rates for patients with schizophrenia spectrum disorders residing in community residential settings between those who do and do not participate in any form of psychotherapy at least twice per month, gender, and the interaction between psychotherapy and gender?

$H_0$1: There are no significant differences in hospitalization rates for patients with schizophrenia spectrum disorders residing in community residential settings between those who do and do not participate in any form of psychotherapy at least twice per month.

H_A1: There are significant differences in hospitalization rates for patients with schizophrenia spectrum disorders residing in community residential settings between those who do and do not participate in any form of psychotherapy at least twice per month.

$H_0$2: There are no significant differences in hospitalization rates for patients with schizophrenia spectrum disorders residing in community residential settings between males and females.

H_A2: There are significant differences in hospitalization rates for patients with schizophrenia spectrum disorders residing in community residential settings between males and females.

H_03: There are no significant differences in hospitalization rates for patients with schizophrenia spectrum disorders residing in community residential settings between participation in a form of psychotherapy at least twice per month and gender.

H_A3: There are significant differences in hospitalization rates for patients with schizophrenia spectrum disorders residing in community residential settings between participation in a form of psychotherapy at least twice per month and gender.

Theoretical Framework for the Study

The primary theory underlying this study was Hamm's theory of integrating psychotherapy through four models (Hamm, Hasson-Ohayon, Kukla, & Lysaker, 2013). Psychotherapy is a widely researched evidence-based practice. According to Hamm et al. (2013), disorders with psychotic features have been extensively studied. Particular attention has been given to the use of psychotherapy as a treatment for this population. Psychotherapy has vacillated from being considered the most important form of treatment to not being used at all. Hamm et al. proposed that psychotherapy should not replace other forms of treatment but should instead be used with other treatment options. The literature indicated that those with schizophrenia spectrum disorders who accept psychotherapy show a decline in dysfunctional symptoms (Hamm et al., 2013). They also demonstrate improved psychosocial functioning (Hamm et al., 2013).

Hamm et al. (2013) also promoted the idea of integrating psychotherapy through the use of four models. First, the narrative model allows patients to develop a historical, interpersonal, and developmental context during psychotherapy. The second model focuses on attachment processes and emphasizes stress reduction. The goal of treatment using the stress reduction approach is to diminish dissociative symptoms. The third model is metacognitive-oriented therapy. The metacognitive-oriented model assists patients in developing a better understanding of themselves and others. The fourth model focuses on implementing psychosocial rehabilitation.

Lysaker et al. (2012) indicated that there has been a division between rehabilitation and psychotherapy in the treatment of schizophrenia spectrum disorders. This division has not been productive for successful treatment. According to Lyskaer et al., there are barriers that remain between the two forms of treatment that are relevant to the population outlined in this chapter. These barriers include conflict regarding whether mental illnesses with psychotic features impoverish the experience of understanding personal mental and emotional processes. Another barrier relates to whether positive change can be implemented through both psychotherapy and rehabilitation (Lysaker et al., 2012).

Nature of the Study

The research design for this study was nonexperimental with an ex post facto approach. The study did not control or manipulate the predictor variables, but instead relied on interpretation of collected data. Using an ex post facto approach, the data were obtained from archival charts of anonymous participants. This research studied the

effects of psychotherapy on adults with schizophrenia spectrum disorders. The use of an ex post facto design removed the risk of harm. Not using this design would have required me to provide psychotherapy treatment to some patients and not to others. In that case, there would have been the potential of harm to the participants who did not receive psychotherapy treatment.

The target population was individuals diagnosed with schizophrenia spectrum disorders who resided in community residential settings licensed through the State of Minnesota. A sample was obtained from community agencies that met criteria for this study. Patients who met inclusion criteria were categorized based on whether they received any form of psychotherapy. Once the sample was obtained, the count for inpatient hospitalizations per patient for the previous 4 years was recorded. Archival data were obtained from patient files from those who had a diagnosis of a schizophrenia spectrum disorder. The goal was to identify differences in inpatient hospital admissions between those who participated or did not participate in any form of psychotherapy and between genders.

The independent variables for this study were the use of any form of psychotherapy treatment and gender. For informational purposes and demographical data, the specific psychotherapy approach used to treat each participant was categorized. If a specific treatment approach was not identified, the term *unspecified* was used.

Definitions

Community residential setting: This environment includes homes that specialize in the care of patients with serious and persistent mental illnesses licensed by the State of

Minnesota as Community Residential Settings. According to Minnesota Statute Chapter 245D (2014), Community Residential Settings are facilities licensed by the State of Minnesota to provide federal waiver services to individuals with disabilities, including mental illnesses.

Psychotherapy: Psychotherapy, as defined for this research, is psychotherapy treatment for mental illness provided by a mental health professional (Welfare-Wilson & Newman, 2013). *Mental health professionals* include licensed psychologists, clinical social workers, professional counselors, and marriage and family therapists.

Gender: Gender is defined biologically as male or female. However, if a patient did not identify as either gender, or identified as transgender, the category of *other* was assigned.

Scope and Delimitations

This research was limited by two factors, including diagnosis. The scope of the study was defined by its focus on the effectiveness of psychotherapy for individuals diagnosed with schizophrenia spectrum disorders who resided in a community residential setting licensed through the State of Minnesota. Potential participants who did not have a mental illness meeting these criteria were excluded from the study.

The second limitation was residential status. This study included patients with schizophrenia spectrum disorders who resided in a community residential setting. This study defined community residential settings as homes specializing in providing residential care to individuals with mental illnesses licensed by the State of Minnesota. Participants in this study were required to be residents of such an environment.

Limitations

External Validity Limitations

There were general limitations to external validity. The characteristics of the population being studied were narrow and specific, which prevented generalization to a larger population. The results of this study only apply to individuals with schizophrenia spectrum disorders who also reside in community residential settings licensed through the State of Minnesota.

Internal Validity Limitations

Maturation threat was one internal validity limitation. Maturation could influence treatment response and hospitalization rates because as patients mature, they may exhibit resistance to treatment or increased vulnerability to mental disorders.

Regression was another threat to internal validity. It is statistically natural for participants with a high number of admissions to regress to a more average number of admissions for the population. To account for regression, patients with extremely high admission rates at the beginning of the study's time frame were removed from the research. A high admission rate was defined as a number of inpatient days being equal to 6 months or more in the first 12 months of the study's timeframe. This rationale was derived from a similar study conducted in Virginia in 2011. That study evaluated the effect of community mental health services on hospitalization rates in Virginia. The authors of that study excluded patients with hospitalizations of 6 months or more (Wanchek, McGarvey, Leon-Verdin, & Bonnie, 2011).

Significance

The implications of this study include the advancement of knowledge about psychotherapy used as a treatment for those with schizophrenia spectrum disorders. There has been limited research on this population, and that research has not established best treatment practices.. The lack of research may have caused difficulty in the identification of the best treatment practices for patients with serious and persistent mental illnesses residing in community residential settings.

Present methods used in the field of mental health for the identified population may not be as effective as they could be. There has been a gap between the theories and practices of psychotherapy and rehabilitation. The significance of the study also resided in its aim to provide a foundational understanding of the utility of psychotherapy for the target population and to identify any differences between genders within the context of community residential settings.

Social Change Implications.

This study may impact treatment practices for patients diagnosed with schizophrenia spectrum disorders. It may provide a scientific basis for the use of psychotherapy in a supportive residential community setting. It may also increase awareness about the impact of psychotherapy treatment for the target population. Professionals in the field of mental health may be better equipped to make clinical service decisions as a result of this study.

The community mental health system in Minnesota may also be impacted by the results of this study. The intent of this study was to determine whether psychotherapy for

the target population is clinically advantageous and to determine whether hospitalization rates fluctuate based on gender. Regardless of the outcome, the knowledge gained from this study may be used to help improve mental health professionals' decision making when they work with clients who have mental illnesses with psychotic features. This study expands the knowledge base of mental health treatment options within the mental health community in the State of Minnesota.

Summary

The purpose of this chapter has been to provide an introduction to and overview of the research. The study was designed to investigate a gap in the literature regarding the utility of psychotherapy for individuals with schizophrenia spectrum disorders who reside in community residential settings. In addition, the study was designed to analyze differences in hospitalization rates between males and females. There were two primary reasons for this research. First, the effectiveness of psychotherapy for the target population was relatively unknown. Second, the deinstitutionalization movement has significantly impacted the mental health field (Šiška & Beadle-Brown, 2011). The primary result of deinstitutionalization has been the shift of care from hospitals to community-based homes. There was a need to research the target population in current settings to assess the utility of psychotherapy as a treatment.

The research was designed to be a quantitative analysis of psychotherapy for a population in the State of Minnesota within a community residential setting that had not yet been fully researched in conjunction with psychotherapy. The research has relevant social change implications. Those implications include bridging the gap between

psychotherapy and increasing awareness of integrative treatment methods for the identified population. Other implications include altering practices and application methods of treatment in the local mental health system and expanding the knowledge base regarding psychotherapy treatment.

The purpose of this chapter has been to provide an introduction to the research. It has provided a summary of the literature and background related to this study. This chapter has also outlined a gap in the literature that was addressed through the research. The gap in the literature was the lack of research regarding the effectiveness of psychotherapy for the target population. After outlining the gap in literature, this chapter provided a basis for the necessity of the research, the problem statement, and evidence supporting the problem statement. I stated the research questions, hypotheses, and conceptual framework for the study. Finally, I briefly discussed the scope and limitations of the study and identified social change implications.

The literature review in Chapter 2 outlines the present research regarding psychotherapy for individuals diagnosed with mental illnesses with psychotic features. It also summarizes the literature as it relates to deinstitutionalization. The review of the literature contained in the next chapter further establishes the identified gap in the literature.

Chapter 2: Literature Review

Introduction

Schizophrenia spectrum disorders are chronic mental disorders that have a significant impact on clients who carry those diagnoses (Tarrier, 2008). Clients with those disorders are forced to cope with debilitating symptoms of their illnesses that have psychological, medical, and sociological impacts. Psychotherapy as a treatment for schizophrenia spectrum disorders has garnered more empirical attention, particularly in the past decade (Tarrier, 2008). Because of the effects of schizophrenia spectrum disorders on clients and the emergence of psychotherapy as a viable treatment option, it is necessary to continue to build the foundation of research in this area.

The appropriateness of psychotherapy for schizophrenia spectrum disorders is debatable. There are opposing views as to psychotherapy's effectiveness for individuals with schizophrenia spectrum disorders regardless of the psychologist's theoretical orientation. However, psychotherapy does appear to have a place in treating patients diagnosed with those disorders (Tarrier, 2008). Individuals with schizophrenia spectrum disorders experience a variety of symptoms that are debilitating across a variety of domains.

Typically, the symptoms of schizophrenia spectrum disorders can be categorized into two distinct groups: positive symptoms and negative symptoms (Tarrier, 2008). *Positive symptoms* typically include hallucinations, delusions, thought disorganization, and speech impairments. Often, positive symptoms are considered to be symptoms that individuals without schizophrenia generally do not experience. Positive symptoms tend

to parallel psychosis (Tarrier, 2008). *Negative symptoms* tend to be secondary to the positive symptoms and generally include dysfunctional interpersonal skills, blunted affect, a lack of emotion, and poor motivation (Tarrier, 2008). Individuals suffering from schizophrenia spectrum disorders must face not only difficult positive symptoms such as hallucinations, but also symptoms that inhibit their ability to participate in the basic activities of a fully functional individual in society. It is not uncommon for individuals with schizophrenia spectrum disorders to experience poor relationships, secondary depression, and an overall lack of fulfillment due to negative symptoms (Tarrier, 2008).

The problem that necessitated this research was the lack of empirical support for psychotherapy as a treatment modality for individuals diagnosed with schizophrenia spectrum disorder who reside in community residential settings. There is a variety of research that establishes psychotherapy as an effective treatment option for patients with schizophrenia spectrum disorders (Cuthbert, 2005; Fuller, 2010; Harder et al., 2014). However, the social and supportive context of the individuals in these studies is often not considered.

This chapter is divided into several major sections. It first outlines the literature search strategy used to discover relevant research for the stated topic. This chapter then transitions to the review of literature, beginning with an examination of traditional treatments for schizophrenia spectrum disorders followed by a section that addresses relevant gender differences regarding the experience and treatment of schizophrenia spectrum disorders. The literature review transitions to a discussion regarding the deinstitutionalization of patients with serious and persistent mental illness in America.

The purpose of that particular section is to foster an understanding of the role of deinstitutionalization and the development of supportive residential services for the identified population.

Overview of Variables and Concepts

This literature review was guided by a number of variables and concepts. The primary concept guiding the research was psychotherapy and its application to individuals diagnosed with schizophrenia spectrum disorders, as well as the difference in psychiatric hospitalization rates between genders. Psychotherapy is a widely researched evidence-based practice. It has been found to be useful for addressing psychological disorders and conditions (Corey, 2005). For example, cognitive behavioral therapy (CBT) combines cognitive and behavioral principles into a single therapeutic approach (Corey, 2005). It is a structured, time-limited treatment modality that is used to address cognitive distortions, assumptions, and beliefs that are associated with presenting symptoms (Corey, 2005). CBT was originally developed specifically for depression and anxiety disorders, but research has supported its use for a wide variety of other diagnoses including schizophrenia spectrum disorders (Corey, 2005).

Five primary variables guided this literature review: psychotherapy, diagnosis from the schizophrenia spectrum according to DSM-5 criteria, gender, placement in a community residential setting, and hospitalization rate. An understanding of these variables assisted in limiting the scope of this literature review. It was necessary to synthesize the literature regarding these variables to discover what was already known

about the topic from current and historical perspectives and to identify gaps in the literature that justified the pursuit of this particular research study.

Literature Search Strategy

The literature search for this review was conducted through the Walden University Library, which provides access to a variety of databases. The primary mode of literature discovery was through the use of Thoreau. Thoreau is a search feature provided by Walden University that allows the user to run searches across multiple databases at the same time. Users can also narrow their results by discipline. Results were narrowed to search behavioral sciences databases. This enabled a more efficient search for literature related to psychotherapy on schizophrenia spectrum disorders.

The literature search was further narrowed in scope by identifying the relevant areas of psychotherapy that applied to schizophrenia spectrum disorders, and by reviewing literature on gender differences in experiences and treatment of individuals with schizophrenia spectrum disorders, as well as gender differences in responses to psychotherapeutic treatment. A search was also conducted to discover literature related to deinstitutionalization to identify its effects on clients with schizophrenia spectrum disorders. Finally, a search was conducted to specifically identify any research that addressed the impact of psychotherapy on clients with schizophrenia who also resided in community residential settings.

In the search for literature, I also placed parameters on the years of publication for the research evaluated. A comprehensive search was first conducted to assess the volume of research available. The cutoff for this initial search was 1970. Research was found

using this search criterion, but it did not have utility for this literature review. Results were then narrowed to include research conducted between 1990 and 2015. This was done to evaluate the development of psychotherapy and to chronicle the deinstitutionalization movement. Whenever possible, the most recent and relevant research was used.

The scope of this literature review was limited to the effectiveness of psychotherapy with patients diagnosed with schizophrenia spectrum disorders. It was initially assumed that CBT and its impact on the target population would be the primary focus of the research. However, it was found that limiting the research to CBT did not adequately encompass psychotherapy treatment strategies for the target population. It was for this reason that the primary search terms included *psychotherapy, cognitive behavioral therapy, CBT, schizophrenia,* and *schizophrenia spectrum disorder*. The use of these particular search terms yielded a wealth of research literature in this area. Literature on gender differences in persons diagnosed with schizophrenia spectrum disorders and gender differences in response to psychotherapy was identified by including *gender* and *gender differences* with the aforementioned terms. The search for literature about supportive residential services was more challenging. The terms used to find literature included *group home, supportive residential services, adult foster care,* and *inpatient treatment*. These terms were also coupled with the terms *schizophrenia* and *schizophrenia spectrum disorders* to narrow the search to the most relevant information.

The search for literature using the above procedures yielded a large amount of resources on psychotherapy and CBT treatments. Results were then narrowed to the most

useful literature related to the topic. The task became more difficult when I attempted to find literature on supportive residential services and the effectiveness of psychotherapy for patients who live in those environments. Research studies and dissertations that focused on the effectiveness of psychotherapy for patients with schizophrenia spectrum disorders in supportive residential service environments were not found.

Traditional Treatment for Schizophrenia Spectrum Disorders

Traditional treatment for individuals with schizophrenia spectrum disorders has tended to focus on the use of antipsychotic medication (Tarrier, 2008). Although the use of antipsychotics has been shown to be effective in addressing some of the symptoms, adherence rates to prescribed medications was between 10% and 80% (Kingdon et al., 2007). This indicates that adherence rates can fluctuate significantly depending on the individual and other factors.

Another common treatment approach for schizophrenia spectrum disorders is to augment the use of antipsychotic medication with case management services (Tarrier, 2008). Such services are often implemented to provide community support to encourage medication adherence and promote mental health stability.

Medications are usually the first-line treatment for a patient with schizophrenia spectrum disorders, but there are other treatment alternatives as well (Addington et al., 2012). Targeted case management is a psychosocial treatment that seeks to coordinate services to meet the patient's needs (Addington et al., 2012). However, research has indicated that the adherence rate for patients with schizophrenia spectrum disorders

receiving case management in the absence of medication is not optimal (Addington et al., 2012).

Patients experience schizophrenia spectrum disorders differently, and for this reason, there is the risk that some cases may be treatment resistant (Garg et al., 2011). The cause of treatment resistance is unknown, but different patients tend to have different responses to treatment. Some patients do not respond well to first-line treatments such as medication. For this reason, alternative treatment approaches are sometimes considered. Electroconvulsive therapy (ECT) is an alternative to more typical treatments for patients who are treatment resistant (Garg et al., 2011). The research on ECT for patients with treatment-resistant schizophrenia spectrum disorders has indicated that using ECT in conjunction with pharmacotherapy tends to increase quality of life for patients (Garg et al., 2011).

Psychotherapy is also a treatment alternative for schizophrenia spectrum disorders (Harder, Koester, Valbak, & Rosenbaum, 2014; Lysaker, Buck, & Hammoud, 2007). Some psychotherapeutic treatment approaches have identified the inability of a patient diagnosed with schizophrenia spectrum disorders to consider his or her personal experience with the illness as a significant barrier to recovery (Lysaker, Glynn, Wilkniss, & Silverstein, 2010). Studies have shown that two approaches can be used to address the impoverished self-experience that is a symptom of schizophrenia spectrum disorders. First, developing a personal narrative has demonstrated utility in facilitating recovery from schizophrenia spectrum disorders (Lysaker et al., 2010). This approach is based on an assumption that the patient diagnosed with schizophrenia spectrum disorders has not

been able to develop a life story to achieve an understanding of who he or she is as a person. Psychotherapy is viewed as a strategy to begin developing a personal narrative that enables self-growth and improved ego strength (Lysaker et al., 2010).

Psychotherapy can also address diminished self-experience through enhancing metacognition (Lysaker et al., 2010). *Metacognition* refers to the act of thinking about thinking (Lysaker et al., 2010). Individuals with schizophrenia spectrum disorders tend to have a diminished capacity to comprehend their own thoughts and understand the perspectives and emotions that others may have (Lysaker et al., 2010). The approach of improving metacognition is rooted in the psychoanalytic approach to treatment.

The integrative approach is another schizophrenia spectrum disorders treatment option. The integrative approach is similar to the psychoanalytic approaches discussed previously because it seeks to aid in recovery through the development of the patient's personal narrative (Gumley & Clark, 2012; Lysaker, Buck, & Roe, 2007). This approach is based on the premise that patients with schizophrenia spectrum disorders lack autonomy and perceive themselves as having minimal worth to society (Lysaker, Buck, & Roe, 2007). The integrative treatment approach for schizophrenia spectrum disorders seeks to develop the patient's personal narrative within the context of the patient's relationships (Gumley & Clark, 2012). The therapist using this approach works with the patient to develop narratives of experiences through analyzing nonhierarchal relationships (Lysaker, Buck, & Roe, 2007). The integrative approach is one that requires patience from the therapist because progress is often slow (Lysaker & Lysaker, 2006).

Research supports the use of psychotherapy as a useful treatment approach for schizophrenia spectrum disorders (Gunderson, 1984). Rosenbaum et al. (2012) conducted a study in which supportive psychotherapy treatment in addition to treatment as usual was compared to traditional treatment alone for first-episode psychosis. The group that received supportive psychotherapy had better scores on the Positive and Negative Syndrome Scale (PANSS) and Global Assessment of Functioning (GAF; Rosenbaum et al., 2012). The results of that study indicated that psychotherapy can assist in stabilizing the symptoms of schizophrenia spectrum disorders and psychosis (Rosenbaum et al., 2012).

In a follow-up study, Harder, Koester, Valbak, and Rosenbaum (2014) researched the long-term outcome of supportive psychotherapy for patients with schizophrenia spectrum disorders. That study used manualized supportive psychodynamic psychotherapy for a maximum of 3 years in addition to standard treatment such as psychotropic medications. The results of the study indicated that the effects of treatment on overall functioning favored using psychotherapy and traditional treatments (Harder et al., 2014).

Malmberg (2010) conducted a systematic review of studies involving a psychodynamic psychotherapy approach for the treatment of schizophrenia spectrum disorders. The results indicated that there was not sufficient evidence to conclude that psychodynamic psychotherapy had any effect on the symptoms of hospitalized patients with schizophrenia (Malmberg, 2010). Malmberg (2010) also concluded that there is a

significant need for additional research regarding the efficacy of psychotherapy to treat schizophrenia spectrum disorders.

Fuller (2010) indicated that trauma-informed psychotherapy is a helpful treatment for individuals diagnosed with schizophrenia spectrum disorders. She asserted that those diagnosed with schizophrenia or other disorders with psychotic features had higher rates of trauma than the general population (Fuller, 2010). Her findings supported the use of trauma-informed psychotherapy for schizophrenia spectrum disorders but also indicated that more research was required to determine how to most effectively implement aspects of trauma into treatment (Fuller, 2010).

Gender, Schizophrenia, and Psychotherapeutic Treatment

Research has indicated notable gender differences in patients diagonised with schizophrenia spectrum disorders. For example, research on gender differences in the course of the illness has suggested that schizophrenia tends to be worse for men than for women (Angermeyer, Kuhn, & Goldstein, 1990) Research has also shown gendered differences in response to treatment. Furthermore, research on the treatment of patients with schizophrenia spectrum disorders has indicated that because gender roles and expectations can impact individual experiences of the illness, gender should be a consideration in treatment therapies. For example, Test, Senn Burk, and Wallisch (1990) points out that women who are mothers might need and respond better to programming, support and treatment that reflects consideration of their particular role and responsibilitiy. Finally, although the review of literature indicates that gender impacts individuals diagnosed with schizophrenia, the literature surveyed also indicates the need

for further research on gender differences in order to better understand the complexity of gender's impact on both the illness and its treatment (Nasser, Walders, & Jenkins, 2002).

The literature also indicated that gender may have an impact on patient response to psychotherapy treatment for this population. Ulberg et al. (2009) found that women had better long-term treatment effects than men when treated with psychodynamic psychotherapy. Donker et al. (2013) indicated female gender was a positive predictor of psychotherapy response for major depressive disorder. Another study conducted by Parker, Blanch, and Crawford (2011) found that there was no consistent difference in psychotherapy response between males and females treated for depression. Literature regarding gender and treatment effect for patients with schizophrenia spectrum disorders was not found.

Cognitive Behavioral Therapy for Schizophrenia Spectrum Disorders

Psychologists' Use of Cognitive Behavioral Therapy

A recent study conducted by Kuller et al. (2010) found that a combination of Cognitive Behavior Therapy (CBT) and medication is an effective treatment option for patients diagnosed with schizophrenia. This study sought to assess the professional beliefs from psychologists in the United Kingdom (UK) and the United States (US; Kuller et al., 2010). There were significant differences in how psychologists in the UK and US viewed treatment efficacy when comparing medication utilization to CBT treatments for schizophrenia. Psychologists in the UK tended to focus more on the use of CBT and rated this treatment modality as more effective than did their US counterparts (Kuller et al., 2010). Furthermore, UK psychologists tended to be more optimistic

regarding CBT outcomes and felt that recovery from schizophrenia was more likely when CBT was used (Kuller et al., 2010).

Kuller et al. (2010) found that US psychologists differed from UK psychologists and considered medication to be more effective in treating schizophrenia when compared to CBT. Professional opinions in the US appear to assert that the first line treatment for schizophrenia should be the use of antipsychotic medications (Kuller et al., 2010).

It is important to understand the possible foundation for such differences in professional opinion. Kuller et al. (2010) points out that there are considerable structural differences between the health care systems of the US and UK. For instance, the UK system of health care, due to its uniformity and universalism, tends to generate more focused, empirically based treatment modalities (Turkinton et al, 2006). The US healthcare system is funded by third-party payers and is more disjointed in its efforts to produce empirically sound treatment. US third party payers do not always require empirically based treatments (Kuller et al., 2010). Treatments utilized for schizophrenia spectrum disorders have the potential to be less effective in the US than in the UK which impacts professional utilization.

Another significant impact on the utilization of CBT in the US is the underlying theoretical differences relating to the development and treatment of schizophrenia spectrum disorders. The US is heavily rooted in the medical model of treatment (Kuller et al., 2010). This model assumes that psychological disorders are organically based. The medical model in the US tends to be characterized by pessimism regarding the prognosis for recovery from schizophrenia spectrum disorders. The use of medications is

often viewed to have the largest effect (Kuller et la., 2010). The UK tends to maintain a more positive outlook about the prognosis of schizophrenia spectrum disorders due to the individualized nature of treatment approaches. While the UK is more rooted in empirically based treatments for schizophrenia spectrum disorders, the overall structure of the treatment system also allows for treatment to be individually tailored to the client (Wykes et al., 2008).

Current Status of Cognitive Behavioral Therapy Treatment for Schizophrenia Spectrum Disorders

CBT is a widely used and well-researched form of psychotherapy. It has a wide base of empirical support. This support has led to the evaluation of CBT's current use among psychologists treating clients with schizophrenia spectrum disorders. The first line treatment for schizophrenia spectrum disorders is usually antipsychotic medication utilization under the monitoring of a medical doctor specializing in psychiatry. While the use of medication can be effective, it requires significant monitoring and subtle changes to ensure the correct dose and combination of antipsychotics. The use of multiple medications can become quite complex and cause numerous side effects depending on what drug is prescribed. Even with the optimal dose and number of medications, it is rare for schizophrenic symptoms to completely subside (Tarrier, 2010). For the clients that happen to experience significant stabilization of symptoms, exacerbations of their illness tend to occur over time (Tarrier, 2008). Exacerbation leads to disruptions of the routines of the affected clients and often leads to discouraging setbacks and increased psychiatric intervention.

The use of medication also has client-related complications. Research has indicated that medication compliance for clients with schizophrenia spectrum disorders is erratic and often less than ideal (Tarrier, 2010). This inconsistency leads to further complications for patients. More traditional therapies for schizophrenia spectrum disorders have been shown to provide minimal effectiveness, particularly in addressing positive and/or negative symptoms of the disorder (Tarrier, 2010).

The drawbacks to medication utilization and other first line treatment interventions have led to the increase in research regarding the effectiveness of CBT as an adjunct treatment for schizophrenia spectrum disorders (Tarrier, 2010). The goal of adjunct CBT is to address the residual symptoms of schizophrenia spectrum disorders while increasing the ability to cope (Mortan, Sutcu, & Kose, 2011). The key for utilizing adjunct CBT in this manner is individualized treatments. Individualization of CBT began in the UK, where there is a strong tendency to not only use empirically-based treatment modalities, but also to strive for individuality in treatment planning (Tarrier, 2010). This characteristic gained a foothold among CBT psychologists and allowed adjunct CBT to be researched as a viable option for individuals with schizophrenia spectrum disorders.

General Structure of CBT

The general structure of CBT for schizophrenia spectrum disorders is sequential. It begins with the establishment of a strong alliance between the psychologist and the patient (Rector & Beck, 2002). Therapeutic alliance and the establishment of rapport are at the heart of CBT for schizophrenia spectrum disorders because this aspect of therapy allows the psychologist to work with the patient from a relational foundation (McCabe &

Priebe, 2004). During initial sessions, the psychologist guides therapy as he or she engages in a discovery process about the client through tactful questioning (Rector & Beck, 2002). While establishing rapport, the psychologist is able to learn about the patient and also develop a therapeutic foundation of trust in which the patient is able to openly communicate with the clinician.

When a healthy therapeutic alliance has been established, the psychologist works with the client to conceptualize a list of issues or problems (Rector & Beck, 2002). Such a list may consist of problematic symptoms as disclosed by the client or secondary issues such as relational problems. Psychoeducation is utilized at this time to help the patient learn more about presenting symptoms. The psychoeducational process is also used to normalize the patient's experienced symptoms. This allows for open communication between the psychologist and patient. Patients are also taught about the connection of historical experiences, present stressors, and problematic vulnerabilities with positive schizophrenic symptoms (Rector & Beck, 2002). Kingdon and Turkington (1992) established this normalizing process as central to CBT for individuals with schizophrenia spectrum disorders.

Cognitive conceptualizations are introduced as the patient becomes more comfortable and socializes into the treatment process (Rector & Beck, 2002). As with other disorders, the use of CBT for schizophrenia spectrum disorders includes developing a connection between the patient's ideas, emotions, and behavioral outcomes. This process is developed through the identification of the patient's personal ideas about the

self, others, and the greater environment. The psychologist begins to place the patient's ideas in the context of his or her present problematic functioning and behavior.

The initial stages of CBT appear to be a simple process of identifying errant thoughts and beliefs and connecting them to behavior. The psychologist is also developing a hypothesis regarding themes that underscore the chronic pathology of the patient (Rector & Beck, 2002). The hypothesis is shared with the patient while it is developed to facilitate treatment progress. The development of these conceptualizations progresses into the utilization of specific cognitive techniques such as testing and reframing beliefs, developing alternate explanations, behavioral experimentation, role-playing, and evidence weighing (Rector & Beck, 2002). The psychologist maintains a fairly structured process throughout this stage of treatment. The structure of therapy is promoted through developing connections between sessions, the establishment of individual session goals, and the utilization of homework assignments for completion between sessions (Rector & Beck, 2012).

Delusions

Because of the psychotic symptoms that accompany a diagnosis of schizophrenia, it is necessary for the utilized therapy to be flexible enough to address specific symptoms such as delusions and hallucinations. Structuring treatment provides the psychologist with a standardized method of intervention for specific client needs. It also enables an individualized approach to the treatment while remaining within the construct of CBT.

Delusions can be a perplexing symptom to address within the therapeutic relationship. Rector and Beck (2002) point out that there are several areas that must be

considered when evaluating delusions from a clinical standpoint. First, the psychologist must evaluate the pervasiveness of the delusion. Pervasiveness can be determined by evaluating how much the delusion controls a client's consciousness (Rector & Beck, 2002). Another aspect to consider is how deeply an individual believes in the delusion. This is known as the patient's conviction (Rector & Beck, 2002). Finally, the psychologist must evaluate how intense and inflexible the delusion may be. A more intense delusion easily takes the place of and removes reality-based beliefs. An inflexible delusion is said to be resistant to change even in the presence of opposing evidence, thoughts, or ideas (Rector & Beck, 2002).

It is also important to consider the context of delusions prior to addressing them in therapy. Contextual factors of delusions provide opportunity for the psychologist to develop conceptualizations of delusions' connections to reality. Delusions are sometimes considered to simply be bizarre manifestations of the illness with no real link to reality. However, the CBT approach asserts that delusions are more easily addressed by placing them in context of everyday stressors (Rector & Beck, 2002). Delusions can often re-emerge when a patient is faced with a situation of being rejected, demeaned, manipulated, attacked, or isolated from a social environment (Rector & Beck, 2002).

Having an understanding of a patient's background and historical beliefs and experiences prior to being delusional can inform the content of present delusions (Rector & Beck, 2002). For example, a pre-delusional enjoyment of farming or agriculture could result in a delusion of grandeur in which a patient believes he or she is capable of running a multimillion-dollar commercial farming establishment. In addition, strong religious

beliefs prior to developing delusions can often lead to delusional thoughts surrounding Jesus or other religious figures (Rector & Beck, 2002).

Cognitive behavioral therapy for delusions. The process of working with a patient and his or her delusional constructs requires a tactful, nonconfrontative strategy of gently acculturating the individual to the cognitive questioning of delusional interpretations. The use of CBT for an individual experiencing delusions requires empathy, unconditional positive regard, and an assumption that the delusions are somehow connected to a plausible belief system (Rector & Beck, 2002).

CBT for delusions consists of two general domains. First, through thoughtful inquiry, the psychologist learns about the patient's pre-delusional thoughts, beliefs, and tendencies. When adequate rapport and background is established, the psychologist gradually moves into the second phase, which includes nonconfrontative questioning of current delusional thoughts.

Treatment begins with a thorough assessment of the individual's tendencies prior to the establishment of the delusion within the cognitive construct. Effective use of CBT for delusions requires the psychologist to have a grounded historical reference to better understand the patient's point of view (Rector & Beck, 2002). Gathering this information is necessary because pre-delusional thought tendencies and beliefs tend to inform present delusions. CBT approaches generally do not acquire extensive background information about a patient, but developing a deeper understanding of the delusional patient's history is vital to treatment.

When adequate historical information is obtained, the psychologist begins to move the patient into the questioning phase of treatment (Rector & Beck, 2002). At this time the psychologist begins the process of questioning the evidence supporting delusions. The patient is gradually introduced to the pattern of questioning delusional beliefs and identifying the connection between thoughts, feelings, and behaviors through this process (Rector & Beck, 2002). It is important to note that the psychologist moves rather slowly with the questioning process. That is, he or she initially focuses on less sensitive delusional beliefs. Once the patient becomes accustomed to the collaborative CBT process, the psychologist can slowly move toward addressing delusions of greater intensity and conviction. The psychologist eventually works with the patient to develop self-inquiry skills to address thoughts outside of therapy sessions as treatment progresses.

Hallucinations

Hallucinations may be one of the most concerning and troublesome symptoms related to schizophrenia spectrum disorders. They are characterized by the corresponding sensory impact of their content. Hallucinations are often divided into five categories: visual, auditory, olfactory, gustatory, and tactile. The most common type of hallucination reported among individuals with schizophrenia is an auditory hallucination (Rector & Beck, 2002).

There tends to be disagreement among various theorists regarding the origin of hallucinations. Some assume that a hallucination is actually the result of an individual being unable to distinguish between external and internal cognitive events (Frith & Done, 1987). Other theorists have attributed hallucinations to a combination of

neuropsychological problems coupled with individual tendencies and biases (Bentall, 1990).

While hallucinations are considered to be abnormal, it is generally the behavioral consequences of the hallucinations that cause them to rise to clinical significance. Research has found a link between the overall distress and behavioral problems that can be associated with hallucinations and individual beliefs the patient may have about his or her origin (Chadwick & Birchwood, 1997). Hallucinating individuals that have more behavioral and emotional problems are assumed to believe their voices carry more authority. For example, a voice that is considered by the patient to be from an authority figure will be more likely to respond behaviorally and emotionally to the hallucinations' content.

Cognitive behavioral therapy for hallucinations. The use of CBT is unlikely to completely remove hallucination symptoms. For this reason, this intervention focuses in reducing the problems and distress caused by responding to hallucinations. Therapy for hallucinations first begins with a complete assessment in which the client and psychologist develop rapport and the professional is able to gather information specifically related to the frequency, intensity, duration, and other characteristics of the target symptoms (Rector & Beck, 2002). The psychologist also evaluates the patient for any specific triggers, such as stress, that may cause or increase symptoms.

Psychologists utilizing CBT to address hallucinations request the patient to begin recording thoughts (Rector & Beck, 2002). The patient records what the voices say, when they occur, and any precipitating events that triggered symptoms in a document.

This record assists the psychologist to identify patterns in the occurrences of hallucinations. A key component to this therapeutic intervention is to assist the patient in being mindful of symptoms and remembering to record experiences with them.

When the psychologist has an adequate grasp of the hallucinations and their typical patterns in the life of the client, he initiates the process of assessing their origin. The use of CBT requires the psychologist to be able to link present hallucinations and their perceived power and identity with the patient's larger belief system (Rector & Beck, 2002). This is completed through developing an understanding of the hallucinatory timeline for the client. The psychologist attempts to identify when the symptoms began and then develop an understanding of the client's belief system both prior to and after symptom onset. This step is important because the content of hallucinations is often tied to individual beliefs, fears, insecurities, and idiosyncratic worldview prior to the onset of the illness (Rector & Beck, 2002). Concluding the assessment process is an evaluation of how the hallucinations impact the client. For example, voices that are repeatedly characterized by demeaning verbalizations toward the patient often result in depression and feelings of worthlessness.

The process of questioning begins once the psychologist has developed a good understanding of the hallucinations' content, triggers, and corresponding distress for the patient (Rector & Beck, 2002). At this point the psychologist begins to tactfully question the client about the hallucinations' content. Depending on the client's interpretations, evidence is discussed to bring the patient to a place of being able to consider the consequences of responding to the symptoms in a particular way. For example, a patient

experiencing command hallucinations to avoid medications may be asked by the psychologist to consider evidence regarding the consequences of not listening to the voice. The psychologist slowly begins working with the client to develop different ideas about the content of the hallucinations after considering the evidence. The ultimate goal of CBT for hallucinations is to bring the patient to an understanding that hallucinatory content is often a reflection of individual beliefs about the self.

Negative Symptoms

Negative symptoms of schizophrenia are characterized by the patient experiencing phenomena such as anhedonia, lack of motivation, and interpersonal withdrawal (Rector & Beck, 2002). Negative symptoms are more common in depressed patients than in patients with schizophrenia spectrum disorders. It is often unclear whether negative symptoms are the result of actual functional deficiencies or directly related to the diagnosis. Patients typically characterize negative symptoms as the feeling of being expected to provide more than they can give from professionals, friends, family members, and partners. As other individuals place increased demands on the patient with a schizophrenia spectrum disorder, he or she generally feels a continued diminishing of individual autonomy and independence (Rector & Beck, 2002).

Cognitive behavioral therapy for negative symptoms. CBT for negative symptoms closely parallels CBT for depression (Rector & Beck, 2002). The psychologist begins with a process of assessment in which he or she engages in a process of discovery about the client to learn about habits, daily routine, likes, and dislikes. This process informs a baseline of overall functioning and developing a conceptualization for future

functioning. After the assessment phase, therapy proceeds to include activities such as self-monitoring techniques, scheduling activities, assignment of tasks, and activity scheduling (Rector & Beck, 2002). The psychologist also attempts to explore the client's reason for being inactive and testing beliefs about being inactive (Rector & Beck, 2002).

Deinstitutionalization

Deinstitutionalization is a movement within the mental health field in which large in-patient psychiatric establishments have been decommissioned in favor of community-based alternatives. The deinstitutionalization movement has created a significant shift in how mental health services are delivered to patients with serious mental illnesses, including schizophrenia spectrum disorders.

The Purpose of Deinstitutionalization

The movement of deinstitutionalization is centered on the idea that normalized community living in smaller homes is a better alternative to large, centralized psychiatric treatment hospitals (Mansell & Beadle-Brown, 2010). For approximately the past 50 years, numerous countries have undertaken that task of gradually moving large, psychiatric in-patient populations to smaller community environments (Šiška & Beadle-Brown, 2011). The idea of deinstitutionalization is based on the concept of the rights of the individual and providing empowerment to the clients that have, for years, been powerless to affect their lives due to mental illness or disability (Šiška & Beadle-Brown, 2011). The assumption is that patients with serious and persistent mental illnesses should be provided the rights allotted to other citizens. This creates a sense of individual

autonomy within the life of the client, which is assumed to lead to better treatment outcomes.

Social Impact of Deinstitutionalization

The societal impact of deinstitutionalization tends to have a ripple effect. That is, the process affects more than one societal system. For example, the shift from government-operated psychiatric treatment centers to smaller community settings has placed the treatment directives in the hands of private providers rather than public institutions. Another area of impact is within individual communities. Whereas institutionalized care isolated patients from community members, the deinstitutionalization movement has attempted to integrate clients directly into the community (Ryu et al., 2006). This provides the ability for clients to work on developing ties within the community and become more active members of society.

Stigma. The stigma associated with serious mental illnesses is one of the most impactful detriments associated with such a diagnosis. Psychiatric patients often are not only faced with severe and disabling symptoms, but they are often forced to cope with the public stigma that is attached to the illnesses (Hickling et al., 2011). The stigma can often be more disabling than the illness symptoms. However, the deinstitutionalization movement has decreased the amount of stigma associated with mental illness diagnoses (Hickling et al., 2011).

A recent research study conducted in the Jamaica sought to discover how attitudes have changed in the country post-deinstitutionalization (Hickling et al., 2011). The deinstitutionalization movement, which began in the 1970s, was found to directly impact

stigma from significantly negative to more positive (Hickling et al., 2011). Studies prior to the deinstitutionalization movement found that there was significant, strong negative stigma toward the seriously mentally ill population when they were housed in large institutionalized settings (Hickling et al., 2011). As the societal shift toward community living and deinstitutionalized health care contined, the stigma shifted as well. The result is that residents of Jamaica have a more compassionate and empathetic opinion of individuals with mental illnesses (Hickling et al., 2011).

The study also discussed how psychological conceptualization changed regarding mental illness from a societal perspective (Hickling et al., 2011). This change refers to how the general population struggled with inaccurate perceptions of mental illness and the reality of deinstitutionalization. The study found that early deinstitutionalization campaigns improved the process of the public accepting the diea of patients moving to community-based care (Corrigan, 2005).

Still, the apparent outcomes of the study in Jamaica may be considered a phenomenon. The study found that 79-82 percent of the Jamaican community has positive attitudes towards the seriously-mentally ill population (Hickling et al., 2011). There is a sufficient body of literature to suggest that attitudes in Western nations have not changed so easily. Link, Yang, Phelan, and Collins (2004) found that, even with the deinstitutionalization movement being in effect for years, there continues to be significant negative stigma. This stigma continues to inhibit effective community care (Link, Yang, Phelan, & Collins, 2004).

Economic impact. The economic impact of deinstitutionalization is a central component to the debate regarding the practicality and feasibility of this social movement. The consideration of the economical impacts of moving clients out of institutionalized care and into community programs is a necessary part of the deinstitutionalization discussion. A literature review by Knapp, Beechmam, McDaid, Matosevic, and Smith (2011) sought to answer questions specifically regarding the economic impact of deinstitutionalization in countries where it was successfully integrated.

The literature showed that community-based care for individuals with serious and persistent mental illnesses is not necessarily more expensive than institutionalized care (Knapp, Beechmam, McDaid, Matosevic, & Smith, 2011). Community-based care and services are often more cost-effective, particularly because they have been found to result in improved outcomes for the clients (Knapp et al., 2011). Using community-based care does not mean that society will see no increased costs associated with deinstitutionalization. Community care can sometimes be more expensive when considering the degree of needs for individual clients (Knapp et al., 2011).

There are several reasons that community care may have an increased cost. First, clients with more serious or intricate needs may have a higher cost associated with community placement (Knapp et al., 2011). For example, an individual with schizophrenia or a pervasive personality disorder may have increased behavioral symptoms that require an increase in supportive staff than would otherwise be the case if

he or she were in a psychiatric institution. The staffing cost for such an individual would be more in the community compared to residing in an inpatient hospital.

Secondly, community care is not as streamlined as institutionalized care, and this fact can carry a larger economical impact. Knapp et al.'s (2011) review pointed out that aspects of community care carry costs that are not as present with institutions. For example, the movement toward community care often requires the construction of new facilities, the recruitment and training of new staff, and the establishment of new regulatory bodies and personnel to ensure that community programs are in compliance with related statutes and laws (Knapp et al., 2011). The centralized care that was provided by treatment centers and institutions tended to minimize costs such as these.

Quality of Life for Deinstitutionalized Clients

There has also been debate regarding the actual effectiveness of deinstitutionalization for individuals with mental illnesses (Picardi et al., 2006). Some have argued that community living arrangements resulting from deinstitutionalization are simply psychiatric wards within a community setting (Picardi et al, 2006). The flipside of the argument is that community living has actually created a positive impact on patients, causing them to feel more integrated into the community. To date, very few studies regarding the quality of life for seriously mentally ill patients have been conducted (Picardi et al., 2006).

Regarding the studies that have been completed, some have indicated that there is a correlation between the level of restriction in the living environment and the quality of life (Kasckow et al., 2001). Some of the research suggests that as the level of restriction

in a residential facility goes down, the perceived quality of life for the patient goes up. The more recent study of Picardi et al. (2006) did not find this to be true. What was discovered in the Picardi et al. (2006) study was that there was no significant difference in the quality of life between clients residing in a residential facility such as a group home, and a different, less-restricted environment such as with a family member (Picardi et al., 2006).

The questions regarding the importance of structure for individuals with serious mental illnesses still remain. One of the benefits of institutionalized settings is the sense of structure and security that they can provide. One of the concerns for clients in the deinstitutionalization movement is how individuals will react to the removal of or change in an established structural routine. The dramatic shift in from institutionalized care to community mental health has had an incredible impact on the mental health community. For example, between 1970 and 2000, the number of psychiatric hospital beds shifted from 207 to 21 beds per 100,000 individuals (Manderscheid et al., 2004). This reduction does not come without impacting the lives of psychiatric patients.

Research surrounding the actual impact of deinstitutionalization on the psychiatric population is limited. However, one measure that can and has been evaluated is the suicide rate among psychiatric patients. Manderscheid et al. (2004) conducted a study that sought to evaluate the impact of deinstitutionalization in terms of suicide rates. It was found that as public beds decreased by one per 100,000 people, the suicide rate increased by 0.025 per 100,000 people. This rate increase does not appear to discriminate based on nonprofit or for-profit beds (Manderscheid et al., 2004).

Deinstitutionalization and the Growth of Residential Facilities in Minnesota

There appears to be a negative correlation between psychiatric hospital bed reduction and suicide rates among individuals with serious and persistent mental illnesses (Manderscheid et al, 2004). Currently, the trend is for most mental health care to take place in the community by private providers rather than in institutions such as long-term psychiatric treatment facilities. General trends at state levels appear to indicate that the growth of community funding does not meet the needs of this population as the number of psychiatric beds decrease (Manderscheid et al., 2004). The problem rests in the lack of funding growth for community placement as public psychiatric beds are removed. The psychiatric bed elimination creates a dynamic that is detrimental to the health and wellbeing of the psychiatric population.

The State of Minnesota has only recently developed a system of deinstitutionalization that matches the nationwide mental health trend. The large-scale deinstitutionalization of psychiatric hospitalization care received a significant overhaul in 2006. It was at that time that the State Operated Services (SOS) developed a system of Community Behavioral Health Hospitals (CBHHs). The CBHH facilities consist of smaller, 16-bed psychiatric hospitals that are dispersed throughout the State rather than having centralized, psychiatric care on large-scale campuses. The idea behind this development was to provide psychiatric care that is based in the community.

The State of Minnesota has also developed a system of providing State and Federal dollars to private providers to pay for community mental health care. Although there are a number of provider types for individuals on the spectrum of mental disorders,

this study focuses on settings that are considered residential facilities or group homes. Residential facilities provide a service for disabled individuals in a smaller, community-based setting. It tends to be used for individuals with chronic mental illnesses that would otherwise be unable to reside in the community. As the deinstitutionalization movement in Minnesota continued to develop, increasing numbers of psychiatric patients were discharged from larger, campus-based hospitals to private, residential facilities such as adult foster care homes or boarding and lodging establishments. Minnesota Statute 245.4711 (2011) requires adult mental health case managers in the State to coordinate services between their clients and residential facilities. Furthermore, Minnesota Rule 9555 (2006) requires the case manager to establish the initial placement. This assures continuity of care and the implementation of services.

Considering the utility of psychotherapy as a treatment for schizophrenia spectrum disorders and the deinstitutionalization trend, the question remains regarding the effectiveness of individual psychotherapy for clients residing in residential care facilities as described previously. There is no research that analyzes the usefulness or utility of psychotherapy for individuals with schizophrenia spectrum disorders that are residing in community residential settings. The purpose of residential facilities is to maintain an environment with enough structure to maintain stability within the community. This includes the availability of support and direct care staff to administer medications, assist with routine activities of daily living, and emotional, psychological, and behavioral support. Often, outside services such as individual skills work and psychological services/psychotherapy are also utilized to increase stability. There is no

research literature that has established a correlation between providing psychotherapy to clients in residential facilities and mental health stability. The literature does indicate that psychotherapy is a cost-effective adjunct treatment for schizophrenia (Myhr & Payne, 2006), but no literature was found regarding its utility among individuals with schizophrenia spectrum disorders also residing in residential facilities in the State of Minnesota.

Treatment Options in Minnesota

In addition to the treatment options discussed previously, the State of Minnesota has also encouraged other treatments and services for individuals with schizophrenia spectrum disorders. These treatment options are part of a collaborative approach designed to promote community stability within the population of individuals experiencing serious and persistent mental illnesses (SPMI).

Adult Mental Health Targeted Case Management (AMH-TCM) is the primary collaborative service offered to individuals suffering from schizophrenia spectrum disorders in the State. AMH-TCM has four primary components. These components are assessment, planning, referral and linkage, and monitoring and coordination. AMH-TCM is not designed to provide therapeutic or rehabilitative treatments. Rather, it is designed to be a collaborative effort to connect patients to necessary services and treatments that promote optimal mental health and stability. The primary goal for AMH-TCM is to provide access to necessary services, supports, and treatments to the patient (Case Management Services, 2011).

An additional treatment option promoted by the State of Minnesota is Illness Management and Recovery (IMR). IMR is a group-based program in which a Mental Health Practitioner (MHP) or licensed clinician works with patients that have experienced psychiatric symptoms in a group-based setting to develop personal strategies for illness management and personal growth. IMR seeks to provide empowerment and autonomy through providing patients with tangible skills that aide in managing psychiatric symptoms. Results from a 2009 study of IMR indicated that the approach showed utility in reducing hospital use over time (Salyers et al., 2010). However, one of the drawbacks to the program is the lack of sustained participation from patients (Salyers et al., 2010). There are no research studies that specifically focused on Minnesota's implementation of IMR.

Analysis of the Literature

The literature review indicated that it is necessary to have additional treatments for schizophrenia spectrum disorders that complement the first line treatments of psychotropic medication. Studies have shown that schizophrenia spectrum disorders is responsive to CBT and other psychotherapy approaches when they are combined with medication management (Kuller et al., 2010). This finding is important because it is difficult, if not impossible, to completely eradicate the symptoms of schizophrenia spectrum disorders through medication alone. The literature also demonstrated that psychotherapy and CBT have utility for both residual symptoms and exacerbations of the disorder for patients that are taking antipsychotic medication (Tarrier, 2010). The structured approach utilized by CBT provides benefit in addressing delusions,

hallucinations, and negative symptoms ofschizophrenia spectrum disorders. Psychotherapy is a viable treatment option and has been shown to have clinical utility for patients with schizophrenia spectrum disorders. Further research in this area is justified to demonstrate the usefulness of psychotherapy as an empirically-based approach.

One of the primary drawbacks in the literature is the lack of defined parameters regarding the populations of patients with schizophrenia spectrum disorders that were studied. The studies utilized for this literature review tended to focus on either inpatient or outpatient populations. Defining studies in this manner is necessary, but vague because it does not adequately account for the setting in which the population resided. The lack of clarity is especially true for patients in the studies that were considered to be outpatient. Nonhospitalized patients with schizophrenia spectrum disorders reside in a variety of different settings that range from independent living settings, such as an apartment, to highly structured residential environments with support staff. The outpatient demographics are further complicated when considering each state's unique system for placing patients with schizophrenia in supportive environments. More specific research is needed to evaluate the effectiveness of psychotherapy for patients with schizophrenia spectrum disorders that reside in supportive environments.

The structural variety of research studies for this population is also limited. Most of the research studies in this area were longitudinal studies with pre- and post-treatment data analysis. The studies evaluated for this literature were not only longitudinal, but they also focused primarily on follow up with patients. This form of research is necessary to assess the alleviation of symptoms based on patient reports. Longitudinal or cross-

sectional research utilizing data collected directly from psychologists appeared to be lacking.

Research also indicated that there are gender differences in patients diagnosed with schizophrenia spectrum disorders and how they respond to psychotherapy treatment (Angermeyer et al., 1990; Ulberg et al., 2009). The survey of research found that the course of illness tends to be worse for men than women (Angermeyer et al., 1990). Regarding response to psychotherapy treatment, it was found that women tend to have better long-term treatment effects than men (Ulberg et al., 2009). However, more recent research by Parker et al. (2011) indicated that there was not consistent differences in gener response to psychotherapy treatment.

It was also found that the deinstitutionalization movement has benefited patients with schizophrenia spectrum disorders who reside in community residential settings. A review of the literature indicates that the study and evaluation of deinstitutionalization and psychotherapy for schizophrenia spectrum disorders has been conducted separately. Studies to measure the correlations between these two variables and their impact on patients were not found in the literature search. There is a need for research that investigates the usefulness and effect of psychotherapy for patients with schizophrenia spectrum disorders that are impacted by deinstitutionalization.

Summary

This literature review synthesized the research that connects psychotherapy, schizophrenia spectrum disorders, and supportive residential services. First line treatments for schizophrenia spectrum disorders have historically been antipsychotic

medications (Tarrier, 2008). Often this approach is utilized with case management services to promote mental health stability and maintain community living. However, there are instances when antipsychotic treatment is not sufficient, particularly when treatment adherence is an issue. A more intensive case management known as targeted case management is sometimes used in an effort to increase treatment adherence (Addington et al., 2012). In some cases schizophrenia spectrum disorders may also be treatment resistive which can result in atypical treatment options such as Electroconvulsive Therapy (ECT) (Garg et al., 2011).

CBT has emerged as a viable treatment option for schizophrenia. Recent studies have found that a combination of psychotherapy and medication have significant utility for patients diagnosed with schizophrenia (Kuller et al., 2010). Psychotherapy is an effective treatment option because it provides the patient with a structured therapeutic approach that is capable of addressing delusions, hallucinations, and negative symptoms within the context of a strong therapeutic alliance with the psychologist (Rector & Beck, 2002).

While the body of research supporting psychotherapy as an effective treatment option continued to grow, the deinstitutionalization movement in the United States was also gaining momentum. The purpose of deinstitutionalization was to normalize community living for individuals with serious and persistent mental illnesses. For the past 50 years, there has been a gradual shift to moving large in-patient psychiatric populations to smaller community environments (Šiška & Beadle-Brown, 2011). The ultimate goal of deinstitutionalization is to improve the quality of life for patients while

reducing readmission rates. This movement has led to the development of unique residential facilities in Minnesota to serve deinstitutionalized patients in a structured community setting.

This literature review evaluated the pertinent literature related to gender differences in the experience and treatment of individuals diagnosed with schizophrenia spectrum disorders, and well as the impact of gender in psychotherapy. The review also examined the use of CBT as a treatment option for individuals diagnosed with schizophrenia. It reviewed other treatment options, such as psychotropic medications, and considered how CBT fits along the treatment continuum. This review of the literature also discussed the deinstitutionalization movement for patients with schizophrenia spectrum disorders. It was discovered that no research exists that evaluated the utility of psychotherapy for patients with schizophrenia spectrum disorders residing in residential facilities.

Conclusion

Some progress has been made in researching psychotherapy treatment for schizophrenia spectrum disorders and deinstitutionalization. However, these research areas tend to lack a unified focus. Research studies that evaluate the impact of psychotherapy for patients with schizophrenia spectrum disorders residing in residential service facilities were not found. Thus, little is known whether psychotherapy for the target population has utility.

There is sufficient research to verify that psychotherapy is a realistic treatment option for patients diagnosed with schizophrenia spectrum disorders. However, patients

with schizophrenia spectrum disorders have unique dynamics that influence treatment outcomes. Once such dynamic is the residential environment of the patient. To date, there have been no research studies that have evaluated the use of psychotherapy treatment for patients with schizophrenia spectrum disorders who also reside in supportive residential facilities. Therefore, the utility of psychotherapy for patients who also have the benefit of supportive residential facilities is unknown. Chapter 3 will identify and describe a research design to address this gap in the literature. It will outline the methodology for research that began closing the identified gap in literature.

Chapter 3: Research Method

Introduction

The purpose of this study was to narrow the gap in the literature regarding the utility of psychotherapy for individuals diagnosed with schizophrenia spectrum disorders and residing in community residential settings. There were several reasons why this study needed to be conducted. First, the effectiveness of psychotherapy for the target population within the context of a supportive environment was unknown. The review of literature in Chapter 2 did not reveal any research studies that addressed this population. No extensive research had been conducted to examine the differences in psychiatric hospitalization rates between males and females for the target population. There was significant research supporting the use of psychotherapy for patients diagnosed with mental illnesses with psychotic features (Gregory, 2010). However, current research had yet to focus on the application of psychotherapy to individuals with serious and persistent mental illnesses residing in community residential settings and the differences from a gender perspective on psychiatric hospitalization rates. This gap in the literature needed to be addressed.

Second, the deinstitutionalization movement had a significant impact on the mental health field (Kliewer, McNally, & Trippany, 2009; Knapp et al., 2011). For the past few decades, the model of mental health care and treatment has moved away from large, institutionalized care to community-based alternatives (Blanch, Carling, & Ridgway, 1988; Picardi et al., 2006). This societal movement in the United States

necessitates a body of research to reflect this change by targeting the deinstitutionalized population.

This chapter is divided into several sections. It begins with a discussion regarding the specific research design and rationale. The research design and rationale section reviews variables relevant to the study, identifies the specific design, and explains the constraints associated with the design choice.

This chapter reviews the methodology of the study following the design and rationale section. The methodology section describes the specific population to be accessed, sampling and associated procedures, and procedures for recruitment of participants. Data collection is also discussed. Because this study used archival data, procedures for gaining access to the information are described. This chapter closes with discussions regarding potential threats to validity of the study and relevant ethical procedures used during the course of the research.

Research Design and Rationale

For the purpose of this study, each participant was required to have a diagnosis of a schizophrenia spectrum disorder. Data collected for this study were from patients who had been given one of these diagnoses. Data were collected from two community residential settings. Community residential settings consisted of living environments such as corporate adult foster care or other structured group residential settings designed to serve individuals with mental disorders. These settings typically consist of a group of individuals with mental disorders residing in a staffed home licensed to provide care.

There were several variables associated with this study. The independent variables were participating in any form of psychotherapy treatment and gender.

The dependent variable corresponded to the rate of psychiatric hospitalization for individuals with schizophrenia spectrum disorders who resided in community residential settings. The variable was measured by the count of admissions to inpatient mental health services over a 4-year period and was treated like interval data. The State of Minnesota also has a resource known as the South Central Crisis Center, which is an inpatient mental health service. The South Central Crisis Center serves individuals with serious and persistent mental illnesses in the region. The purpose of the Crisis Center is to provide a stabilizing environment for patients experiencing a mental health crisis. The goal of the Crisis Center is to provide brief inpatient services that promote mental health stabilization and then discharge patients to the original living environment. The Crisis Center does not provide psychiatric medication management or medication adjustment. A placement at the Crisis Center was considered a psychiatric hospitalization. The goal of this study was to research the relationship of psychotherapy to the target population by analyzing the number of times participants left supportive residential facilities due to a psychiatric hospitalization.

The research design for this study was a causal-comparative quasi-experimental design using an ex post facto approach. Within this design, participants were not randomly assigned to experimental groups (Tabachnick & Fidell, 2012). The data were collected from the archived charts of anonymous participants that were provided to me.

For this study, I obtained anonymous data from Community Residential Settings (CRS) licensed by the State of Minnesota.

It was anticipated that the data could be obtained within a reasonable time frame once access had been granted. No significant time constraints were expected because the data collected were archival. The statistical analytic software used for this study was the Statistical Package for the Social Sciences (SPSS).

Sampling of the Target Population

Blossom Hill Corporation is a human service organization located in rural Southern Minnesota. It specializes in providing intensive residential services to patients with severe and persistent mental illnesses. At any given time, Blossom Hill Corporation serves between 30 and 35 patients across five homes in various communities in the Southern Minnesota area. It operates four Corporate Adult Foster Care homes that serve four patients each. Blossom Hill Corporation also owns and operates a Board and Lodge With Special Services, which serves 17 patients. Sunrise Farm Corporation is an organization that previously operated two residential services facilities: one Corporate Adult Foster Care home, and one Board and Lodge With Special Services. Blossom Hill Corporation recently purchased those facilities from Sunrise Farm Corporation.

The target population for this study consisted of individuals diagnosed with schizophrenia spectrum disorders. The target population sample was accessed through archival records secured from Blossom Hill Corporation and Sunrise Farm Corporation.

Sampling and Sampling Procedures

Records accessed for this study were obtained from all records of discharged patients during the previous 4 calendar years on the day of data collection. First, an anonymous list of all patients within the past 4 years who had been diagnosed with a schizophrenia spectrum disorder was obtained. Patients who did not have a schizophrenia spectrum disorder were not included in the study. Patients who met inclusion criteria were categorized based on whether they received psychotherapy (yes or no). Once the sample was obtained, data regarding the number of inpatient admissions during the previous 4 years for each patient were recorded. The goal was to identify the differences in inpatient admissions, if any, related to gender and psychotherapy that existed between patients.

A power analysis was conducted, taking into account effective size, alpha level, and power level. G*Power, a general power analysis program (Erdfelder, Faul, & Buchner, 1996) was used to calculate the exact sample size for the study. The current study used a 2x2 factorial analysis of variance (ANOVA). Gravetter and Walnau (2007) indicated that the commonly accepted alpha level is $\alpha = .05$. A medium effect size was achieved with a value of $f = 0.25$ (Gravetter & Walnau, 2007). A power of .80 was used for the study, and four groups were analyzed. With all these inputs, G*Power determined that a minimum sample size of $n = 128$ was to be used based on these values.

Research Design Choice

Psychotherapy is an applied psychological intervention. Studying this population through applied treatment would have required me to provide treatment access to some

and not to others. Administering treatment in this fashion would have represented a significant ethical problem. The vulnerability of the target population due to mental illness would also have been a risk that would have needed to be addressed if accessing patients directly. These risks were minimized by using archival data. Using archival data from established mental health providers allowed for effective use of data without directly identifying or interacting with specific patients. The use of this approach enabled the advancement of knowledge in the discipline while also protecting data privacy.

Procedures for Recruitment, Participation, and Data Collection

One of the goals for this study was to research the identified population without causing distress through interviews or direct client contact. Data collection occured without direct contact with patients. Data were collected in collaboration with the mental health provider. The information was taken from the provider's records and given to me with patients' identifying information removed. A staff member selected by the program director of the agency conducted this task. The data collected from each record included the following: gender, age, diagnosis, and number of inpatient admissions over the 4 years. Each patient record accessed was assigned a nonidentifiable numerical code for identification. Therapy status was also obtained from each record as to whether the particular patient received psychotherapy.

The study used archival data from private agencies in the State of Minnesota. The specific agencies used for this study were Blossom Hill Corporation and Sunrise Farm Corporation. Agreement documents were obtained from each agency to gain access to the data (see Appendices A & B). First, each agency director was asked to electronically

sign a letter of cooperation, which indicated the organization's willingness to allow access to the data (see Appendix B). A confidentiality agreement was also signed by me and provided to the organization's authorized representative (see Appendix C). This agreement provided assurances that the data collected would be confidential. The agreement also indicated that those not directly involved with the research outlined in would not have access to the collected data.

Operationalization of Constructs

The first independent variable corresponded to the use of any form of psychotherapy. Use of any form of psychotherapy was a categorical variable with two levels. The therapy status of each participant was categorized as to whether or not the person received psychotherapy treatment at least twice a month. The specific forms of psychotherapy used by therapists were to be identified wherever possible for examination of trends via descriptive statistics. If a specific approach was not identified, the approach was defined as a *generalist* approach. Because many psychotherapists in the State of Minnesota are generalists, it was difficult to state for certain that each psychotherapist for a given patient was using a specific psychotherapy approach. The second independent variable in the study was the gender of patients. This variable was readily available from the archival data and was used as two independent variables to answer the research question

The dependent variable for this study corresponded to psychiatric hospitalization rates for each participant over the course of the previous 4 years. The dependent variable was a nominal count that was treated like interval data. This variable may have been as

low as one, had no definitive upper bound, and could not be fractionalized. The goal was to determine if there were significant differences in psychiatric hospitalization rates between use of any form of psychotherapy, gender, and the interaction between the two variables.

Each participant was required to have a specific residential status and a schizophrenia spectrum disorder from the *Diagnostic and Statistical Manual for Mental Disorders, Fifth Edition* (DSM-5). All participants selected for this study were required to reside in a community residential setting in the State of Minnesota. Minnesota statutes indicated that there are well-utilized community residential settings for individuals with serious and persistent mental illnesses. They are Corporate Adult Foster Care homes and Board and Lodge With Special Services. This study focused on patients who resided in one of these two facility types.

Methodology

Data Analysis Plan

The software used for analysis was the Statistical Package for the Social Sciences (SPSS) version 22.0 for Windows. SPSS is a software program developed and published by IBM. This software enables the user to complete statistical manipulations and computations quickly and efficiently. Using the software, data were screened for accuracy, missing data, and outliers or extreme cases. Individuals with outlying hospitalization rates were removed from analysis. Standardized values (*z* scores) were created for the hospitalization rates where values that fell outside of the range $\pm$ 3.29 were considered outliers.

Research Questions and Hypotheses

RQ1: Are there significant differences in hospitalization rates for patients with schizophrenia spectrum disorders residing in community residential settings between those who do and do not participate in any form of psychotherapy at least twice per month, gender, and the interaction between psychotherapy and gender?

$H_0$1: There are no significant differences in hospitalization rates for patients with schizophrenia spectrum disorders residing in community residential settings between those who do and do not participate in any form of psychotherapy at least twice per month.

H_A1: There are significant differences in hospitalization rates for patients with schizophrenia spectrum disorders residing in community residential settings between those who do and do not participate in any form of psychotherapy at least twice per month.

$H_0$2: There are no significant differences in hospitalization rates for patients with schizophrenia spectrum disorders residing in community residential settings between males and females.

H_A2: There are significant differences in hospitalization rates for patients with schizophrenia spectrum disorders residing in community residential settings between males and females.

$H_0$3: There are no significant differences in hospitalization rates for patients with schizophrenia spectrum disorders residing in community residential settings between participation in a form of psychotherapy at least twice per month and gender.

H_A3: There are significant differences in hospitalization rates for patients with schizophrenia spectrum disorders residing in community residential settings between participation in a form of psychotherapy at least twice per month and gender.

Description of Data Analysis Plan

Descriptive statistics were conducted to describe the sample demographics and summarize the data collected for the dependent variable. Frequencies and percentages were calculated in order to detail the nominal demographics, such as gender and number of psychiatric hospitalizations. Means and standard deviations were calculated for the dependent variable as well as the participants' ages and other continuous variables (Howell, 2010).

To address the research question, a 2x2 factorial ANOVA was used to determine whether there were significant differences in psychiatric hospitalization rates for patients with schizophrenia spectrum disorders between individuals receiving some form of psychotherapy, gender, and the interaction between the two variables.. A 2x2 factorial ANOVA is the appropriate analysis to conduct when the purpose of the research is to evaluate if mean differences exist on one nominal/continuous dependent variable between two or more discrete grouping variables with two levels. The two discrete grouping variables (factors) in this analysis corresponded to the use of any form of psychotherapy (yes/no) and gender (male/female). The dependent variable corresponded to the counts of psychiatric hospitalization rates for patients with schizophrenia spectrum disorders, and this variable was treated as interval data. The assumptions of the 2x2 factorial ANOVA were examined prior to conducting the analysis—normality and homoegenity of

variance. Normality is the assumption that the data are normally distributed (bell shaped) and was assessed with the Kolmogorov Smirnov test. Homogeneity of variance assumes that both groups have equal error variances and was assessed using Levene's test. The 2x2 factorial ANOVA used three *F* tests, which were calculated by the ratio of two independent variance estimates from the same population variance (Pagano, 2009). By using the *F* test, I was able to determine the overall comparison on whether group means were significantly different for main effect and the interaction term (Tabachnick & Fidell, 2012).

Threats to Validity

Threats to External Validity

Threats to external validity exist due to the way this study was constructed. First, the interaction of selection and treatment impacted external validity because the characteristics of the population being studied are narrow. The results of this study only apply to individuals with schizophrenia spectrum disorders. Additional generalizations were not possible.

The second threat to external validity was the relationship between setting and treatment. The Crisis Center is a setting that is considered a psychiatric hospitalization for the purposes of this study and is unique to southern Minnesota. Another threat to external validity corresponded to selection bias, where the selection of individuals or groups was not generated through proper randomization methods. Consequently, the results from the study could be generalized to other comparable programs; however,

these comparisons must be made with caution. Additional research in other settings would need to be conducted for further generalization.

Threats to Internal Validity

There were some threats to internal validity that may have been encountered when utilizing archival data. Maturation is a threat caused by participants maturing over time. This study used archival data to track patients over four calendar years. During that time, it is possible that some patients may have matured which influenced their mental health stability. Given the parameters of the study, this could be misinterpreted to mean that psychotherapy has more of an impact than was actually the case. It does not, however, compensate for varying developmental stages of each patient that could impact coping abilities, the ability learn new coping abilities, and the cognitive abilities necessary to work through mental health decompensation. Another threat to internal validity corresponded to the accuracy of existing records. The use of archival data presents the possibility that the database had flaws in its structure.

Ethical Procedures

Institutional Permissions

The study was subject to the guidance and oversight of the Walden University Institutional Review Board (IRB). Approval from this body at Walden University was obtained prior to conducting the study.

Several agreement documents were obtained from CRS providers to gain access to the data (See Appendix A & Appendix B). First, each agency director was asked to electronically sign a letter of cooperation, which indicated the organization's willingness

to allow access to data (See Appendix B). A confidentiality agreement was also signed by me and provided to the organization's authorized representative (See Appendix C). This agreement provided assurances that the data collected would be confidential. The agreement also indicated that those not directly involved with the research outlined in this would not have access to the collected data.

Treatment of Data

The archival data collected was both anonymous to me and kept confidential. did not have direct access to the names of the patients. Individuals from the agency removed names and other identifying information from the archival data prior to granting access to me. Each chart reviewed was assigned a number to allow for ease of inputting data into the SPSS program for analysis. The data obtained was not disseminated to outside individuals other than would be necessary for the successful completion of the research. While not in use, the data were stored on a flash drive within a locked filing cabinet in my residence. Upon expiration of the five-year retention period, I will permanently destroy all research-related data and information pertaining to this study.

Other Ethical Issues

Another ethical issue that had to be addressed is the previous relationship I have with one of the agencies. Blossom Hill Corporation had previously employed me from 2002–2012. This history createed an ethical dilemma regarding access to data and the familiarity with the patients served by the organization. Blossom Hill Corporation did not have an organizational policy against research being conducted utilizing its data. However, there was a policy against outside individuals having direct access to the

company's charts and documentation. This issue was discussed at length with the program director of the agency. It was decided that the research would be permitted with the provision that I would not have direct access to current or historical charts and documentation.

In addition, the owner of Blossom Hill Corporation is a biological family member of mine. This ethical concern was discussed with the owner. The discussion included informing the owner that the ethical guidelines outlined in the confidentiality agreement (See Appendix C) were to be followed regardless of any family or prior professional relationship.

The program director decided that an employee of Blossom Hill Corporation would obtain the data requested and provide it in an anonymous format (See Appendix B). I agreed to compensate the staff member for time spent gathering the archival data and correctly formatting it (See Appendix B). The amount of compensation was equal to the staff member's hourly wage, which was twelve dollars per hour. The program director was also informed that the agency has the right to terminate the research at any time if doing so is in the best interests of the organization (See Appendix B).

Summary

This chapter outlined the components of research design and methodology for the conducted research. Data from archival patient records from a specific organization were analyzed by me utilizng predetermined data analysis plan. The plan consisted of completing a 2x2 ANOVA for to determine whether there were significant differences in

psychiatric hospitilizaiton rates between receiving any form of psychotherapy at least twice per month and gender.

The specific nature of the research had several validity threats that were addressed. Threats to internal validity included a maturation effect and regression. Specific procedures were identified to minimize these threats as much as possible.

Threats to external validity were also discussed. The primary threat to external validity was related to the ability of the research to be generalized. The narrow scope of the research prevented it from being generalized to the larger psychiatric population. Setting and treatment was also a concern because one of the hospitalization settings idenfied is unique to the southern Minnesota region: the South Central Crisis Center. It would be possible to generalize the results of the research to a population with similar settings.

Finally, the ethical considerations for the research were reviewed. I have a prior relationship with the research partner, Blossom Hill Corporation, and this could have created ethical problems. Preserving confidentiality and privacy was vital to the population being studied, and for this reason I did not have direct access to patient records. I instead compensated an active employee of the organization to obtain the necessary patient data and present it in an ananomous way. Written agreements were obtained outlining these procedures.

The next chapter will present the findings of the statistical analyses. Descriptive statistics will be used to analyze for trends in the demographics and research variables. A 2 x 2 ANOVA will be used to answer the research question. Chapter five will include

discussion of the findings and assess the meaning of the results through evaluation and interpretation.

Chapter 4: Results

Introduction

The purpose of this research study was to assess the effectiveness of psychotherapy treatments for individuals who resided in community residential settings who had been diagnosed with schizophrenia spectrum disorders, as well as to determine if there were significant differences in psychiatric hospitalization rates between males and females. Thus, the research question was the following: Are there significant differences in hospitalization rates for patients with schizophrenia spectrum disorders residing in community residential settings between those who do and do not participate in any form of psychotherapy at least twice per month, gender, and the interaction between psychotherapy and gender? After presenting demographical information and descriptive statistics, the three hypotheses are tested by a 2x2 factorial ANOVA. Unless indicated otherwise, all analyses were evaluated with a significance of the generally accepted level ($\alpha = .05$).

Data Collection

The study used archival data from private agencies in the State of Minnesota. Data were collected without interaction with the participants by collaborating with the mental health provider. Records were sent to me with the identifying information removed. The records provided information on gender, age, diagnosis, frequency of participation in psychotherapy, and number of inpatient admissions (hospitalizations) in the past 4 years. Each record was given a nonidentifying participant number for the analysis.

Treatment

Data were collected for a total of 137 patients. Outliers were examined by calculating the standardized values of the continuous dependent variable. Any standardized values, or *z*-scores, falling outside the range of ± 3.29 standard deviations from the mean were considered outliers and were removed from the analysis (Tabachnick & Fidell, 2012). Values falling outside of the specified range may be attributed to error, or there may be an actual extreme case that might skew the distribution of data. One participant was removed for an outlying number of hospitalizations. A review of the raw data indicated that the participant was reported to have 8 hospitalizations within the study's timeframe. Because this number of hospitalizations fell outside the range of ± 3.29 standard deviations from the mean, there was the possibility that the results would be skewed if the data from that participant were included in the final analyses. Therefore, final analyses were conducted on the remaining 136 participants.

Demographical Data

Of the 136 participants, the majority were male (n = 88, 65%). Most participants had been diagnosed with schizophrenia (n = 76, 56%). Most of the participants had not received psychotherapy at least twice a month (n = 76, 56%). In regard to residential status, 54% of participants lived in Corporate Adult Foster Care (n = 73). The remaining 46% of participants lived in Board and Lodge facilities (n = 63). The frequencies and percentages of the demographic data are presented in Table 1.

Table 1

Frequencies and Percentages of Demographics

Demographic	*n*	%
Gender		
Female	48	35
Male	88	65
Diagnosis		
Delusional disorder	5	4
Schizoaffective	55	40
Schizophrenia	76	56
Psychotherapy participation (at least twice a month)		
Yes	60	44
No	76	56
Residential status		
Corporate Adult Foster	73	54
Board and Lodge	63	46

Note. Due to rounding error, percentages may not sum to 100%.

Descriptive Statistics of Continuous Variables

The age of the participants ranged from 21.00 years to 86.00 years (M = 50.3, SD = 13.86). The number of hospitalizations ranged from 0.00 to 5.00 (M = 1.04, SD = 1.09). The means and standard deviations of the continuous variables are presented in Table 2. A bar chart for frequencies of number of hospitalizations is presented in Figure 1.

Table 2

Means and Standard Deviations for Continuous Variables

Continuous variables	Min.	Max.	*M*	*SD*
Age	21.00	86.00	50.31	13.86
Number of hospitalizations	0.00	5.00	1.04	1.09

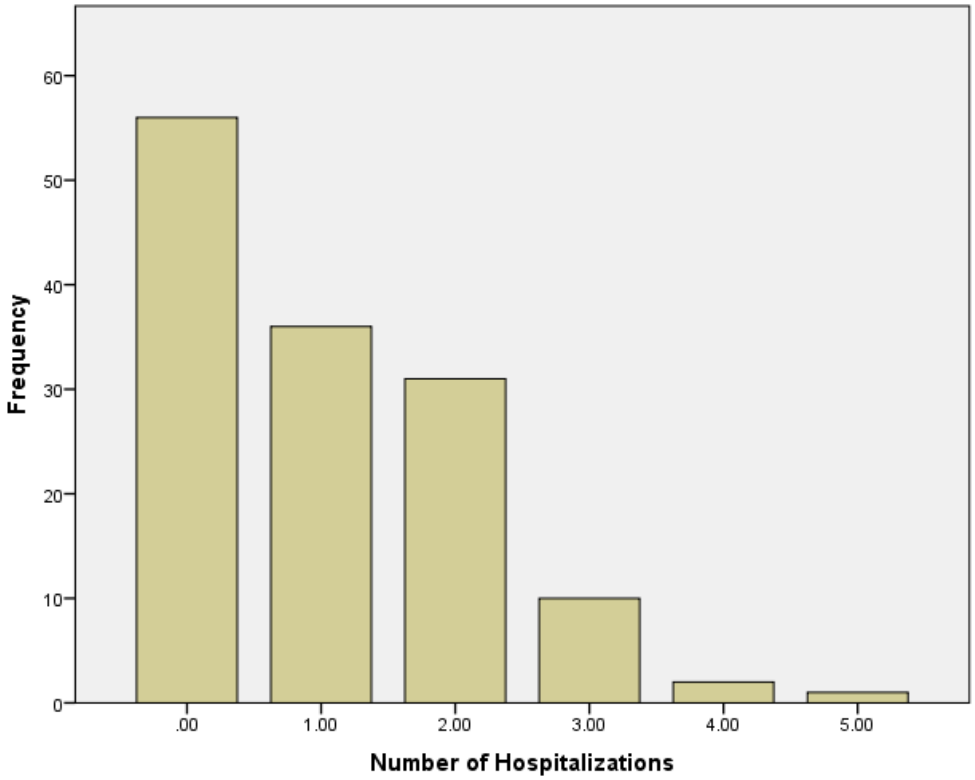

Figure 1. Bar chart for frequencies of number of hospitalizations.

Results

Research Questions and Hypotheses

RQ1: Are there significant differences in hospitalization rates for patients with schizophrenia spectrum disorders residing in community residential settings between those who do and do not participate in any form of psychotherapy at least twice per month, gender, and the interaction between psychotherapy and gender?

$H_0$1: There are no significant differences in hospitalization rates for patients with schizophrenia spectrum disorders residing in community residential settings between those who do and do not participate in any form of psychotherapy at least twice per month.

H_A1: There are significant differences in hospitalization rates for patients with schizophrenia spectrum disorders residing in community residential settings between those who do and do not participate in any form of psychotherapy at least twice per month.

H_02: There are no significant differences in hospitalization rates for patients with schizophrenia spectrum disorders residing in community residential settings between males and females.

H_A2: There are significant differences in hospitalization rates for patients with schizophrenia spectrum disorders residing in community residential settings between males and females.

H_03: There are no significant differences in hospitalization rates for patients with schizophrenia spectrum disorders residing in community residential settings between participation in a form of psychotherapy at least twice per month and gender.

H_A3: There are significant differences in hospitalization rates for patients with schizophrenia spectrum disorders residing in community residential settings between participation in a form of psychotherapy at least twice per month and gender.

In order to address the research questions, a 2x2 factorial ANOVA was used to determine whether there were significant differences in psychiatric hospitalization rates for patients with schizophrenia spectrum disorders between individuals who were and were not participants in some form of psychotherapy, genders, and the interaction between the two variables. A 2x2 ANOVA is an appropriate statistical analysis to assess for differences in a continuous dependent variable between two dichotomous independent

variables (Tabachnick & Fidell, 2012). The dependent variable, number of hospitalizations, was treated as continuous. The independent grouping variables corresponded to gender (male or female) and participation in a form of psychotherapy (yes or no). Three *F* tests were conducted for gender, psychotherapy, and the interaction of the two variables. Prior to analysis, the assumptions of normality and homogeneity of variance were assessed.

Normality assumption. The dependent variable, number of hospitalizations, should be normally distributed for the 2x2 ANOVA. The assumption was checked using a Kolmogorov-Smirnov (KS) test. The results indicated significance for the variable ($p < .001$), meaning that the assumption of normality was not met. However, the ANOVA has been found to be a robust analysis for violations of assumptions. Stevens (2009) suggested that distributions with sample sizes greater than 50 approximate toward normality, even when the distribution appears to deviate significantly from normal distribution. Furthermore, nonnormality has been found to have little effect on a Type I error (Howell, 2010).

Homogeneity of variance assumption. The assumption of homogeneity of variance was assessed with a Levene's test for the dependent variable, number of hospitalizations. The test indicated significance at the .05 level ($p = .010$), such that the assumption for homogeneity of variance was not met. Due to the assumption not being met, Tabachnick and Fidell (2012) suggested the use of a more stringent alpha level. Thus, I used an alpha level of .025 ($\alpha = 0.5/2$) to determine significant mean differences of the ANOVA. Thus, caution was used to interpret the results.

Results of 2x2 factorial ANOVA. The first hypothesis examined for differences in number of hospitalizations between individuals who did and did not participate in psychotherapy at least two times a month. The results of the main effect of psychotherapy were not significant, $F(1, 132) = 0.22$, $p = .642$, $\eta^2 = .002$, suggesting that there were not significant differences in the number of hospitalizations between participants who attended psychotherapy at least two times a month and those who did not. Thus, the first null hypothesis cannot be rejected. Accordingly, it is concluded that there were no significant differences in hospitalization rates for patients with schizophrenia spectrum disorders residing in community residential settings between those who did and did not participate in any form of psychotherapy at least twice per month. The results of the main effect of psychotherapy are presented in Table 3. The means and standard deviations for the number of hospitalizations for each group are presented in Table 4.

The second hypothesis examined the differences in the number of hospitalizations between males and females. The results of the main effect of gender were not significant, $F(1, 132) = 2.64$, $p = .106$, $\eta^2 = .020$, suggesting that there were not significant differences in number of hospitalizations between males and females. Thus, the second null hypothesis cannot be rejected. Accordingly, it is concluded that there were no significant differences in hospitalization rates between male and female patients with schizophrenia spectrum disorders residing in community residential settings. The results for the main effect of gender are presented in Table 3. The means and standard deviations for the number of hospitalizations for each group are presented in Table 4.

The third hypothesis examined the differences in the number of hospitalizations by the interaction of psychotherapy and gender. The results of the interaction effect were not significant, $F(1, 135) = 0.51$, $p = .475$, $\eta^2 = .004$, suggesting that there were not significant differences in number of hospitalizations by the interaction effect of psychotherapy and gender. Thus, the third null hypothesis cannot be rejected. Accordingly, there were no significant differences in hospitalization rates for patients with schizophrenia spectrum disorders residing in community residential settings between participation in a form of psychotherapy at least twice per month and gender. The results of the interaction effect are presented in Table 3. The means and standard deviations for the number of hospitalizations for each group are presented in Table 4.

Table 3

2x2 Factorial ANOVA for Number of Hospitalizations

Source	*F*	*p*	η^2
Psychotherapy participation	0.22	.642	.002
Gender	2.64	.106	.020
Psychotherapy participation*gender	0.51	.475	.004

Table 4

Means and Standard Deviations for Number of Hospitalizations

Continuous variables	*M*	*SD*
Psychotherapy participation		
Yes	1.00	1.06
No	1.07	1.12
Gender		
Male	0.93	0.94
Female	1.23	1.31
Psychotherapy participation*gender		
Yes to psychotherapy and male	0.78	0.94
Yes to psychotherapy and female	1.25	1.14
No to psychotherapy and male	1.02	0.94
No to psychotherapy and female	1.20	1.54

Summary

The purpose of this study was to assess the effectiveness of psychotherapy and gender differences in relation to the number of hospitalizations for individuals diagnosed with schizophrenia spectrum disorders who resided in community residential settings. This chapter has presented the findings of the data analysis, demographic information, descriptive statistics of continuous variables, and results of the 2x2 factorial ANOVA.

The results of the ANOVA indicated that there were no significant differences in the number of hospitalizations by participation in psychotherapy, so the null hypothesis $H_0$1 could not be rejected. Further analysis indicated that there were no significant differences in the dependent variable by gender. Thus, the null hypothesis $H_0$2 could not be rejected. A final analysis found that there were no significant differences in the number of hospitalizations by the interaction of psychotherapy participation and gender, so the null hypothesis $H_0$3 could not be rejected. In the next chapter, these findings are

discussed in in terms of their relation to the literature review. The implications of these findings for research, practice, and social change are also discussed.

Chapter 5: Discussion, Conclusions, and Recommendations

Introduction

The purpose of this research was to analyze the effectiveness of psychotherapy for individuals diagnosed with schizophrenia spectrum disorders who resided in community residential settings. There were two reasons for the study. First, the deinstitutionalization movement has had a significant impact on the mental health field (Šiška & Beadle-Brown, 2011), necessitating continued study of the shift in the care of deinstitutionalized individuals from hospital settings to other supportive environments, such as community-based homes and residential settings. Second, the effectiveness of psychotherapy for the target population within the context of community residential settings was unknown. Information about the effectiveness of treatment for schizophrenia spectrum disorders in community residential settings is important because it may lead to the development and adaptation of treatment options for individuals in these and other supportive environments. Therefore, the study was designed to examine whether psychotherapy had an impact on psychiatric hospitalization rates for the target population. In addition, I examined whether significant differences existed for psychiatric hospitalization rates between males and females among the target population.

Study participants included patients with schizophrenia spectrum disorders who resided in community residential settings. I investigated differences in hospitalization rates based on (a) participation in psychotherapy at least twice per month, (b) gender, and (c) the interaction between psychotherapy and gender. A 2x2 factorial ANOVA was used to determine whether there were significant differences in participants' psychiatric

hospitalization rates between individuals receiving some form of psychotherapy, gender, and the interaction between the two variables. The results of the ANOVA indicated that there were no significant differences in number of hospitalizations by participation in psychotherapy. Further analysis indicated that there were no significant differences in the dependent variable by gender. Finally, the analysis indicated that there were not significant differences in number of hospitalizations by the interaction of psychotherapy participation and gender.

The remainder of the chapter addresses the interpretation of the findings in relation to previous literature, the limitations of the study, recommendations for further research, and implications for research and practice. The chapter ends with a conclusion.

Interpretation of the Findings

Historical studies have also indicated that gender impacts psychotherapy treatment for the target population. Angermeyer, Kuhn, and Goldstein (1990) found that male patients diagnosed with schizophrenia tended to have more negative symptoms than did women. Furthermore, the literature indicates that that women diagnosed with schizophrenia responded better to structured psychotherapy interventions than did men. The results of this study were found to contradict those studies, because gender was not related to response to psychotherapy in the target population.

The present study found that psychotherapy was not related to a reduction in psychiatric hospitalization rates for the target population. These findings support the inconclusiveness of the literature regarding the effectiveness of psychotherapy for treating individuals with schizophrenia spectrum disorders. For example, Rosenbaum et

al. (2012) found that supportive psychotherapy in addition to traditional treatment resulted in overall improvement for individuals with schizophrenia spectrum disorders during first-episode psychosis. In a more recent study, Harder, Koester, Valbak, and Rosenbaum (2014) found that supportive psychodynamic psychotherapy improved overall functioning for patients with schizophrenia spectrum disorders. They also found that the effects of long-term treatment on overall functioning favored using psychotherapy and traditional treatments in conjunction with psychotropic medications. The results of the present study, however, stand in contrast to the findings of Rosenbaum et al. and Harder et al.

Malmberg (2010) systematically reviewed studies on the effectiveness of psychotherapy for individuals with schizophrenia spectrum disorder and found that there was not sufficient evidence to conclude that psychodynamic psychotherapy had any effect on the symptoms of hospitalized patients with schizophrenia spectrum disorder. That finding is supported by the results of the present study, which also found that psychotherapy is not related to a reduction in psychiatric hospitalization rates for the target population.

Rosenbaum et al. (2012) found that psychotherapy resulted in overall improvement for individuals with schizophrenia spectrum disorders during first-episode psychosis. However, the same study also found that psychotherapy of any kind did not have a significant impact on reducing hospitalization rates. The findings of nonsignificance of the present study generally align with the findings of Rosenbaum et al. regarding hospitalization rates.

Furthermore, previous research on gender and treatment response to psychotherapy for individuals diagnosed with schizophrenia spectrum disorders has been inconclusive. This study found that gender was not related to psychotherapy treatment response for individuals diagnosed with schizophrenia spectrum disorders in community residential settings. This generally supports the research of Parker, Blanck, and Crawford (2011), who also found that gender did not predict psychotherapy treatment outcomes for depression.

Ulberg et al. (2009) found that women had better long-term treatment results than men when treated with psychodynamic psychotherapy. The present study found that gender was not related to response to treatment as measured by hospitalization rates. Given the Ulberg et al. finding, the minimal relationship between gender and treatment outcomes for this study was contradictory.

Previous literature showed that there were no significant relationships between psychotherapy and hospitalization rates (Rosenbaum et al., 2012) and between psychotherapy and gender (Parker et al., 2011). Therefore, the findings of this study are consistent with the inconclusive nature of the connections between psychotherapy, hospitalization rates, and gender for treating individuals in the target population. Furthermore, the findings of nonsignificance suggest that there is no relationship between psychotherapy, hospitalization rates, and gender for treating individuals in the target populations.

Links to Theory

The primary theory underlying this study was Hamm's theory of the integration of psychotherapy through four models: narrative, stress reduction, metacognitive therapy, and psychosocial rehabilitation (Hamm, Hasson-Ohayon, Kukla, & Lysaker, 2013). Hamm et al. (2013) stated that the research on psychotherapy for individuals with psychotic disorders found that negative symptoms decrease with regular treatment. Patients were also found to have increased psychosocial functioning because of the psychosocial rehabilitation approach (Hamm et al., 2013). The results of this study did not demonstrate improved functioning for those receiving regular psychotherapy compared to those who did not. The theory of Hamm et al. did not account for other factors that are present in structured residential settings. Thus, an ecological theory such as the one proposed by Bronfenbrenner (1995) might have been a better fit. An ecological theory would better account for the relationship of social, cultural, and familial environments in mental health recovery.

Bronfenbrenner (1995) theorized that people develop in relation to their social contexts or environments. Human development is shaped by interactions between individuals and their social, cultural, and familial environments (Bronfenbrenner, 1995). Application of ecological theory in relation to treatment in residential settings would allow for researchers to consider treatment in relationship to the environment and social context. This theory also might help to identify how systemic interactions influence individuals in large social groups or institutions. Ecological theory could help to explain how social factors, such as patients' relationships with other patients and staff, as well as

institutional factors, such as the specifics of institutional contexts, might influence treatment effectiveness in residential settings (Bronfenbrenner, 1995).

Specific applications of ecological theories to research on the target population could include evaluating the impact of staffing patterns on hospitalization rates, or how the presence of peers impacts mental health stability. Research using an ecological theory could also consider how different residential environments, such as board and lodge versus adult foster care, impact outcomes for the target population.

Limitations of the Study

The primary limitation of the study was its lack of generalizability. Patients included in this study came from a narrow and specific target population. In this case, the parameters for the target population were individuals who had been diagnosed with a schizophrenia spectrum disorder and resided in a supported residential environment in the State of Minnesota. A *supportive residential environment* referred to a facility licensed by the State of Minnesota as a Community Residential Setting (CRS) or Board and Lodge With Special Services for adults. Consequently, the specific nature of the population studied did not make it possible to generalize the findings to a larger population that does not use structured residential environments. However, it is possible to generalize the findings to other CRS or Board and Lodge With Special Services settings within the state, because these settings are closely monitored by the Minnesota Department of Human Services. This consistency makes it possible to assume that similar results would be obtained if this study were duplicated with other providers.

Finally, a power analysis was conducted that determined that a sample size of 128 charts was required. The actual sample size for this study was 136 participants. While this sample size is acceptable for statistical purposes, a larger sample size would have strengthened the findings. The goal of inferential statistics is to generalize findings from a sample to the greater population. A larger sample size would have been closer to resembling the true population of interest. In addition, a larger sample size would have provided more statistical power in correctly rejecting the null hypothesis. Finally, when using archival data, inaccuracies in the original data set may exist, or errors may occur when entering data. However, I double checked the data to ensure accuracy.

Recommendations

Because findings on the effectiveness of psychotherapy in treating individuals diagnosed with schizophrenia spectrum disorders remain mixed and inconclusive, additional research on the effectiveness of psychotherapy in treating individuals diagnosed with schizophrenia spectrum disorders is recommended. This might include further research on psychotherapy for treating schizophrenia spectrum disorders and treating those disorders among specific populations, including individuals in community residential settings. Because research on treating patients with schizophrenia spectrum disorders in residential community settings is lacking, future research might also involve qualitative exploration of the factors that influence treatment outcomes in these settings. The findings of nonsignificance also suggest that more research is needed on the relationship between psychotherapy and the factors of hospitalization rates and gender for individuals in the target population. Because psychotherapy was found to not be related

to hospitalization rates, it would be beneficial to study which variables are related to mental health stability for the target population.

Other variables, such as the effects of medication and their impact on the psychotherapy process, were not investigated through this study. Although most of the participants had been prescribed psychotropic medications for schizophrenia spectrum disorders, the limited scope of this study did not permit me to investigate or control for the effect of prescribed medications on treatment outcomes. Therefore, it is recommended that future studies be designed to account or control for the influence of medications in relation to psychotherapy in treatment outcomes.

I was also unable to identify specific psychotherapy treatment modalities used by psychotherapists for participants within the research group during the process of data collection. Obviously, this made the impact of specific treatment protocols on hospitalization rates impossible to determine. Because archival data were used for this study, contacting specific clinicians about their treatment practices was not possible. It is recommended that future research in this area focus on identifying the treatment protocols and types used to treat schizophrenia spectrum disorders for individuals in the target population. Such research may inform best practices for improving community stability and outcomes for the target population.

Additional research regarding the role of community residential settings in reducing hospitalizations is also recommended. There is little exact research on the impact of treatment in community residential settings on the lives of individuals with severe mental illnesses. Most of the research has focused on institutional settings rather

than the private community providers that characterize community residential settings in the State of Minnesota. Thus, the actual impact on community stability for individuals with serious and persistent mental illnesses residing in private community settings is still largely unknown. Future research should focus on the impact of community residential settings on psychiatric stability for the target population, which might involve exploratory qualitative research to identify factors related to treatment effectiveness in these settings.

Researchers might also focus on the relationship between the frequency of psychotherapy treatment and hospitalization rates, which could include longitudinal research. In the present study, I separated the target population into two groups: those who received psychotherapy at least twice per month, and those who did not. As such, the scope included whether psychotherapy of any kind at least twice per month was related to patient psychiatric hospitalization rates compared to patients who received no psychotherapy treatment. Therefore, it is necessary for further research to focus on the relationship between the frequency of psychotherapy treatment and hospitalization rates, as well as how individuals diagnosed with schizophrenia spectrum disorders respond to treatment over time.

Finally, research could include consideration of ecological variables. This study did not have a focus on the impact of ecological factors, such as patient relationships with staff and peers and the influence of such relationships on treatment outcomes. It is possible that these factors have an impact on the stability of symptoms, thereby minimizing the impact of psychotherapy for the target population.

Implications

Positive Social Change

The findings of the present study did not yield significant results and indicated that psychotherapy treatment for the target population is not related to psychiatric hospitalization rates. The present study was limited in scope to one specific provider in south-central Minnesota. However, social change may be accomplished by the study highlighting the need for further research on the effectiveness of psychotherapy for the target population. The study may inform social change by underscoring the importance of making treatment effectiveness in residential settings a research priority because treatment in residential community settings remains underrepresented in the literature. This study may also help lay the groundwork for supporting continued research on deinstitutionalization and the role of supportive residential environments in psychiatric health.

Theoretical and Practical Implications

New theories may be necessary to understand treatment effectiveness at the organizational level in residential community settings. For example, the theory of Hamm et al (2013) integrating psychotherapy with other treatment options was not applicable because specific psychotherapy treatment modalities used by psychotherapists for participants within the research group could not be identified. Hamm et al. promoted treatment based on narrative approaches, attachment processes, metacognitive-oriented therapy, or psychosocial rehabilitation. The findings of the study, however, were able to be analyzed in relation to specific approaches described in the theory of Hamm et al.

Theories that allow researchers to address treatment and treatment factors in the unique contexts of residential community settings would help researchers to better understand treatment effectiveness in these settings, even with minimal information available on treatment approaches. Ecological and environmental theories that allow for consideration of the influences of psychological, social, and environmental factors seem appropriate for framing and understanding treatment in supportive living facilities. Supportive living facilities present community, residential, and social factors involving relationships with coinhabitants and facility personnel, as well as interactions within the built environments of facilities, all of which might play important roles in patient treatment and treatment effectiveness.

The findings of nonsignificance in this study underscore the need for continued research on the treatment of individuals diagnosed with schizophrenia spectrum disorders who reside in community residential settings, which also has implications for practice. Practitioners in community residential settings should base treatment on current and emerging research as well as best practices. Additionally, practitioners might play a crucial role in providing important and valuable insight to researchers on psychotherapy and treatment in community residential settings.

Conclusion

The purpose of this study was to research the impact of psychotherapy treatment for individuals with schizophrenia spectrum disorder who reside in supportive residential environments, and to determine if gender is related to treatment outcomes. It was found that psychotherapy of any kind was not related to psychiatric hospitalization rates for

individuals in the target population. The results indicated that psychotherapy treatment for patients in the target population was not related to the treatment outcome of psychiatric hospitalizations. Also, gender was not related to psychotherapy treatment outcomes in terms of psychiatric hospitalization rates. This finding contrasts previous research which has found that females had a better treatment response, and improved long-term prognosis than their male counterparts.

The minimal relationship between psychotherapy and hospitalization rates within the context of this study points to the need for additional research. First, it is necessary for more specific studies focusing on psychotherapy to be conducted. This study was unable to account for specific psychotherapeutic approaches, because the archival data did not indicate the approach utilized. In fact, there was not a single case in which the treatment approach was identified. This study has laid the groundwork by which future research can be conducted for this population, which includes research on psychotherapy approaches for the target population. Such research is necessary to inform best practices for the target population.

The relationship between gender and treatment outcomes both confirms and contrasts the present body of literature. As mentioned, some literature identifies gender as a predictor of treatment outcomes and long-term prognosis for individuals with mental health disorders (Ulberg et al., 2009). Other studies found that gender does not play a significant role in treatment response (Parker, Blanck, & Crawford, 2011). The findings of this study support the idea that a patient's gender should not have an impact on treatment decisions for the target population. This study relates to the inconclusiveness

in the literature, and highlights the need for more specific studies focused on gender and psychotherapy response.

The results indicated that ecological theories should be a central component to future research for the target population. Theories such as Bronfenbrenner's (1995) ecological theory are better able to account for factors other than psychotherapy and gender. Ecological theory asserts that human development is is shaped by the interactions between individuals and their environments (Bronfenbrenner, 1995). The lack of relationship between psychotherapy and hospitalization rates in my study demonstrates the significant connection between environment and mental health prognosis. Future research must account for environmental influences.

In conclusion, the findings did not yield significant results and indicated that psychotherapy treatment for the target population was not related to psychiatric hospitalization rates. It also found that gender was not related to treatment response to psychotherapy for individuals diagnosed with schizophrenia spectrum disorders in community residential settings. The results supported the nature of findings of previous research on the effectiveness of psychotherapy for the target population and it underscored the need for continued research. Future research should focus on the effectiveness of psychotherapy treatment for individuals diagnosed with schizophrenia spectrum disorder in general, and on the target population. Finally, theories that allow researchers to address the contextual and environmental factors of residential care settings should be used. Those theories, such as the ecological theory, will better account

for the mental health and prognosis for individuals residing in supportive residential environments.

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Appendix A: Letter of Cooperation

Paula Beulke, CEO, Owner
Blossom Hill Corporation
1317 NE 9th Street
Montgomery, MN 56069
Phone: (612) 756-2973

02/05/2014

Dear Joshua Beulke:

Based on my review of your research proposal, I give permission for you to conduct the study entitled The Effectiveness of Psychotherapy for Schizophrenia Spectrum Disorders in Community Residential Settings within the Blossom Hill organization. As part of this study, I authorize you to be permitted access to archival information from the charts which includes the following information:

- Client's date of birth, gender, and assigned client number
- Psychotherapy status and psychotherapy approached used in treatment
- Number of hospitalizations
- Residential Status (Board and Lodge or Corporate Adult Foster Care)
- Individuals' participation will be voluntary and at their own discretion.

You are further authorized to utilize this information for the specific purposes of your research.

We understand that our organization's responsibilities include:

- Providing you access to a staff member who will obtain the requested information from the clients'' charts. You will be compensating this employee.

We reserve the right to withdraw from the study at any time if our circumstances change.

I confirm that I am authorized to approve research in this setting.

I understand that the data collected will remain entirely confidential and may not be provided to anyone outside of the research team without permission from the Walden University IRB.

Sincerely,

paulab@blossomhillservices.com 02/18/2014

Paula Beulke
CEO, Owner

Blossom Hill Corporation

Appendix B: Confidentiality Agreement

CONFIDENTIALITY AGREEMENT with Blossom Hill Corporation

Name of Signer: JOSHUA THOMAS BEULKE

During the course of my activity in collecting data for this research: The Effectiveness of Psychotherapy for Schizophrenia Spectrum Disorders in Community Residential Settings. I will have access to information, which is confidential and should not be disclosed. I acknowledge that the information must remain confidential, and that improper disclosure of confidential information can be damaging to the participant.

By signing this Confidentiality Agreement I acknowledge and agree that:

1. I will not disclose or discuss any confidential information with others, including friends or family.
2. I will not in any way divulge, copy, release, sell, loan, alter or destroy any confidential information except as properly authorized.
3. I will not discuss confidential information where others can overhear the conversation. I understand that it is not acceptable to discuss confidential information even if the participant's name is not used.
4. I will not make any unauthorized transmissions, inquiries, modification or purging of confidential information.
5. I agree that my obligations under this agreement will continue after termination of the job that I will perform.
6. I understand that violation of this agreement will have legal implications.
7. I will only access or use systems or devices I'm officially authorized to access and I will not demonstrate the operation or function of systems or devices to unauthorized individuals.

Signing this document, I acknowledge that I have read the agreement and I agree to comply with all the terms and conditions stated above.

Signature: joshua.beulke@waldneu.edu **Date:** 02/18/2014