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Impacts of Objective and Subjective Social Inclusion on the Quality of Life of Individuals with Schizophrenia Spectrum Disorders and Major Depressive Disorder

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Philadelphia College of Osteopathic Medicine

Department of Psychology

IMPACTS OF OBJECTIVE AND SUBJECTIVE SOCIAL INCLUSION ON THE
QUALITY OF LIFE OF INDIVIDUALS WITH SCHIZOPHRENIA SPECTRUM
DISORDERS AND MAJOR DEPRESSIVE DISORDER

Katie A. Johanning-Gray

Submitted in Partial Fulfillment of the Requirements of the Degree of

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DEPARTMENT OF PSYCHOLOGY**

Dissertation Approval

This is to certify that the thesis presented to us by Katie Johanning-Gray
on the 28th day of May, 2015, in partial fulfillment of the
requirements for the degree of Doctor of Psychology, has been examined and is
acceptable in both scholarship and literary quality.

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Abstract

Increased social inclusion and enhanced quality of life for individuals with severe mental illnesses (SMIs) are goals of the recovery movement. The present study examined the differences in reported subjective social inclusion (SubSI) and objective social inclusion (ObjSI) between individuals diagnosed with schizophrenia spectrum disorders (SSDs) and those diagnosed with Major Depressive Disorder (MDD). Furthermore, the amount of variance in quality of life (QOL) which can be predicted by type of diagnosis, SSDs or MDD, symptom severity, and SubSI and ObjSi was determined. An archival data set was used. Participants were 337 individuals whose primary diagnosis was an SSD or MDD. Overall, participants diagnosed with an SSD were found to report less social inclusion than participants diagnosed with MDD; specifically, participants diagnosed with an SSD reported significantly lower SubSI than participants diagnosed with MDD. ObjSI, SubSI, symptom severity, and diagnosis were found to significantly predict QOL and accounted for 31.3% of the variance in QOL. Higher scores on the ObjSI and SubSI measures predicted higher QOL scores. Fewer symptoms indicated predicted higher QOL scores. Finally, a diagnosis of SSD was also predictive of higher QOL scores than a diagnosis of MDD. Utilizing the knowledge gained through this study, clinicians can work to tailor treatment goals, treatment planning, and therapeutic milieu more appropriately for their clients with SMIs. Clinical researchers can utilize QOL as an outcome variable for determining treatment effects in a more robust manner. Other implications and limitations of the study are also explored.

Keywords: social inclusion, quality of life, perception of stigma, severe mental illness

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Chapter 1: Introduction

Statement of the Problem

How community members interact with each other can be significantly influenced by knowledge of other members' mental health diagnoses, including their behavior. In a random sample of 240 Ohio residents with 152 respondents, Link, Cullen, Frank, and Wozniak (1987) found that approximately 40% of their sample reported that they would be less socially engaged with a person described in a vignette as a "former mental hospital patient" as compared with the same person labeled as a "back patient." The authors also manipulated behavioral dimensions in vignettes and found that the behavior of a fictional male character played a key role in the social desirability of the person. Link et al. (1987) found that approximately 24% of the variance in how socially engaged people reported that they would be with the fictional character was predicted by the level of behavior (no, mild, or severely objectionable) that the individual evidenced in the vignette. The amount of variance predicted increased to approximately 50% when scores indicating the perceptions of people, relative to how dangerous former psychiatric hospital patients could be, were added into the equation.

People's perception of others' mental health seems to determine if and to what extent they choose to interact with a person. Lack of interaction between individuals with mental health conditions and other community members may, in turn, contribute to the social exclusion of individuals with mental health conditions. Indeed, Bonner, Barr, and Hoskins (2002) found that people with mental health diagnoses are over-represented in groups which are socially excluded; therefore, they are not partaking in social interaction

with the same frequency as are other people. This is important to address because community inclusion facilitates access to ways of meeting one's needs and also promotes healing (Lloyd, Tse, & Deane, 2006).

Whether or not one feels accepted by others may influence how willing the person is to engage in community activities. Troublesome effects of stigma on those with mental health diagnoses have been demonstrated in the research literature (Weinstein, 1983). Any perceived lack of acceptance may decrease community inclusion and quality of life (QOL).

The negative correlation between perceived stigma and individuals' social inclusion was demonstrated in a study of individuals diagnosed with Bipolar I and Bipolar II disorders (Perlick et al., 2001). Individuals who reported higher levels of perceived stigma were significantly less engaged in social activities outside of family networks than those who reported lower levels of perceived stigma. In the same study, the negative correlation between perceived stigma and level of social engagement within family networks also approached significance. It may be hypothesized that the relationships between perceived stigma and social inclusion, and social inclusion and access to resources may contribute to individuals feeling stigmatized, resulting in lower QOL.

In a community outpatient sample of 120 individuals with schizophrenia, over 8% of the variance in level of QOL was predicted by the individuals' levels of satisfaction with their social networks (Bengtsson-Tops & Hansson, 2001). Participants reported that their social networks were less supportive and close, and that they were having fewer

relationships with which to share happiness as compared with community norms for these constructs. Measures on QOL assess “enjoyment and life satisfaction associated with various activities” (Rapaport, Clary, Fayyad, & Endicott, 2005, p. 1171). Individuals with Major Depressive Disorder (MDD) have been found to have significantly lower QOL scores as compared with community norms. In one sample, 63% of individuals with MDD had QOL scores in the severely impaired range and only 10% of their scores fell within the normal range (Rapaport et al.).

Perceptions of one’s community acceptance may be different across people diagnosed with different mental health disorders. Part of this difference in self-perception may be due to the how the public views these different diagnoses. A nationwide, representative sample of 1444 individuals living in the United States reported perceiving individuals with schizophrenia as significantly more dangerous than individuals with MDD and also reported being significantly less likely to engage socially with individuals with schizophrenia as compared with individuals with MDD (Link, Phelan, Bresnahan, Stueve, & Pescosolido, 1999). Furthermore, diagnostic criteria for these two groups of people differ in terms of overt behaviors, possibly contributing to differing levels of actual and perceived social acceptance and inclusion. For example, in the active phase of their illnesses, individuals with schizophrenia spectrum disorders (SSDs) primarily present with psychotic features, which include delusions and hallucinations. Behaviors exhibited during these episodes may be viewed as more unstable, unpredictable, or dangerous to other community members than are behaviors exhibited by individuals with MDD.

Purpose of the Study

The present study will examine if there is a difference in reported subjective and objective experiences of social inclusion between individuals diagnosed with SSDs and those diagnosed with MDD. Furthermore, the amount of variance in QOL which can be predicted by type of diagnosis, SSDs or MDD, in addition to reported subjective and objective experiences of social inclusion will be determined. The determination of any relationships between diagnoses, social inclusion, and QOL would then allow the field to address these differing problems more completely across diagnostic categories.

Literature Review

Increased social inclusion/social acceptance is a goal that many stakeholders envision for individuals with serious mental illnesses (SMI; e.g., Leff & Warner, 2006; Perlick, 2001). However, although increasing numbers of individuals with SMI have been de-institutionalized and are living in the community, they are not partaking in social activities with the same frequency as are other individuals. Research has shown that individuals with SMI face and perceive ongoing discrimination and stigma in society (e.g. Ertugrul & Uluğ, 2004, Link et al., 1999, Link, Struening, Neese-Todd, Asmussen, & Phelan, 2001, Perlick, 2001, Perlick et al., 2001). It has also been shown that, for individuals with SMI, discrimination and stigmatization can contribute to the internalization of stigma and decrease their participation in social activities (Perlick et al., 2001). High levels of self-stigmatization and perceived social exclusion may also be related to lower levels of QOL. QOL in individuals with mental health conditions has been characterized by lower levels of enjoyment and satisfaction with such areas as social

relationships, physical health, work, daily activities, economic status, and sense of well-being (Rapaport et al., 2005).

This literature review will discuss the history of deinstitutionalization, the relationships between stigma and mental health conditions, impacts of social inclusion/exclusion, the importance of QOL, and differences in the experiences of individuals with SSDs as compared with those with MDD. However, several theories have been proposed as explanatory frameworks for the relationships between these factors. Therefore, even though these theories are not the focus of the current study, the author will review these theories to give the reader a stronger framework for understanding the empirical work which has already been done in this area as well as the rationale for the current study.

Deinstitutionalization. Bachrach (1976) defined deinstitutionalization as “a process involving two elements: (1) the eschewal of traditional institutional settings—primarily State hospitals—for the care of the mentally ill, and (2) the concurrent expansion of community-based services for the treatment of these individuals” (p. 1). Bachrach went on to state that the process involves two parts, removing individuals who are currently hospitalized from institutions and preventing the hospitalization of individuals in the future. Although the deinstitutionalization movement can be traced further back in time, it gained momentum in the United States in the 1960s (Bachrach, 1983). The aim of the movement was “improving the lot of individuals perceived as helpless in gaining access to life’s entitlements” by providing services to individuals in their own communities rather than in large, socially excluded mental hospitals in order to

make treatment “more humane and more therapeutic” (Bachrach, 1983, p. 7). More recently, the deinstitutionalization movement can be seen in laws, public policies, and organizations committed to increasing the social inclusion of individuals with mental health illnesses. For example, in their 1999 *Olmstead* decision, the U.S. Supreme Court stated that individuals “must be treated in the least restrictive setting possible, in the community instead of institutional settings whenever feasible” (State of California, 2007, p. 22). The importance of social inclusion of individuals with mental health illnesses can also more recently be seen in the Substance Abuse and Mental Health Services Administration’s (SAMHSA) National Consensus Statement on Mental Health Recovery (United States Department of Health and Human Services, 2006).

Public policies, organizations, and other reform movements. The Community Mental Health Center Act of 1963 formally began deinstitutionalization in the United States (Swarbick, 2009). As deinstitutionalization started, reform of the mental health services system began in other ways as well; consumers of mental health programming assembled their own consumer movement; the Community Support Program (CSP) was created within the National Institute of Mental Health (NIMH), and the National Alliance for the Mentally Ill (NAMI) was created by family members of individuals with mental health illnesses (Swarbick).

Despite the efforts of deinstitutionalization and other movements, the ongoing negative impact of stigma continues to have an effect on the social inclusion of individuals with SMI. In SAMHSA’s statement on recovery, the importance of social inclusion is highlighted in numerous areas including the following statement, “Societal

acceptance and appreciation of consumers—including protecting their rights and eliminating discrimination and stigma—are crucial in achieving recovery” (United States Department of Health and Human Services, 2006, p.2). In California in 2007, the Mental Health Services Oversight and Accountability Commission’s Stigma and Discrimination Advisory Committee’s created a 63 page report and 10-year plan to address how to increase the social inclusion of individuals with mental health illnesses through the elimination of stigma (State of California, 2007). Within the U.S. Department of Education, The National Institute on Disability and Rehabilitation Research (NIDRR) funds research and activities to promote the social inclusion of individuals with mental health illnesses through The Temple University Collaborative on Community Inclusion of Individuals with Psychiatric Disabilities (TU Collaborative).

True social inclusion. Although some community-based programs have been able to provide appropriate services and treatment options for individuals with SMI, deinstitutionalization has had mixed success. (Bachrach, 1983). Some programs have been successful in meeting the needs of a minority of individuals with SMI; however, a significant failure of the movement has been the inability of many individuals to access treatment (Bachrach). Also, despite the work of patient advocacy groups, the stigma of mental health conditions contributes to less social support availability in the new community based service system as compared with the availability in institutional settings (Bachrach).

The current literature is replete with descriptions of how, despite their physical location in the community, individuals with mental health conditions are not fully a part

of their communities. In 2009, while reviewing the history and movement towards the social inclusions of individuals with mental health illnesses, Swarbick stated, “The mental health service delivery system continues to need an overhaul in terms of creating a culture that is based on self-determination, empowering relationships, and opportunities for persons in recovery to fully participate in all facets of community living” (pp. 206-207). According to the TU Collaborative,

“For many living in the community has been an enormous benefit...For others, however, living in the community has meant only a change in address rather than the chance to develop a sense of genuine participation and integration in the day-to-day life around them.”

Ware, Hopper, Tugenberg, Dickey, and Fisher (2007) described individuals with psychiatric disabilities as “in the community, but not of it” (p. 469). Based on interviews with 56 adults with psychiatric disabilities in 5 sites where social integration is a service goal, the authors go on to give the following new definition of social integration, “a process, unfolding over time, through which individuals who have been psychiatrically disabled increasingly develop and exercise their capacities for connectedness and citizenship” (p. 471). Although deinstitutionalization has generally succeeded in its literal goal of providing the best treatment within the community, numerous barriers, including stigma, prevent the true social inclusion of individuals with mental illnesses.

Stigma. Research over several decades has shown that numerous individuals and groups within society are stigmatized when they deviate from societal notions of “normality” (Towler & Schneider, 2005). The following brief definition of stigma was

offered by Hayward and Bright (1997), “the negative effects of a label placed on any group” (p. 346). Crocker and Major (1989) define stigmatized individuals as being within “social categories about which others hold negative attitudes, stereotypes, and beliefs, or which, on average, receive disproportionately poor interpersonal or economic outcomes relative to members of the society at large because of discrimination against members of the social category” (p. 609). Crocker and Major go on to clarify differences between a “stigmatized group” and an “outgroup.” They stated that a stigmatized group cannot be the dominant group in a society whereas an out group could be. Furthermore, the authors noted that stigmatized groups are demeaned by the vast majority of individuals within the society, whereas out groups are demeaned by particular in groups. Stigmatized social categories or groups vary widely in type and include skin color, weight, intellectual disability, gender, sexual orientation, homelessness, and mental illness (Crocker & Major; Towler & Schneider).

Link and Phelan’s (2001) conceptualization of stigma is considered to be one of the most significant in regard to research on the stigma of mental illness (Rüsch, Angermeyer, & Corrigan, 2005). In their conceptualization of stigma towards any group of individuals, Link and Phelan describe the following steps. Initially, differences amongst people are perceived. These differences are simplified into discrete categories with given labels into which individuals are then assigned. The dominant cultures then create relationships between the labels and negative stereotypes which become so strong that the relationships are available at a preconscious level, allowing individuals in the culture to make instantaneous decisions based upon them. Individuals in the dominant

culture create a split between themselves and individuals in the other sub-groups through the use of the different labels. The final step consists of assigning labeled individuals to lower societal roles, causing them to have less access to desirable elements of the culture.

The stigma surrounding the grouping or categorization of individuals with mental illnesses in our society is especially undesirable and the saliency of the stigma surrounding these individuals is overpowering. Towler and Schneider (2005) had 70 undergraduate student participants sort 54 cards, each with the name of a stigmatized group, into 5-10 piles based on their similarity to each other; the participants were then asked to rate how well 20 different traits applied to each of the piles. Overall, 7 clusters were created based on the participants' piles and were labeled by the researchers as: physically disabled, mental, physical appearance, sexual identity, racial identity, social deviants, and economically disadvantaged. The stigma cluster of "mental" included: the depressed, mental patients, the suicidal, people who have had a nervous breakdown, schizophrenics, obsessive people, and neurotics.

In their second study, Towler and Schneider (2005) had 40 participants rate their reactions to social situations with exemplars from 6 of the 7 clusters; "obsessive people" and "depressed people" were used for the mental cluster. Comfort and evaluation ratings were lowest for the mental cluster. Also, the evaluation ratings for the mental cluster were significantly lower than those for the physically disabled, racial identity, and sexual identity clusters, and comfort ratings for the mental cluster were significantly lower than those for the physically disabled, social deviants, racial identity, and sexual identity clusters. Based on this research, it can be hypothesized that the stigma surrounding

mental illness could contribute to less social inclusion of these individuals, as compared with other stigmatized groups or categories.

Stigma and mental health conditions. The significantly negative stigma of individuals with mental health conditions has been researched and well-documented for several decades. In a review of stigma and mental illness, the general consensus of studies in the 1950s and 1960s was that “The general public feared and disliked the mentally ill, and wished to avoid them at all costs” (Hayward & Bright, 1997, p. 346). The impact of stigma on the recovery of individuals with mental health conditions remained substantial enough more recently to warrant a special section of *Psychiatric Services* on the topic in 2001. According to Perlick (2001), stigma detrimentally impacts the self-esteem and social functioning of individuals with mental health conditions across diagnoses. In a study of individuals with a variety of SMIs, most participants agreed or strongly agreed that current and former psychiatric patients experience rejection in multiple ways (Link et al., 2001).

The stigma of mental health conditions. Investigations into public conceptions of what mental illness entails have revealed a number of findings. In a review of the literature on mental illness and stigma, Hayward and Bright (1997) cited perceptions of dangerousness, attribution of responsibility, poor prognosis, and disruption of social interaction as possible causes for the stigma of mental illness. Most prevalent is the impact of community members’ perceptions of dangerousness.

In a 1996 nationwide sample of 653 adults in the United States, who were asked an open-ended question regarding what the term “mentally ill” meant to them, the

following perceptions of mental illness were found (Phelan, Link, Stueve, & Pescosolido, 2000). Behaviors suggestive of psychosis were included in approximately 35% of descriptions of the term, “mentally ill,” with 20% of all descriptions being composed of only psychotic behaviors and 12% of all the descriptions being considered violent psychosis. Also, over 15% of the descriptions included socially deviant behaviors and 14% included cognitive impairment descriptors. The only significantly associated sociodemographic variable to mentions of violence found by Phelan and colleagues was race, with non-whites rather than whites, making greater mention of violence in their descriptions of mental illness. These descriptions show the remarkably negative associations that individuals have with the label of mental illness; it logically follows that individuals perceived with such labels might be negatively impacted.

Perceptions of mental illness stigma on labeled individuals. As outlined in Link and Phelan’s conceptualization of stigma (2001), stigma can have many deleterious effects. Individuals in stigmatized groups are frequently aware of societal opinions of them. Individuals with mental health conditions may have varying levels of perceived stigma, dependent on a number of factors.

Symptoms of their disorders may contribute to the accuracy of perceptions of individuals with mental health conditions. Also, symptom severity may influence the level of stigma experienced by individuals. In a sample of 60 individuals being treated for schizophrenia in an outpatient clinic, perception of stigma was positively associated with severity of symptoms, specifically the symptoms of emotional withdrawal, passive social withdrawal, delusions, and suspiciousness (Ertugrul & Uluğ, 2004).

Reactions to perceptions of mental illness stigma on labeled individuals. Due to the particularly negative nature of the stigma surrounding individuals with mental health conditions, the perceptions of these beliefs by individuals with mental health problems is related to numerous negative impacts on these individuals. Research on specific negative impacts on individuals with mental health conditions related to their perceptions of their stigmatization will be discussed in the following sections.

Social isolation. In one study of 70 participants in a clubhouse program for individuals with mental illnesses, 63% of the respondents indicated that they would avoid interactions with people that they perceive as thinking differently about them because of their psychiatric treatment (Link et al., 2001). In another study involving 264 individuals in treatment for bipolar disorders, baseline stigma concerns significantly predicted psychological isolation and behavioral avoidance scores at a 7-month follow-up. In addition, psychological isolation, behavioral avoidance, and rejection sensitivity scores combined to explain approximately 54% of the variance in social leisure scores of the same individuals (Perlick et al., 2001).

Relationships. In the same sample of 70 participants in a clubhouse program for individuals with a variety of SMI diagnoses, the majority of participants felt that former psychiatric patients would be discriminated against in dating relationships (81%), close friendships (66%), and would be perceived as less trustworthy (69%). Other relationship variables of significance included 59% feeling that former psychiatric patients were viewed as less intelligent, and 67% indicating that their opinions would be taken less seriously (Link et al., 2001).

Self-esteem. In the sample from the clubhouse program previously reviewed, perception of devaluation-discrimination and stigma-withdrawal accounted for 13% of the variance in self-esteem scores at 6-months and 19% of the variance at 24-month follow-ups. By dichotomizing self-esteem scores into low and high, with the cut-off being the mid-point of the scale and controlling for baseline self-esteem, sex, and diagnosis, an individual scoring at the 90th percentile of the devaluation-discrimination scale would be 8.8 times more likely to have low self-esteem than an individual at the 10th percentile. The same analysis for stigma-withdrawal showed that an individual at the 90th percentile would be 7 times more likely to have low self-esteem than one at the 10th percentile (Link et al., 2001).

Employment. Perceptions of employers was also explored in the sample of 70 individuals from the clubhouse program reviewed previously; 52 (74%) felt employers would discriminate against former psychiatric patients (Link et al., 2001). Even with severity of the condition being controlled for, individuals who had been diagnosed with a mental health condition were less likely to be employed and also earned less income than individuals who met criteria for mental health conditions but had never received treatment (Link, 1982).

Stigma and Social Distance. Along with the negative outcomes related to perceptions of stigma by the stigmatized group as described previously, numerous studies have shown how the stigma of mental health conditions impacts the relationships between individuals in this stigmatized group and with other community members (e.g., Angermeyer, Matschinger, & Corrigan, 2004; Link, 1982; Link et al., 1999; Perlick et al.,

2001). In a review of 35 articles on the attitudes of individuals who have received psychiatric treatment, the majority of participants endorsed interpersonal difficulties, social rejection, and job discrimination; also, most individuals who had been psychiatrically hospitalized report problems with social re-integration due to stigma (Weinstein, 1983). In an effort to assess the impact of community members' stigma on how willing they would be to and to what extent they would interact with individuals with mental health conditions, researchers coined the term *social distance*.

Assessing social distance. Vignettes describing behaviors of individuals with mental health conditions are frequently used in research to determine the effects of stigma on participants' attitudes while minimizing response patterns based on social acceptability (Leff & Warner, 2006). Social distance scales seek to determine how closely engaged an individual would be with another individual, using descriptions of fictitious individuals. In order to measure engagement, researchers describe the fictitious individual and then use dichotomous and/or Likert scale items such as: 1) "Would you discourage your children from marrying someone like this?" 2) "Would you be willing to have someone like this join a favorite club or organization of yours?" (Phillips, 1963, p.967), 3) "How would you feel about having someone like Jim Johnson as a neighbor?" and 4) "How would you feel about recommending someone like Jim Johnson for a job, working for a friend of yours?" (Link et al., 1987). By utilizing these vignettes, researchers have sought to determine the factors that contribute to social distance and which of the factors are most salient.

Determinants of social distance. The coping strategies that individuals who are stigmatized utilize may contribute to decreased social inclusion. In addition, numerous studies have also shown that the stigma surrounding individuals with mental health conditions contributes to the perceptions and behaviors of other community members. These perceptions and behaviors of community members may, in turn, contribute to a decreased amount of social interaction between them and individuals with mental health conditions.

Behavior. Link et al. (1987) found that descriptions of behaviors were significantly more effective in predicting social distance than labels were in 10 of the 12 studies reviewed. In their subsequent study, over 23% of the variance in social distance scores was attributable to the behavior of the individual in the vignette (Link et al.). Phillips (1963) found that the variance in social distance scores was chiefly attributable to the descriptions of the individuals' behaviors, with the description of a 'paranoid schizophrenic' having the greatest social distance scores and the description of a 'normal individual' having the lowest. Perceptions of the dangerousness of individuals with mental health conditions may be strengthened by symptoms including disorganized behavior and flat affect and impact social distance (Ertugrul & Uluğ, 2004).

Label. Although the difference was not significant, over 39% of respondents indicated greater social distance from the individual with a mental health condition when vignettes described an individual in the same way, except when the reason given for a hospitalization was for mental health or for a back problem. There was a significant interaction for social distance between the hospitalization type and how dangerous

participants perceived individuals with current or past histories of mental illness to be (Link et al., 1987).

Although community members may not always be aware of other individuals' diagnoses, or lack thereof, this finding is important in conjunction with information previously discussed. That is, that the majority of adults in the United States may be able to identify behaviors related to MDD and SSDs as being behaviors of someone with a mental illness and that over 12% of descriptions of individuals with mental illnesses involved behaviors congruent with violent psychosis (Link et al., 1999; Phelan et al., 2000). Therefore, community members may ascertain the presence of a mental illness without being told and many people continue to associate violence strongly with individuals who have mental health conditions.

Perception of dangerousness. In one study, community members' perceptions of the dangerousness of individuals who have had or are currently receiving psychiatric treatment accounted for over 25% of the variance expressed in social distance measures, based on vignettes of an individual who had been hospitalized for a back problem or had been at a mental health institution (Link et al., 1987). Participants' responses on measures of likelihood of violence and social distance based on vignettes created to meet *DSM-IV* criteria for schizophrenia, MDD, Alcohol Dependence, and Cocaine Dependence, along with one describing an individual with subclinical problems showed a statistically significant correlation between perception of dangerousness and social distance scores (Link et al., 1999).

Based on this information, community members' descriptions of individuals with mental illnesses include significantly deviant and violent behaviors; individuals with mental health conditions perceive a significant stigma against individuals receiving psychiatric care, and the psychiatric diagnostic labeling of individuals is associated with poor outcomes. This combination of stigma, perceptions of stigma, and behavioral avoidance contributes to individuals with mental health conditions being less socially accepted and subsequently less involved.

Labeling Theory. Labeling theory was offered, in part, as an explanatory framework for the social exclusion of individuals with mental health conditions. It proposed that individuals who have been psychiatrically hospitalized will face stigma and rejection; therefore, other individuals will seek increased social distance from them (Scheff, 1966, 1974). In his sample of 300 systematically selected, married, white women, Phillips (1963) found that individuals reported being less willing to engage socially with an individual, described in a vignette, who sought help from mental health professionals, as compared with an individual who sought no help even though the descriptions of their behaviors were the same in all other ways. Later studies used comparisons, determining whether the label of a mental health condition or an individual's behavior was more predictive in causing participants to report a desire for increased distance between themselves and the individual being described. In their review of the literature, Link et al. (1987) found behavior to be a significantly stronger predictor of desire for social distance than labels. This finding resulted in a revision of traditional labeling theory.

Modified labeling approach. A modified labeling approach was proposed more than thirty years after the original, with revisions based on results from empirical studies of the steps (Link, Struening, Dohrenwend, Cullen, & Shrout, 1989). The studies, their results, and the new approach were reported together. This approach is strongly related to Link and Phelan's (2001) conceptualization of the formation of stigma towards any group discussed previously; however, it is focused on the stigma of mental illness. The new modified labeling approach is characterized by several steps.

As noted, Link and colleagues (1989) conducted empirical studies on each step of the approach they proposed. The studies involved data from a stratified sample of 429 community residents and 164 psychiatric patients at inpatient and out-patient facilities. Within their sample, there were 11 out-patient psychiatric patients during their first treatment recruited from the community and 56 first treatment inpatients or out-patients recruited from facilities; 9 out-patient psychiatric patients with a history of treatment recruited from the community, and 108 inpatients or out-patients with treatment histories recruited from facilities; 96 individuals from the community with a history of treatment who were no longer in treatment; 142 individuals from the community who met diagnostic criteria for mental health conditions but had never been diagnosed as having one, and 171 individuals from the community without a treatment history who did not meet diagnostic criteria for a diagnosis. Participants who currently or had previously met diagnostic criteria for MDD or SSDs were specifically recruited from facilities for the studies. Therefore, 98 individuals in the sample were diagnosed with MDD, 50 of whom

were experiencing their first episodes and 65 individuals were diagnosed with SSDs, 21 of whom were experiencing their first psychotic episodes.

Link and colleagues' (1989) participants with a history of psychiatric treatment completed a measure to determine how they responded to their perceptions of their positions in society. The measure looked at methods including: hiding the diagnosis, limiting interactions, and/or teaching others. All participants completed measures of how strongly individuals with a history of psychiatric treatment are devalued or discriminated against and also the breadth of their social networks (Link, et al.). Subsequent paragraphs will describe the specific steps of this theory which are pertinent to the current study.

Step 1. The first step states that all individuals form an idea of their community's views of individuals with a mental health label, the stigma of mental illness. Two features of the idea formed are specifically significant, (a) how much an individual feels that people with mental health conditions are devalued, and (b) how much he or she feels people with mental health conditions are discriminated against; both of these features are components of the stigma surrounding mental illness (Perlick et al., 2001). Another precondition to this step, noted by Rüsçh et al. (2005), is that the differences between individuals with and without mental health conditions have to be noticed and be viewed as relevant by society before mental illness can be formed into a stigmatized group.

Evidence in support of individuals generating a negative view of individuals with mental health conditions in step 1 of the modified labeling approach has been found in numerous studies including Link et al. (1989). The Towler and Schneider (2005) article discussed previously also substantiates the fact that individuals with mental health

conditions are grouped together because the authors discovered the stigma cluster of “mental” included: the depressed, mental patients, the suicidal, people who have had a nervous breakdown, schizophrenics, obsessive people, and neurotics. The second study in their article goes on to show how salient and negative the stigma is surrounding mental illness (Towler & Schneider). A review of 35 articles evaluating the attitudes of individuals receiving psychiatric treatment showed that these individuals, who are also members of society, frequently endorsed perceptions of mental health patients which are negative; these include characteristics and behaviors such as “worthless, unpredictable, immoral, foolish, weak, sick, dangerous, irresponsible” (Weinstein, 1983, p.80). A more recent review of mental illness stigma reported that the stigma surrounding mental health conditions remains and continues to be negative (Rüsch et al., 2005).

Step 2. The second step of the approach is that an individual is labeled as having a mental health condition by a professional. According to the theory, this process of labeling contributes to the individual’s idea of how his or her community negatively views individuals with mental health conditions to now be applied to him or herself (Link et al., 1989). Evidence supporting this step is mixed because 57% of measures of self-perceptions of individuals who had received psychiatric treatment showed that the individuals endorsed positive views of themselves across 35 studies (Weinstein, 1983). However, the validity of Weinstein’s assertion that the views were positive is questionable. Items which were considered to be favorable self-perceptions included characteristics such as clean and safe, which typically would be more neutrally viewed characteristics in society, with only their opposites, dirty and dangerous, being perceived

negatively. Also, there is no information on how the participants felt about themselves prior to the diagnosis in order to compare the later perception scores. Finally, should Weinstein's analysis of "favorable self-perceptions" be accepted, this would still leave a significant minority of studies showing overall negative self-perceptions of individuals with mental health conditions.

In accordance with Link and colleagues (1989) on Step 2, Rüsç and colleagues (2005) state that "some people with mental illness may accept the common prejudices about mental illness, turn them against themselves, and lose self-confidence" in describing the meaning of *self-stigma*. However, they also point out that awareness of having a mental illness is required for this to occur; therefore, this step may not be possible for significantly impaired individuals.

Step 3. The next three steps of the modified labeling approach involve responses to the label and also its consequences. In the third step, the individuals respond to their perceptions of their positions in society by attempting to hide the diagnosis, reducing the range of their social interactions to include only individuals who are aware of their diagnoses or who have similar diagnoses, and/or try to teach others about mental health conditions. In Link and colleagues' study component related to this, participants who were currently involved with, and those who had had previous psychiatric treatment, significantly endorsed items regarding social withdrawal and items related to attempts to educate the community; also, endorsement of items regarding secrecy trended towards significance for these same individuals (1989).

In an evaluation of 264 individuals participating in treatment for bipolar disorder, those who reported greater concern with the stigma of mental health conditions when discharged from a psychiatric hospital, or when they began a new outpatient treatment, were significantly less engaged with non-family social networks than were those reporting less concern with stigma at a seven month follow-up (Perlick et al., 2001). Therefore, the amount of concern about stigma was negatively correlated with reports of social inclusion 7 months later. Also, overall stigma concerns at baseline were statistically significant, positive predictors of variance in isolation ($p < .01$) and avoidance ($p < .001$) scores at follow-up (Perlick et al.).

The idea in step 3 that individuals attempt to hide their diagnoses was upheld in a nationwide survey of 1,301 mental health consumers (Wahl, 1999). Many respondents reported secrecy around their mental health diagnoses. Specifically, 74% of respondents reported that they “sometimes, often, or very often avoided telling others outside their immediate families about their mental illnesses” (Wahl, p. 471).

Step 4. The fourth step involves negative impacts on the individuals with mental health conditions, including low levels of social inclusion; this is due to their beliefs about how others will devalue and/or discriminate against them and how they alienate themselves in step three. Link and colleagues found that when education, age, marital status, and employment status were controlled for there was still a significant, positive relationship between amounts of alienation strategies used and amount of reliance on household support; however, there was a significant negative relationship between amount of withdrawal and size of non-household social networks (1989). In their study

with 264 individuals who had bipolar disorders, Perlick and colleagues found that isolation, avoidance, and rejection sensitivity scores accounted for over 50% of the variance in engagement in social leisure activities (2001).

Step 5. Finally, by step five, the theory asserts that most individuals with mental health conditions will have lower self-esteem, limited community connections, and inferior employment opportunities (Link et al., 1989). Therefore, individuals with mental health conditions were hypothesized to have lower QOL, as described by Rapaport et al. (2005). As predicted, Rapaport and colleagues found that individuals with depressive and anxiety disorders including MDD, Dysthymic Disorder, Panic Disorder, Obsessive Compulsive Disorder, Social Phobia, and Post-traumatic Stress Disorder had significantly lower QOL scores than other individuals in their sample.

Because of the consequences outlined in step five, Link and colleagues asserted that individuals with mental health conditions are at increased risk for other mental health problems (1989). Indeed there does appear to be an increase in symptoms influenced by stigma. Wahl (1999) stated that, “Experiences have led many consumers to maintain a secrecy that not only is uncomfortable but also may contribute to the very symptoms— anxiety, depression, paranoia—from which they are struggling to recover” (pp. 475-476). In Wahl’s study of 1,301 mental health consumers, only 21% reported “that they seldom or never worried that others would view them unfavorably if their status as a mental health consumer were disclosed”; however, 55% reported that they had this concern often or very often (p. 471). Along with concerns, 57% of mental health consumers reported lower self-esteem and self-confidence. Rüsich et al. (2005) acknowledge that self-stigma

results in decreased self-esteem and self-efficacy but caution that such reductions must be parceled out from those caused by depressive symptoms of mental illnesses.

Social inclusion. The influences of mental illness stigma on behavioral avoidance and social distance, discussed previously, contribute to decreased social inclusion of individuals with mental health conditions. Social inclusion has been defined in a variety of ways. Reviewing the literature on social inclusion/exclusion of individuals with mental health conditions, Morgan, Burns, Fitzpatrick, Pinfold, and Priebe found that the concept is generally considered to be multidimensional; however, the dimensions included in its definitions vary between and among researchers (2007). Social inclusion is important for individuals because feeling socially excluded leads to physical and to mental health problems; conversely, social inclusion aides in restorative processes (Lloyd et al., 2006).

Definitions of social inclusion. In the mental health literature Lloyd and colleagues (2006) defined social inclusion as “being able to rejoin or participate in leisure, friendship, and work communities” (p. 1). Ware and colleagues (2007) broadened the concept into *social integration*, defining it as “a process, unfolding over time, through which individuals who have been psychiatrically disabled increasingly develop and exercise their capacities for connectedness and citizenship” (p. 471). The idea of social inclusion/exclusion is also cited in many other fields including economics and sociology. In the *Review of Income and Wealth*, Chakravarty and D’Ambrosio (2006) state that socially excluded individuals cannot “participate in the basic economic and social activities of the society in which he lives” (p. 377).

Social inclusion compared to social capital. The concepts of social capital and social inclusion/exclusion are strongly interrelated in the literature (Morgan et al., 2007). Social relationships and networks are crucial components of each concept. However, social capital is focused on the use of social relationships for economic and/or material reasons, whereas, social inclusion/exclusion looks at the *use* of social relationships for these reasons and also for others. Therefore, according to Morgan and colleagues, the use of social inclusion/exclusion is more applicable to the study of societal experiences of individuals with mental health conditions because it considers that relationships serve many valuable purposes. Based on this conclusion, this review will focus on social inclusion/exclusion rather than on social capital.

Dimensions of social inclusion. Due to the breadth of the concept and given the fact that the construct of social inclusion is studied in a variety of fields, a number of dimensions have been proposed to measure social inclusion. In a more specifically socio-economic model, Chakravarty and D'Ambrosio (2006) offered the following list of sub-domains: constitutional/political rights, social rights, civil rights, access to paid employment, quality of employment, health services, housing, education, social care, financial services, transportation, commercial facilities, leisure services, friendships, neighborhood participation, and family life. In a review of social inclusion in mental health literature, dimensions of social inclusion included employment, housing, income, social relationships and networks, and education; the review also highlighted the importance of using both objective and subjective reports to measure social inclusion (Morgan et al. 2007).

Social inclusion of individuals with mental health conditions. As reviewed in the section on deinstitutionalization, today, individuals with mental health conditions are “in the community, but not of it” (Ware et al., 2007, p. 469) despite the facts that social inclusion is considered to be of significant benefit to individuals and that there are numerous public policies, organizations, and movements towards increasing social inclusion for this stigmatized group. Stigma can lead to social exclusion of individuals with mental health conditions. The discriminatory views of community members may lead to fewer opportunities for social engagement for individuals with mental health conditions; also, the stigma that individuals with mental health conditions perceive from other community members may deter them from being involved in the activities which are available to them (Morgan et al., 2007).

Individuals with SMI have problems obtaining and maintaining steady employment, with many being reliant on government aid; therefore, they have minimal funds for social activities or new clothes in order to appear well-groomed in public (Leff & Warner, 2006). Lacking funds for leisure activities may directly contribute to fewer opportunities for social interactions. In an indirect way, lacking funds for new clothing may also contribute to fewer social experiences because the impact of stigma regarding appearance is layered on top of the stigma of mental illness. Because of these reasons and others, the number of individuals with mental health conditions in socially excluded groups, such as those who are homeless or poor, is larger than would be expected by the percentage of the total population they account for (Bonner et al., 2002).

Based on their review of the literature on social inclusion/exclusion, Morgan and colleagues (2007) recommended that objective and subjective measures should be used to assess the construct. Using objective and subjective measures allows for a consideration of the frequency and quality of dimensions of the social lives of individuals with mental health conditions. The Social Inclusion scale used by the SAMHSA/MHD Multisite Research Initiative utilizes reports of frequency ratings for social interactions, and the Social Acceptance scale used ratings of frequency of feelings about other's viewpoints due to having a mental health diagnosis. In this manner, both quality (subjective reports) and quantity (objective reports) measurements were garnered along with information about how available the individuals believe social groups are to them.

Quality of life. The negative impact of stigma on social inclusion may contribute to a lower QOL. QOL considers, minimally, an individual's functional status and his or her access to resources and opportunities (Lehman, 1996). Due to the wide variety of impacts that SMIs have on the individuals diagnosed with such conditions, it is important to investigate the QOL experienced in these populations.

Definitions and domains. QOL has been defined in a variety of overlapping ways. Lehman (1996) suggested that, "at a minimum, QOL covers persons' sense of well-being; often it also includes how they are doing (functional status) and what they have (access to resources and opportunities)" (p. 78). Measures of QOL assess "enjoyment and life satisfaction associated with various activities" (Rapaport, et al., 2005, p. 1171). Based on these descriptions, QOL is significantly related to individuals' happiness and success.

Quality of life and mental health conditions. QOL is considered an important, humanistic outcome of treatment services (Lehman, 1996). In a sample of 120 individuals with schizophrenia seeking treatment in an out-patient setting, over 8% of the variance in levels of QOL was predicted by the individuals' levels of satisfaction with their social networks (Bengtsson-Tops & Hansson, 2001). Overall, study participants reported that their social networks were less supportive and close and that they had fewer relationships to share happiness with, as compared with community norms for these constructs. In another sample, 63% of individuals with MDD had QOL scores in the severely impaired range, two or more standard deviations below the community norm; only 10% of their scores fell within the normal range (Rapaport, et al., 2005).

According to Evans, Banerjee, Leese, and Huxleys (2007), few investigations considered whether or not QOL models vary across types of mental illnesses. To address this research gap, they mailed a survey to a sample of community dwelling adults in England (18 to 65 years old). Based on responses, 794 individuals were separated into a "common mental disorder" (CMD) group, made up primarily of anxiety and depressive disorders, and 1,119 respondents made up the "healthy population" group. The "SMI" group was made up of 149 individuals, currently living in the community, who had a history of psychotic illness of at least 2 years in duration and at least 2 psychiatric hospital admissions, at least one of which occurred in the previous 2 years. The authors considered the following QOL components in their analysis: life in general, life overall, work, leisure, finance, living situation, safety, family, social, and health.

At baseline, Evans and colleagues (2007) found that the SMI group's ratings were significantly lower than all of the ratings of the "healthy population" group for all areas except for finance; the CMD groups' ratings were all significantly lower than those of the "healthy population." In comparing the SMI and CMD groups' ratings, the SMI groups' ratings were significantly higher for general health, family, and living situation; significantly lower ratings were seen with mental health and life overall.

Sociodemographic factors and quality of life. Hansson (2006) reported that only weak relationships have been found between sociodemographic variables and QOL in individuals with SMI and that more research has focused on the clinical variables, which have been more predictive of QOL. In the study reviewed previously, Evans and colleagues (2006) found the following significant sociodemographic factors ($p < .05$) for the SMI group: age, restricted living situation opportunities, restricted family opportunities, income and benefit receipt, employment status, and restricted mental health opportunities. Significant factors ($p < .05$) for the CMD group included: income, age, gender, restricted financial opportunities, home ownership, and frequency of contact with family. In a study of 418 individuals with schizophrenia seeking treatment in out-patient settings in Nordic countries, the following factors were considered, among others, as possible objective predictors of QOL: age, sex, living situation (living alone or not), employment situation, frequency of family contact, and having a close friendship (Hansson et al., 1999). The only variable which was found to predict variance in QOL was having a close friendship, which predicted approximately 5% of the variance.

Social inclusion of individuals with depression and schizophrenia. Based on the literature reviewed thus far, labels lead to stigma. Symptoms of mental health conditions and perceptions of stigma, held by individuals with mental health conditions and other community members, contribute to decreased amounts of social inclusion. The combination of social distance by community members and withdrawal of individuals with mental health conditions leads to lower social inclusion. It could be hypothesized that individuals with SSDs would have different perceptions about levels of social inclusion than individuals with MDD due to differences in stigma, behaviors, perceived dangerousness, and insight of the individuals.

Individuals with schizophrenia. Ertugrul and Uluğ (2004) gave the following interpretations for their results of a positive correlation between experiences of stigma and symptom severity in a sample of 60 individuals with schizophrenia being treated in an outpatient setting:

“Patients with schizophrenia may prefer to be distant to others due to their delusions and suspicions and may perceive more stigmatization as they expect more negative attitudes from others. It may also be true that symptoms like delusions and suspiciousness may cause florid behavioral change and are attention-taking, which may be scary for others and cause more public reaction” (p.76).

Depression. In Ertugrul and Uluğ’s (2004) study involving 60 individuals with schizophrenia, reported level of depression was positively correlated with answers to an item on the World Health Organization-Disability Assessment Schedule—II. This item which purportedly measures perception of stigmatization is as follows, “In the last 30

days, how much of a problem did you have because of barriers or hindrances in the world around you” (p. 74). Reported level of depression was the only predictor variable for this item and predicted 33% of the variance in responses.

Differences due to behaviors. It has been found that individuals with MDD and those with schizophrenia spectrum disorders are perceived differently (Link et al., 1999). Also, diagnostic criteria for these two groups of people differ in terms of overt behaviors. For example, in the active phase of their illness, individuals with schizophrenia spectrum disorders primarily present with psychotic features including delusions and hallucinations which may manifest in overt behaviors. Behaviors exhibited during these episodes may be viewed as more objectionable by other community members than behaviors exhibited by individuals with MDD (Link et al.). An individual with MDD may be able to limit his or her experience of stigma by limiting the knowledge of who is informed about the condition; however, it is harder for individuals with psychotic symptoms to mask their behavior(s) or appearance(s) which illustrate the symptoms they are experiencing (Leff & Warner, 2006). Significantly more social distance was shown in response to a vignette describing an individual with schizophrenia as compared with one describing an individual with MDD (Link et al.).

Differences due to perceived dangerousness. Despite indications of decreasing stigma surrounding mental illnesses in the United States, perceptions of dangerousness of individuals with these illnesses increased between 1950 and 1996, with the vast majority of violent descriptors being used along with psychotic descriptors (Phelan et al., 2000). One possibility for these findings given by the researchers is that Americans have

become more accepting of less severe mental illnesses, but stigma has been less diminished for individuals with psychosis.

Summary

The Community Mental Health Center Act of 1963 formally began deinstitutionalization in the United States (Swarbick, 2009). Since then, numerous public policies, organizations, and movements have aimed to increase the social inclusion of individuals with mental health conditions, e.g. Supreme Court's 1999 *Olmstead* decision, SAMHSA National Consensus Statement on Mental Health Recovery, CSP, NAMI, and NIDRR (State of California, 2007; Swarbick, 2009; TU Collaborative; United States Department of Health and Human Services, 2006). Despite all of these efforts, the stigma surrounding mental illness contributes to behavioral avoidance and social distance, which in turn contribute to decreased social inclusion of individuals with mental health conditions.

Today, the stigma of mental illness continues to impact, detrimentally, the self-esteem and social functioning of individuals with mental health conditions across diagnoses (Perlick, 2001). Social inclusion is important for individuals because feeling socially excluded leads to physical and to mental health problems and, conversely, social inclusion aids in restorative processes (Lloyd et al., 2006). Less social inclusion may contribute to a lower QOL, which is considered to be an important, humanistic outcome of treatment services (Lehman, 1996). QOL considers, minimally, an individual's functional status and to his or her access to resources and opportunities (Lehman).

Despite the salience of QOL as an outcome, according to Evans and colleagues (2007), few investigations considered whether or not QOL models vary across types of mental illnesses. Therefore, it is important to determine if individuals diagnosed with different mental health conditions perceive different amounts of social inclusion. If so, the determination of how greatly the perception of social inclusion and the type of diagnosis may impact QOL in individuals diagnosed with different mental health conditions will aid the field in addressing these factors more completely in their treatment.

Hypotheses

1. Individuals diagnosed with schizophrenia spectrum disorders report less subjective and objective experiences of inclusion in social activities than individuals diagnosed with Major Depressive Disorder.

2. Quality of life is predicted by diagnosis, schizophrenia spectrum disorders or Major Depressive Disorder, symptom severity, reported subjective experience of social inclusion, and reported objective social inclusion.

Chapter 2: Method

This study utilized archival data obtained from baseline interviews of the Substance Abuse and Mental Health Services Administration/Mental-health Disparities (SAMHSA/MHD) Multisite Research Initiative (Salzer, Brusilovskiy, Rothbard, & Haley, 2007). Information regarding methods and data specific to the Philadelphia region sites was garnered from personal communication with the study's statistician, E. Brusilovskiy (January 11, 2012). Participants were consumers at four mental health agencies who had been diagnosed with a schizophrenia spectrum disorder or major depression. The participants completed the Quality of Life Scale (QOL Interview excerpts, Lehman, 1983), Subjective Social Inclusion Scale (QOL Interview excerpts, Lehman, 1983), Social Acceptance Scale (Well-Being Project, Campbell and Schraiber, 1989), Hopkins Symptoms Checklist (Derogatis et al., 1974), and Colorado Symptom Index (Shern et al., 1994), as part of the baseline measures. Subjective baseline reports were compiled and coded into the Statistical Package for the Social Sciences (SPSS) and statistical analyses were completed.

Design and Design Justification

The study utilized an archival, cross-sectional correlational design using data from self-report questionnaires. This enabled the use of a multiple regression analysis to determine if diagnosis, self-reports of frequency of social inclusion, and self-reported perception of quality of social inclusion are factors in QOL scores.

Archival data analysis was used because it is unobtrusive and imposes no further burden on the populations from whom the information has been collected. Archival data

provides a larger and higher-quality database than would be feasible for an individual researcher to collect on his/her own. Therefore, in order to look for factors in QOL scores utilizing a secondary data set, a cross-sectional correlational explanatory design was used.

Participants

Participants in the original dataset took part in the SAMHSA/MHD Multisite Research Initiative at 4 sites in the Philadelphia area. Lists of individuals meeting eligibility criteria were compiled and chart reviews were conducted to verify that eligibility had not changed. Inclusion criteria of the original study were:

- a. a primary diagnosis of a schizophrenia spectrum disorder or major depression
 - b. being categorized as White or African American, based on administrative records,
 - c. over the age of 18,
 - d. ability to knowledgeably provide consent,
 - e. and currently receiving psychiatric medication prescriptions at the site,
- Recruiting information is provided in the procedures.

Measures

Quality of life. According to Lehman, the QOL Interview was created to evaluate the QOL experienced by individuals with chronic mental illnesses (1988). To this end it is focused on the individual's current functioning and the questions are short and specific. Pilot trials were conducted until clients were able to understand and answer all items. The QOL Interview incorporates many facets of life which may affect one's sense of welfare and it is structured to reduce the opportunity for interviewer effects. It has been

used in studies with men, women, Caucasian and minority groups, with those aged 18-65, individuals who are outpatients, inpatients, chronically mentally ill, and non-patients (Lehman, 1996).

In this study, QOL will be measured by the use of the QOL Scale used by the SAMHSA/MHD Multisite Research Initiative; the QOL Scale was made up of 11 of the 54 items of the QOL Interview Subjective QOL Subscales (QOL Interview excerpts, Lehman, 1983). In 1983, Lehman found that these subscales had internal consistencies, Cronbach's alpha, ranging from .74 - .88 across all subscales and locations which were studied. The one-week test-retest correlations ranged from $r = .41 - .95$. The QOL Interview Subjective QOL Subscales measure individuals' subjective feelings regarding their well-being across many facets of life. In regard to each item's content, the participants answered whether they felt terrible, unhappy, mostly dissatisfied, mixed, mostly satisfied, pleased or delighted; these answers were scored from 1 to 7, respectively, along with options for the item not being asked and not being answered. An example of an item is "How do you feel about the amount of fun you have?" (E. Brusilovskiy, personal communication, January 11, 2012).

Objective social inclusion. The QOL Interview Frequency of Social Contacts subscale has individuals report their frequency of engagement with others. In this study, Objective Social Inclusion (ObjSI) will be measured with the SAMHSA/MHD Multisite Research Initiative scale, which was made up of 6 of the 10 items of the Quality of Life Interview Frequency of Social Contacts subscale (QOL Interview excerpts, Lehman, 1983). It is important to note that this scale focuses on social participation; however,

many researchers consider social inclusion to be multi-dimensional and include such factors as employment, housing, income, and education (e.g., Morgan et al., 2007).

For each item of the scale, the participants answered whether or not they engage in the described activity at least once a day, at least once a week, at least once a month, less than once a month, or not at all; these answers were scored from 5 to 1, respectively, along with options for the item not being asked and not being answered. An example of an item is, “visit with someone who does not live with you” (E. Brusilovskiy, personal communication, January 11, 2012). In 1983, Lehman found that the Social Contacts subscale had an internal consistency, Cronbach’s alpha, of .70 at both locations which were studied. The one-week test-retest correlation was $r = .69$. Although the entire subscale was not used, Lehman does describe the ability to subdivide some of the scales.

Subjective social inclusion. In this study Subjective Social Inclusion (SubSI), or individuals’ feelings about their frequency of social inclusion, will be measured by participants’ ratings of 7 of the 136-item California Well-Being Project Client Interview (CWBPCI; Well-Being Project, Campbell & Schraiber, 1989). The SAMHSA/MHD Multisite Research Initiative used these items as a “Social Acceptance Scale.” The CWBPCI creates a well-being quotient score as a measure of subjective well-being. It has been used with men, women, Caucasian and minority groups, outpatients, inpatients, the chronically mentally ill, and with a median age of 35 (Lehman, 1996). According to Lehman, the Well-Being Project was a consumer designed and consumer run, 3-year project to better understand well-being concerns of those being treated for mental illnesses; however, no information was provided on the CWBPCI’s psychometric

properties. Despite this, because it was consumer-generated, its face validity is strong (Lehman). Because the SubSI Scale was created from items of the CWBPCI, no psychometric information regarding reliability or validity is available.

For the first item of the SubSI Scale, the participants indicated how frequently they felt that they were treated differently when others knew they had received a mental health diagnosis or had received mental health services. Answers for frequency were: *most of the time, sometimes, seldom or rarely, or never*; these answers were scored from 1 to 4, respectively, along with options for no opinion, and for the items *not being asked or not being answered*. The remaining 6 items began with “As an individual who has received mental health services, do you think others...”; response options were, *all of the time, most of the time, sometimes, seldom, and never*; the answers were scored from 1 to 5, respectively, along with options for no opinion, and for the items *not being asked or not being answered*. An example of an item is “feel or treat you like you are unpredictable?” (E. Brusilovskiy, personal communication, January 11, 2012). This scale could also be operationally considered as “perceived stigma” because the items are related to different aspects of the stigma of mental illness.

Due to differences in how the responses of the SubSI Scale were scored, the data for the first question of the scale were converted in the following way: responses previously scored a 1 (*Most of the Time*) were changed to 2s (*Most of the Time* on the scale for questions 2-8). Those previously scored a 2 (*Sometimes*) were changed to 3s (*Sometimes* on the scale for questions 2-8). Responses previously scored a 3 (*Seldom or Rarely*) were changed to 4s (*Seldom* on the scale for questions 2-8). After excluding

participants with less than an 80% response rate, there were no 4 or 'Never' responses to question 1; therefore, no 4 responses were converted.

Symptom severity measures. In order to control for the level of current symptoms being experienced by the participants, two symptom measures were utilized, the Colorado Symptom Index (CSI; Shern et al., 1994) and Hopkins Symptom Checklist – 25 (HSC; Derogatis et al., 1974).

Colorado Symptom Index. The CSI is widely used in research as a self-report measure of psychiatric symptomatology; specifically, the symptoms measured by the CSI can be broadly viewed as anxiety-related and psychotic (Boothroyd & Chen, 2008). It has been used with homeless adults receiving treatment for substance abuse or mental health issues, for dually diagnosed populations, and in other studies involving individuals with SMIs (Boothroyd & Chen). Several studies have shown the CSI to be a reliable and valid measure of severity of symptoms for individuals with SMIs (Boothroyd, & Chen; Levitt et al., 1999). Boothroyd and Chen's study of the CSI involved 3,874 adult Medicaid recipients in Florida; therefore, some, but not their entire sample was made up of individuals with psychiatric disabilities. They found the internal consistency, Chronbach's alpha, to be between .91 and .92 across the disability sub-groups, with the overall estimate at .92. Test-retest reliability scores were done with an average of 381 days between administrations, and the correlations ranged from $r = .61 - .73$ for the sub-groups, with an overall $r = .71$ (Boothroyd & Chen). The SAMHSA/MHD Multisite Research Initiative specifically utilized the Psychosis subscale of the CSI; there is no reliability or validity information available for the subscale.

There are 10 items which make up the CSI Psychosis subscale. For each item, the participants were asked how often he/she had experienced the problem during the previous month. Answers for frequency were: *once during the month, several times during the month, several times a week, or at least every day*; these items were scored from 1 to 4, respectively, along with options for *no opinion*, and for the item *not being asked or not being answered*. An example of an item is “How often have you heard voices, or heard or seen things that other people didn’t think were there?” Therefore, higher scores indicate more frequent psychotic symptoms.

Hopkins Symptom Checklist – 25. This is a 25-item version of the original 90-question checklist which measures only for depression and anxiety (Feightner & Worrall, 1990). Various forms of this checklist have been created, including forms intended to be used in primary care settings, forms translated into several languages, and forms used in therapy to assess changes in symptom severity. Numerous studies have been done on the different forms with Chronbach’s alpha for internal consistency as high as .95 (Feightner & Worrall).

For each of the 25 items on the HSC, the participants were asked how bothered or distressed he/she had been during the past week by a problem or complaint. Answers for frequency were: *not at all, a little, quite a bit, and extremely*; these items were scored from 1 to 4, respectively, along with options for, *no opinion*, and for the item *not being asked or not being answered*. An example of an item is “feeling fearful.” Therefore, higher scores indicate more severe depression and anxiety symptoms.

Procedure

This is a secondary data analysis obtained as a de-identified data set; the data were originally obtained in the following way. The four sites of the SAMHSA/MHD Multisite Research Initiative in the Philadelphia area recruited consumers from traditional mental health providers. The following information was obtained from Brusilovskiy:

Four lists were created from each agency, each with the names of individuals meeting the preceding criteria and separated by race and diagnosis: 1) White and schizophrenia spectrum DO, 2) African American and schizophrenia spectrum DO, 3) White and a Major Depression Diagnosis, and 4) African American and a Major Depression Diagnosis. Chart Reviews were conducted to verify the fact that eligibility had not changed. The names on each list were then randomly ordered.

Research staff directed agency staff at each agency to approach their clients in order to inform them about the study and to gain their permission for research staff to contact them. Agency staff completed a “Consent-to-Contact” (CTC) form that was then returned to the research staff. All individuals who consented to speak to the research staff were contacted and informed about the study. Those who agreed to participate were provided with written consent forms, completed a baseline, and were randomized either to the experimental or to the control condition. Each participant enrolled in the study was assigned a sequential Participant ID#. Each participant had an equal probability (50%-50%) of being assigned either to the experimental or to the control group. Randomization occurred within site (i.e., each site had its own random assignment list) and was done in blocks of 10 to avoid runs. A random number sequencer was used, in

which the sequence of five 1s (i.e., experimental group assignment) and five 2s (i.e., control group assignment) were randomly determined for each Participant ID#.

Participants assigned to the experimental condition were referred to the interventionists at their agency, for the Self-Care Intervention. Additional follow-up interviews were conducted at 6- and 12-months intervals after the baseline interview. Each participant received \$20 for completion of each individual interview and an additional \$20 if they completed all three interviews (personal communication, 2012).

A common assessment protocol composed of 27 scales was administered at baseline; of these scales, 5 were included in the current study's analyzed data. Accuracy of administration was preserved through the following means: interviewing training received by all interviewers, interviewers were given directions on how to score each item, and a manual with a script of the interview that included every item was followed. An automated data entry system was supplied to each site; this system conducted consistency checks, locked out any out-of-range responses, and confirmed data with double entry.

Statistical Plans and Analysis

Two statistical tests were completed. According to Weinfurt (1995), the Bonferroni inequality states that the overall alpha will be less than or equal to the sum of the alpha levels from both tests. Therefore, in order to keep the alpha set at $\alpha = 0.05$, the alpha level for each test was set at $\alpha = 0.025$.

Statistical plan for hypothesis I. Hypothesis I states that individuals diagnosed with schizophrenia spectrum disorders report fewer subjective and objective experiences

of inclusion in social activities than do individuals diagnosed with Major Depressive Disorder. To test this hypothesis a multivariate analysis of variance (MANOVA) was performed. In the MANOVA, type of disorder was the independent variable with 2 levels (schizophrenia spectrum disorder or Major Depressive Disorder); perceived frequency of social inclusion (ObjSI) and perceived quality of social inclusion (SubSI) were the 2 dependent variables.

In order to run an F test for MANOVA, a check that the assumptions of the test are met had to be done, initially. The F test requires that the dependent variables are correlated (Weinfurt, 1995); therefore, a Pearson product-moment correlation coefficient was used to determine if ObjSI and SubSI are linearly related. However, if there is a high correlation between the dependent variables, $r \geq 0.7$, then there is multicollinearity and the variables will be combined into a single measure (Sheskin, 2007). The F test assumes a normal distribution and is not as robust when used with dependent variables with extreme outliers (Sheskin). Thus, tests for outliers on the dependent variables were run. First, boxplots were inspected; if outliers were found, the original mean and trimmed mean were to be compared. If extreme outliers impacted the mean, the data from the participant(s) were to be examined and any removal of extreme outliers would be reviewed in the discussion.

The F test also assumes homogeneity of variances for the dependent variables (Sheskin, 2007). Levene's Test of Equality of Error Variances was used to test for homoscedasticity. Another assumption of the F test is that there is homogeneity of covariance (Sheskin). To test for homogeneity of covariance, Box's Test of Equality of

Covariance Matrices was utilized. The multivariate test statistic was determined by any violations of assumptions for the F test.

Because Wilks' lambda is frequently recommended, this statistic would have been used unless there are unequal sample sizes for the two levels of the independent variable or if there is heterogeneity of covariance; if either of these conditions is present, Pillai's trace would be used as it is the most robust F statistic (Sheskin, 2007).

Statistical plan for hypothesis II. Hypothesis II states that QOL is predicted by diagnosis, schizophrenia spectrum disorders or Major Depressive Disorder, symptom severity, reported subjective experience of social inclusion (SubSI), and reported frequency of social inclusion (ObjSI). To test this hypothesis, a multiple regression was run. For this test, there is an assumption that multicollinearity does not exist between the predictor variables and that there is a linear relationship between each predictor variable and QOL (Sheskin, 2007). Therefore, a Pearson product-moment correlation coefficient was completed initially to determine if there are any high, linear relations between the predictor variables, $r \geq 0.7$ and to determine if QOL is linearly related to each of the predictor variables. If multicollinearity had been found, one of the variables would have been removed from the regression.

Multiple regression also assumes homoscedasticity (Sheskin, 2007). To test for this, that the errors, or residuals, are normally distributed for any combination of values on the predictor variables, a scatterplot of the standardized residuals and standardized predicted values for QOL was analyzed. Outliers can also strongly and negatively impact the results of a multiple regression (Williams, Grajales, & Kurkiewicz (2013). If outliers

were found during the inspection of boxplots, the original mean and trimmed mean would be compared. If extreme outliers impact the mean, the data from the participant(s) would be examined and any removal of extreme outliers would be addressed in the discussion.

Chapter 3: Results

Participants

Excluded Participants. There were 1,771 eligible consumers at sites in the Philadelphia area of the MHD study; of these, 501 were approached and 396 consented and were enrolled in the original study. In this study, if a participant responded to more than 20% of the questions on a scale with a 'No Opinion' or 'No Answer,' the participant's data were removed from the statistical analysis(es) involving that scale because the scale was deemed incomplete and possibly invalid (Schlomer, Bauman, & Card, 2010). Based on this, 57 participants were excluded because of incomplete responses on the SubSI scale. Two participants were excluded because of incomplete responses on the ObjSI scale, and two more participants were excluded because of incomplete responses on the QOL scale. Furthermore, two more participants were excluded because their responses were greater than 3 SDs from the mean of the HSC; this will be discussed further in the statistical analysis section for Hypothesis II.

Therefore, the data from 59 participants were excluded from the statistical analyses completed for Hypothesis 1, leaving 337 participants' data. The data from 4 additional participants were excluded from the statistical analyses completed for Hypothesis 2, leaving 333 participants' data in the analysis.

Descriptive statistics. Of the participants included in the analysis of Hypothesis 1, 131 were male and 206 were female (39% and 61%, respectively). One hundred twenty-six participants self-identified as White, 206 identified as Black, and 5 self-identified as both White and Black (37.4%, 61.1%, and 1.5% respectively). Based on

their reports, 35 participants were married (10%); 39 were separated (12%); 62 were divorced (18%); 32 were widowed (9%); 78 had a non-spouse significant other (23%), and 203 reported being single or never married (60%); these categories exceed 100% in total because some participants reported falling into multiple categories of the marital status question. Finally, 199 participants reported having children (59%).

Further information regarding the participants whose data was utilized in the testing of Hypothesis I is as follows. Vocationally, 39 participants reported working for pay, 69 participants reported they were involved in volunteer work, and 5 of these participants reported doing both volunteer and work for pay (12%, 20%, and 1%, respectively). Furthermore, 264 participants reported being disabled; 287 were unemployed; 282 participants reported having received Social Security income in the previous 30 days, and 53 reported being retired (78%, 85%, 84%, and 16% respectively). Again, these categories exceed 100% in total because some participants reported falling into multiple categories vocationally.

The participants educational attainment is as follows: 46 completed less than 9 years of school, 99 completed 9-12 years of school but did not graduate, 108 graduated from high school or completed his/her GED, 58 had some college/vocational training, and 19 were Associate, vocational, or college graduates; 7 participants did not respond to this question (14%, 29%, 32%, 17%, 6%, and 2%, respectively). Table 1 presents demographic characteristics of the participants who were included in the testing of both hypotheses, characteristics of those who were excluded from the testing of Hypothesis 1, and the characteristics of those who were excluded from the testing of Hypothesis 2.

Table 1

Demographic Characteristics of Included and Excluded Participants

Characteristic	Data Included in Both Analyses		Data Excluded from Hypothesis 1 Testing		Data Excluded from Hypothesis 2 Testing	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Gender						
Female	204	61	26	44	30	45
Male	131	39	33	56	33	55
Race/Ethnicity						
White	125	37	21	36	22	35
Other (non-White)	210	63	38	64	41	65
Diagnosis						
SSD	200	60	36	61	36	57
MDD	135	40	23	39	27	43
Marital Status						
Single or Never Married	201	60	46	78	48	74
Married	35	10	3	5	4	6
Separated	39	12	3	5	5	8
Divorced	62	19	8	14	8	12
Education						
Less than 9 Years	45	14	5	9	5	8
9 to 12 Years	98	30	20	34	22	35
HS Graduate/GED	108	33	15	26	16	26
Some College/Vocational Training	57	17	14	24	14	23
Associate/Vocational/College Graduates	19	6	4	7	5	8
Employment Status						
Currently Working for Pay	39	12	7	12	7	11
Doing Volunteer Work	69	21	11	19	11	18
Retired	53	16	10	17	10	17
Disability Status						
Reported Current Disability	262	78	51	88	52	87
Reported Social Security Income in Last 30 Days	280	84	50	85	52	86

Note. Some participants did not answer all demographic questions. Some participants also endorsed multiple items for categories.

Descriptive Statistics of Variables

Social inclusion. The ObjSI Scale asked participants to rate how frequently they engaged in a social activity, with response options including: *at least once a day, at least once a week, at least once a month, less than once a month, or not at all*. The answers were scored from 5 to 1, respectively; therefore, higher scores on the scale indicate more frequent social inclusion. For the analysis of Hypothesis 1, the mean response across groups was most closely associated with each activity occurring at least once a month ($M = 2.79$, $SD = 0.90$). Table 2 compares mean responding between diagnoses. The mean response was the same in Hypothesis 2, despite the exclusion of 2 additional participants ($M = 2.79$, $SD = 0.91$).

As described previously, the SubSI Scale asked participants to indicate how frequently they felt they are treated differentially when others know they have a mental health diagnosis or have received mental health services. Response options were: *all of the time, most of the time, sometimes, seldom, or never*; the answers were scored from 1 to 5, respectively. Therefore, higher scores on the items in this scale indicate feeling more socially included. For the analysis of Hypothesis 1, the mean response was most closely associated with sometimes feeling that he/she is treated differentially due to others knowledge of his/her mental health diagnosis or receipt of services ($M = 2.97$, $SD = 0.77$). Table 2 looks at mean responses across diagnoses. The mean response remained the same for Hypothesis 2 ($M = 2.97$, $SD = 0.77$). Despite being considered as two parts of the social inclusion construct in this study, the scales measuring ObjSI and SubSI were found to be minimally related, $r = .091$, $n = 337$, $p = .048$, one-tailed.

Table 2

Mean Responses to Social Inclusion Measures

	Diagnosis	<i>n</i>	<i>M (SD)</i>
Objective Social Inclusion	Overall	337	2.79 (0.90)
	SSD	202	2.76 (0.92)
	MDD	135	2.82 (0.89)
Subjective Social Inclusion	Overall	337	2.97 (0.77)
	SSD	202	2.87 (0.80)
	MDD	135	3.11 (0.71)

Quality of life. The QOL measure assessed individuals' subjective feelings regarding their well-being across many facets of life. In regard to each item's content, the participants answered whether or not they felt terrible, unhappy, mostly dissatisfied, mixed, mostly satisfied, pleased or delighted; these answers were scored from 1 to 7, respectively. Therefore, higher scores on this scale indicate higher QOL. The mean response for this scale was found to be most closely related to being mostly satisfied ($M = 4.63$, $SD = 0.91$). Because previous research has associated several sociodemographic factors with QOL, these factors were also explored in this study. A relationship between sexual orientation and QOL could not be determined in this sample because all participants who answered identified as heterosexual. The only significant finding was the relationship of gender and QOL, with men reporting higher QOL than women.

Table 3

QOL Scores

	<i>N</i>	<i>M(SD)</i>
Gender*		
Male	131	4.82 (0.89)
Female	204	4.50 (0.90)
Race/Ethnicity		
White	124	4.55 (0.87)
Other (non-White)	211	4.67 (0.93)
Marital Status		
Single/Never Married	201	4.64 (0.93)
Other	132	4.59 (0.86)
Children		
Yes	198	4.58 (0.94)
No	136	4.69 (0.86)
Working for Pay		
Yes	39	4.79 (0.91)
No	295	4.61 (0.89)
Currently Disabled		
Yes	262	4.59 (0.92)
No	72	4.78 (0.82)

* $p = .001$

To determine if there was a difference between male and female participants' reports of QOL, Levene's test to measure homogeneity of variances was first performed. It revealed that variances were unequal, $F(333) = 0.75$, $p = .001$. Therefore, the t-test for two independent samples with equal variances not assumed was run, revealing that female participants' QOL scores ($M = 4.50$, $SD = 0.90$) were significantly different from male QOL scores ($M = 4.82$, $SD = 0.89$), $t(278.397) = 3.217$, $p = .001$, two-tails. Table 3 summarizes the possible relationships which were explored.

Symptom severity. As discussed previously, the CSI is widely used in research as a self-report measure of psychiatric symptomatology. This study utilized the Psychosis

subscale of the CSI; the participants were asked how often he/she had experienced different problems related to psychotic symptoms during the previous month. Answers for frequency were: once during the month, several times during the month, several times a week, or at least every day; these items were scored from 1 to 4, respectively.

Therefore, higher scores indicated more frequent psychotic symptoms. The mean response ($M = 2.25$, $SD = 0.95$) was most closely associated with having each problem several times during the month. Table 4 looks at mean responses across diagnoses.

Although individuals with MDD reported more frequent symptoms on the CSI than did individuals diagnosed with SSDs, the difference was not significant, $t(331) = -1.399$, $p = .163$, two-tails.

The HSC, as described previously, is a self-report checklist which focuses on depression and anxiety. For each of the 25 items on the HSC, the participants were asked how bothered or distressed he/she had been during the past week by a problem or complaint. Answers for frequency were: not at all, a little, quite a bit, and extremely; these items were scored from 1 to 4, respectively. Therefore, higher scores indicate more severe depression and anxiety symptoms. The mean response ($M = 1.80$, $SD = 0.56$) was most closely associated with being bothered/distressed by each symptom, 'a little', during the previous week. Table 4 looks at mean responses across diagnoses. Individuals with MDD reported significantly more frequent symptoms on the HSC than did individuals diagnosed with SSDs, $t(331) = -3.872$, $p < .001$, two-tails.

Table 4.

Responses to Symptom Severity Measures

	Diagnosis	<i>n</i>	<i>M(SD)</i>
CSI	Overall	333	2.25 (0.95)
	SSD	202	2.19 (0.99)
	MDD	131	2.34 (0.88)
HSC Total*	Overall	333	1.80 (0.56)
	SSD	202	1.70 (0.53)
	MDD	131	1.94 (0.57)
Anxiety Subscale	Overall	333	1.77 (0.63)
	SSD	202	1.70 (0.58)
	MDD	131	1.87 (0.68)
Depression Subscale	Overall	332	1.82 (0.62)
	SSD	201	1.71 (0.59)
	MDD	131	2.00 (0.61)
Somatic Subscale	Overall	333	1.74 (0.60)
	SSD	202	1.67 (0.60)
	MDD	131	1.85 (0.59)

* $p < .001$ **Multivariate Analyses**

Statistical methods employed in testing hypothesis I. Hypothesis I examined if individuals diagnosed with schizophrenia spectrum disorders reported fewer subjective and objective experiences of inclusion in social activities than individuals diagnosed with

Major Depressive Disorder. To test this hypothesis a multivariate analysis of variance (MANOVA) was performed. In the MANOVA, type of disorder was the independent variable with 2 levels (schizophrenia spectrum disorder or Major Depressive Disorder), and SubSI and ObjSI were 2 dependent variables.

In order to run an F test for MANOVA, a check of the assumptions for MANOVA was conducted. The F test requires that the dependent variables are correlated (Weinfurt, 1995); the dependent variables, ObjSI and SubSI, were found to be significantly, linearly related with $r = .091$, $n = 337$, $p = .048$, one-tailed. The F test for MANOVA also assumes a normal distribution and is not as robust when used with dependent variables with extreme outliers (Sheskin, 2007). Thus, boxplots for ObjSI and SubSI were examined. Because no outliers were found, no further testing of outliers was needed.

Another assumption of the F test is homogeneity of variances for the dependent variables (Sheskin). In the case of ObjSI, Levene's Statistic indicated that this variable met the homogeneity of variance assumption $F(1,335) = 1.007$, $p = .316$. However, homoscedasticity was not found through Levene's Test of Equality of Error Variances for SubSI, $F(1, 335) = 6.026$, $p = .015$. A final assumption of the F test is that there is homogeneity of covariance (Sheskin). To test for homogeneity of covariance, Box's Test of Equality of Covariance Matrices was utilized and homogeneity of covariance was found, $F(3, 4625414.841) = 0.791$, $p = .499$. Sheskin (p. 1439) recommends using a more robust test if the homogeneity of variance assumption is not met; therefore, Pillai's Trace was used as it is the most robust F statistic (Sheskin).

Pillai's Trace rejected the null hypothesis for Hypothesis I and revealed that there was an effect of diagnosis on social inclusion $F(2, 334) = 3.870, p = .022$. Tests of between-subjects effects showed a statistically significant effect of diagnosis on SubSI, $p = .006$; however, there was not a significant effect of diagnosis on ObjSI, $p = .593$. Overall, participants diagnosed with an SSD were found to report less social inclusion than participants diagnosed with MDD; specifically, participants diagnosed with an SSD reported significantly lower SubSI than participants diagnosed with MDD.

Statistical methods employed in testing hypothesis II. Hypothesis II tested if QOL was predicted by diagnosis, SSD or MDD, symptom severity (measured by the HSC and CSI), reported SubSI, and reported ObjSI. Because some sociodemographic variables have been found to be related to QOL, several *t*-tests were completed to see if any such variables should be added to the regression equation. None of the following group divisions met significance: white/non-white, marital status, having children or not, educational attainment, employment status, or whether or not they reported that they were currently disabled. The only sociodemographic variable found to have a significant difference between groups was gender; the significance of this difference will be discussed in a succeeding paragraph. Therefore, in the final regression equation used for predicting QOL, diagnosis (SSD or MDD), SubSI, ObjSI, HSC, CSI, and gender were the 6 predictor variables.

When completing a multiple regression, there is an assumption that multicollinearity does not exist between the predictor variables (Sheskin, 2007). Therefore, Pearson Product-moment correlations were completed between all predictor

variables. The results are summarized in Table 5. Although there were many significant relationships between the predictor variables, none was large enough, $r \geq .7$, to indicate that there was any multicollinearity between them. There is also an assumption of linearity, that there is a linear relationship between each predictor variable and QOL (Sheskin). Therefore, Pearson product-moment correlation coefficients were determined for QOL and each of the predictor variables; all of the predictor variables were found to be significantly, linearly related to QOL. These results are also shown in Table 5.

Multiple regression also assumes homoscedasticity (Sheskin, 2007). To test for this, that the errors, or residuals, are normally distributed for any combination of values on the predictor variables a scatterplot of the standardized residuals and standardized predicted values for QOL was analyzed. Visual inspection revealed that the residuals were normally distributed. Boxplots of all of the predictor variables were also inspected for the presence of outliers. Because 2 of the participants' scores were more than 3 SDs above the mean for the HSC (more than 3.2 and 3.5), the data from these participants were removed from the regression analysis.

Utilizing linear regression, the null hypothesis was rejected for Hypothesis II. Combined, the final six predictor variables accounted for about 31.3% of the variability in QOL, $F(6, 326) = 26.252, p < .001$, adjusted $r^2 = .313$. ObjSI, SubSI, HSC, and diagnosis were found to significantly predict QOL. However, gender and CSI did not significantly predict QOL. Specifically, higher scores on the ObjSI and SubSI measures predicted higher QOL scores. Fewer symptoms indicated on the HSC predicted higher QOL scores. Finally, a diagnosis of SSD was also predictive of higher QOL scores than

was a diagnosis of MDD. The standardized beta coefficients and t -test results are shown in Table 6. Without the exclusions of the HSC outliers, the finding for the model was $F(6, 328) = 25.228, p < .001$, adjusted $r^2 = .303$.

Table 5

Correlations between Predictor Variables and QOL for Hypothesis II

	Gender	SubSI	ObjSI	Diagnosis	HSC	CSI	QOL
Gender							
Pearson Correlation	1	.002	-.012	-.321	-.210	-.123	.167
Significance, 1-tailed		.488	.414	<.001***	<.001***	.012*	<.001***
N	333	333	333	333	333	333	333
SubSI							
Pearson Correlation	.002	1	.094	.163	-.417	-.414	.424
Significance, 1-tailed	.488		.044*	.001***	<.001***	<.001***	<.001***
N	333	333	333	333	333	333	333
ObjSI							
Pearson Correlation	-.012	.094	1	.037	-.129	-.118	.268
Significance, 1-tailed	.414	.044*		.253	.009**	.016*	<.001***
N	333	333	333	333	333	333	333
Diagnosis							
Pearson Correlation	-.321	.163	.037	1	.208	.077	-.147
Significance, 1-tailed	<.001***	.001***	.253		<.001***	.081	.004**
N	333	333	333	333	333	333	333
HSC							
Pearson Correlation	-.210	-.417	-.129	.208	1	.657	-.418
Significance, 1-tailed	<.001***	<.001***	.009**	<.001***		<.001***	<.001***
N	333	333	333	333	333	333	333
CSI							
Pearson Correlation	-.123	-.414	-.118	.077	.657	1	-.273
Significance, 1-tailed	.012*	<.001***	.016*	.081	<.001***		<.001***
N	333	333	333	333	333	333	333
QOL							
Pearson Correlation	.167	.424	.268	-.147	-.418	-.273	1
Significance, 1-tailed	<.001***	<.001***	<.001***	.004**	<.001***	<.001***	
N	333	333	333	333	333	333	333

Note. For the gender analyses, female was coded as 0 and male was coded as 1.

For the diagnosis analyses, SSD was coded as 1 and MDD was coded as 2

* $p \leq .05$. ** $p \leq .01$. *** $p \leq .001$.

Table 6.

Predictors of QOL

	β	T
SubSI	.36**	6.73
ObjSI	.22**	4.75
HSC	-.25**	-3.89
Diagnosis	-.14*	-2.82
Gender	.08	1.67
CSI	.09	1.39

Note. $df = 326$. For the gender analyses, female was coded as 0 and male was coded as 1. For the diagnosis analyses, SSD was coded as 1 and MDD was coded as 2

* $p \leq .01$. ** $p \leq .001$.

Chapter 4: Discussion

Bonner, Barr, and Hoskins (2002) found that people with mental health problems are over-represented in groups which are socially excluded; therefore, they are not partaking in community activities with the same frequency as other people. Despite these findings, few studies have explored differences in social inclusion across diagnoses. Less social inclusion may contribute to a lower QOL, which is considered to be an important, humanistic outcome of treatment services (Lehman, 1996). Therefore, the present study examined differences in reported SubSI and ObjSI between individuals diagnosed with SSDs and those diagnosed with MDD. Furthermore, the amount of variance in QOL which can be predicted by type of diagnosis, SSDs or MDD, level of symptoms, gender, and reported SubSI and ObjSI was studied.

Social Inclusion Measures

The scales used to measure SubSI and ObjSI in this study were created in the 1980s, i.e., 1989 and 1983 respectively (QOL Interview excerpts, Lehman, 1983; Well-Being Project, Campbell and Schraiber, 1989). Since that time, the understanding of social inclusion within the field of mental health has evolved. Today, the SubSI scale may be more appropriately called and understood as “perceived stigma” and the ObjSI scale may be seen as only one part of social inclusion, more specifically, “social participation.” The impact of these possible, alternative interpretations on the results of the analyses will be discussed further.

Social Inclusion and Diagnoses

It was found that individuals diagnosed with an SSD reported lower SubSI and lower ObjSI than individuals diagnosed with MDD. Follow up tests revealed that, specifically, participants diagnosed with an SSD reported significantly lower SubSI than participants diagnosed with MDD. This means that although rates of social participation are similar across diagnoses, individuals with SSDs report significantly higher perceived stigma than individuals with MDD.

This finding fits with research conducted on attitudes that both the public and professionals have toward individuals with serious mental illnesses (e.g., Latalova, Kamaradova, & Prasko, 2014; Mittal et al., 2014). The stigma literature has found that SSDs continues to elicit higher levels of prejudice, when compared with MDD and other mental health conditions (Mittal et al., 2014; Pescosolido, Medina, Martin, & Long, 2013). Amongst respondents who defined a person who is ‘mentally ill’ as behaving psychotically, the perception of dangerousness of individuals with mental health illnesses has actually increased between 1950 and 1996. Participants who defined a ‘mentally ill’ person with descriptors indicating breaks with reality and bizarre behavior often used violent descriptors as well (Phelan et al., 2000). Phelan and colleagues also argued that these findings are due to Americans having become more accepting of less severe mental illnesses, such as MDD in this study; however, stigma has been less diminished for individuals with psychosis, such as those with SSDs in the current study.

Wahl (2004) has written extensively about the media depictions of mental illnesses, which often involve stereotyped characterizations, leading to more

stigmatization of this population. Morgan and colleagues (2007) discuss how the discriminatory views of community members may lead to fewer opportunities for social engagement for individuals with mental health conditions; therefore, there would be fewer opportunities for individuals with SSDs than for those with MDDs in this study. Discriminatory behaviors have also made it very difficult for individuals with SMIs to obtain and keep steady employment, obtain housing, and participate in social and/or leisure activities (Bonner et al., 2002; Leff & Warner, 2006; Stuart, 2006).

In addition to public stigma, research has also indicated that individuals with serious mental illnesses at times endorse the public's stigmatizing beliefs and attitudes with regard to individuals with mental health problems (Link & Phelan, 2001). This internalization of stigma, termed self-stigma, often leads to feelings of shame and embarrassment as well as to poor self-esteem and sense of self-worth. Self-stigma has also been suggested to contribute to individuals not setting goals and to not taking risks because they expect to fail (Corrigan, Larson, & Rüsçh 2009; Latalova et al., 2014). This same mechanism of self-stigma is thought to deter individuals from being involved in the activities which are available to them (Morgan et al., 2007). In this study, individuals with SSDs may be experiencing more self-stigma than those with MDDs, thus dissuading individuals with SSDs from greater involvement in community activities.

The Prediction of Quality of Life

Hypothesis II, that QOL is predicted by diagnosis, SSD or MDD, ObjSI, and SubSI, symptom severity (as measured by the HSC and CSI), and any sociodemographic variables, was found to be supported. Diagnosis, ObjSI, SubSI, and symptom severity

were found to be significant predictors of QOL. Specifically, higher scores on the ObjSI and SubSI measures predicted higher QOL scores. Also, a diagnosis of a SSD was predictive of higher QOL scores than was a diagnosis of MDD. Experiencing fewer symptoms, as measured by the HSC, was also found to be predictive of higher QOL scores.

Although predicting QOL from ObjSI and SubSI had not been specifically considered previously, it does follow from earlier research. In a review of research on QOL in individuals with SMIs, Hansson discusses the fact that significant associations have been found in this population between QOL and size and quality of one's social network (2006). Although overall ObjSI and SubSI have not been used to predict QOL for individuals with SMIs previously, information related to social inclusion and contained within the constructs of social inclusion have been considered. Specifically, in an outpatient sample of individuals with schizophrenia, the only variable which was found to predict variance in QOL was having a close friendship, which predicted approximately 5% of the variance (Hansson et al., 1999). Also, in another outpatient sample of individuals with schizophrenia, over 8% of the variance in level of QOL was predicted by the individuals' levels of satisfaction with their social networks (Bengtsson-Tops & Hansson, 2001).

Many people, including professionals in the field of mental health, would argue that diagnosis and/or severity of symptoms would be the largest predictors of QOL for individuals with SMIs. However, this was not found in this study. The predictor variable with the highest correlation with QOL in this study was SubSI, or perceived stigma.

SubSI was also more highly correlated with QOL than ObjSI or social participation. This would suggest that clinicians and researchers may need to be more closely focused on the impact that the perception of stigma has on individuals with SMIs than is currently the case. The lack of relationships between QOL and sociodemographic factors is also consistent with previous research in samples with mental health illnesses. Hansson (2006) reported that only weak relationships had been found between such variables and QOL. In this study, the only sociodemographic factor which was found to be related to QOL was gender, with men reporting higher QOL scores than women. Although this difference was statistically significant, the correlation between gender and QOL was small and gender was not significantly predictive of QOL when it was entered in the linear regression analysis.

Individuals with schizophrenia reported higher QOL scores as compared with the study participants who had a diagnosis of MDD; this may at first seem counterintuitive. However, Gladis, Gosch, Dishuk, and Crits-Christoph (1999) stated that self-report ratings of QOL appeared to be dependent on the affective state of the individual. If a negative affective state causes one to report lower scores for QOL, it would follow that individuals with MDD would have lower QOL scores in this study. Hansson also discusses the impact of severity of depressive symptoms on QOL; in his review of QOL research for individuals with SMIs, he states that severity of depressive symptoms is the strongest psychopathologic feature related to QOL (2006). He also reports that symptoms of anxiety also negatively impact QOL. In contrast, Hansson reports that the impacts of

negative symptoms and positive symptoms, such as hallucinations and delusions, have not been found, consistently, to predict QOL.

In this sample, individuals with MDD reported significantly more frequent symptoms on the HSC than did individuals with SSDs. Because the HSC focuses on depressive symptoms, the possibility that affective state may bias self-reporting for QOL may also be related to the predictive ability of the HSC for QOL in this study. Although the difference only approached significance, the finding that individuals with MDD in this sample also had higher scores on the CSI Psychosis subscale than did individuals with SSDs also supports the idea that affective state may impact self-reporting. Another possible interpretation argued by Hansson (2006) is that depressive symptoms may be impacting other things in the individual's life, such as information processing; therefore, the scores reported are a valid representation of the individual's assessment of him/herself, including QOL and frequency of symptom experience.

Differences in QOL scores, specifically between MDD and SSD populations, had not been compared prior to this study. However, Evans and colleagues (2007) compared QOL scores of individuals with SMIs, defined as having had a psychotic illness for over 2 years and having had at least 2 psychiatric hospitalizations with at least 1 of the hospitalizations occurring in the previous 2 years, with QOL scores of individuals with common mental disorders, defined as having significant non-psychotic symptoms while living in the community, these individuals primarily exhibited depression and anxiety symptoms. In contrast to the current study, the SMI group in their study had significantly lower ratings for life overall than the common disorders group.

There are several possible reasons for this contrast in findings, including the following. It is possible that the measure used by Evans and colleagues for “life overall” is significantly different in scope from the QOL measure in this study (2007). It is also possible that the magnitude of depressive symptoms measured in this study was significantly greater than in their common disorders group. There may be a threshold at which depressive symptoms seen in MDD predict QOL, whereas a grouping of depressive symptoms seen in a community sample, as measured by Evans and colleagues, does not significantly predict QOL.

Implications

The knowledge that individuals diagnosed with an SSD report lower social inclusion than individuals diagnosed with MDD is important to clinicians, advocates and policy makers for several reasons. It should be highlighted, however, that although there was a significant difference in scores between the groups, there was also overlapping of scores; therefore, many of these statements may also apply to individuals with MDD. When working with individuals with SSDs, clinicians should be aware that their clients’ perceptions of, and actual levels of social inclusion may have several consequences.

Significantly greater social distance has been shown in response to vignettes describing an individual with schizophrenia as compared with ones describing an individual with MDD (Angermeyer et al., 2004; Link et al., 1999). Despite the increase in knowledge about the etiology of mental health disorders, social distance remains prevalent throughout the world, even within healthcare providers, especially towards individuals with psychotic illnesses (e.g., Angermeyer et al., 2004; Evans-Lacko, Corker,

Williams, Henderson, & Thornicroft, 2014; Mittal et al., 2014; Pescosolido et al., 2013).

Due to social distance, access to natural support networks, such as family, friends, and community groups, to aid in their recovery are less available to individuals with SSDs.

Discriminatory behaviors have also made it very difficult for individuals with SSDs to obtain and keep steady employment; limited employment opportunities are interrelated with other problems that individuals with SSDs have; these include limited income, obtaining housing, limited educational opportunities, and minimized ability to participate in social and/or leisure activities (Bonner et al., 2002; Leff & Warner, 2006; Stuart, 2006). The knowledge of these consequences of reduced social inclusion in individuals with SSDs, as compared with those who have MDD, can help clinicians tailor treatment goals, treatment planning, and therapeutic milieu more appropriately for their clients.

For example, a client with SMI may have an employment goal; however, s/he does not complete objectives related to job searching. As part of treatment, the clinician should consider and discuss with the client, past experiences s/he has had; individuals who do not feel that they are accepted by their social environment may lack the motivation to become more involved in his/her community due to fear of future rejections.

QOL is a frequently used outcome variable for treatment (Gladis et al., 1999). The knowledge of predictor variables, including their strength, garnered from this study should influence the use of QOL as an outcome variable in future research. Specifically,

levels of social inclusion and diagnosis may need to be controlled for in order to determine treatment effects.

In order to customize treatment to improve QOL in individuals with SMIs, clinicians should consider the following factors (Hansson, 2006). Treatment should emphasize enhancing the individual's social network; this will probably require the consideration of past discriminatory experiences and unsuccessful attempts at engaging in social activities. Because future negative encounters are probable, treatment should focus on assertiveness skills and the creation of a sense of self-efficacy through pre-planned in vivo experiences.

It is also important for clinicians to consider both public stigma and self-stigma when working with individuals with SMIs. As noted previously, the SubSI scale was the most highly correlated with QOL and probably should be understood as perceived stigma. Because the predictive ability of public stigma and of self-stigma cannot be parsed out in this study, clinicians should explore the impacts of both with their clients and future studies should look at the effects of these variables separately. Research regarding effective interventions and anti-stigma campaigns to address both public stigma and self-stigma will be discussed in subsequent paragraphs.

Limitations

The first limitation of the study involves the actual differences in SubSI mean scores between individuals diagnosed with SSDs and those diagnosed with MDD. Although the result was statistically significant, the clinical significance may be negligible. As described previously, the SubSI Scale asked participants to indicate how

frequently they have felt that they are treated differentially when others know they have a mental health diagnosis or have received mental health services. The mean score for the SSD group was 2.87 and the mean score of the MDD group was 3.11. For the SubSI scale, *most of the time* was scored as a 2, *sometimes* as a 3, and *seldom or rarely* was scored as 4. Due to the amount of overlap in mean scores between the groups, along with how closely *most of the time* and *sometime* may be considered to be, the difference in SubSI between the groups may be too small to be felt subjectively.

Two limitations of this study are related to its design. First, the study utilized an archival data set. Accordingly, the determination of what data would be collected was not based on the current study's hypotheses and therefore more appropriate measures may have been available to test the hypotheses. Also, the data utilized were obtained from self-report questionnaires. There are several possible problems with this, including fatigue effects due to the length of the interview in the original data collection and the problems with lack of responding to items.

Another significant limitation of the current study is related to the lack of consensus in the field of human services on the meaning of social inclusion; therefore, reliable and valid measures of this concept are lacking. Therefore, the reliability and validity of the subjective measure of social inclusion, despite strong face validity, are questionable.

The diagnostic accuracy in this study also cannot be ensured. Participants were grouped by diagnostic category based upon diagnoses available in their charts at their

respective treatment centers. No formal diagnostic procedure was completed by the researchers.

A final limitation of this study is the exclusion of some of the participants from the data set. Although no significant differences were seen across sociodemographic factors of individuals included and excluded from analyses, as displayed in Table 2, the need to make exclusions does limit the study's generalizability.

Future Directions

Models of social inclusion. Many researchers have called for the operationalization of the concept of social inclusion to enhance research and enhance its use in clinical care (e.g., Morgan et al., 2007; Ware et al., 2007). The development of models of social inclusion would lead to a stronger definition of the concept and promote consensus (Ware et al., 2007). The validity and reliability of objective and subjective measures of social inclusion could then be measured to ensure that they are psychometrically sound. Ware et al. caution that in defining social inclusion, either individuals with mental illnesses or societal groups may be implicated as being the source of the problem; therefore, that group, individuals with mental illnesses or a societal group, is then named as the sole group which should work to change the current state of inclusion. However, both groups need to take steps to change; societal groups need to increase opportunities for the individuals and individuals with mental illnesses need to work on skill building to maximize their opportunities. Also, the idea of social inclusion as a process and not just an outcome needs to be considered.

Proposed approaches. Hayward and Bright (1997) outline cognitive behavioral strategies which can be utilized to contend with the effects of stigma. Maladaptive cognitions of an individual with mental illness may be related to the causes of his/her illness, his/her prognosis, how greatly his/her behaviors can improve symptoms, and efficacy of treatment. Along with skill development, they recommend hierarchical exposures to social interactions.

Because increasing social interaction is likely to expose individuals with mental illnesses to rejection, Perlick et al. (2001) recommend “buffered exposures” to “inoculate them against the adverse effects of future experiences of discrimination or rejection” (p.1631). They use the idea of supported employment as an example of the beginning of social engagement within an accommodating atmosphere where the individuals can learn to recognize and respond to stigma with the aid of their peers and encouraging instructors.

The peer support model has also been beneficial in reducing self-stigma of individuals with mental illnesses. For example, Corrigan (2004) noted that the ability of consumers to provide psychoeducation about symptoms, skills, and resources illustrates to others, including other consumers, that individuals with mental illness are capable and knowledgeable. Empowerment has been discussed as being a way to counteract the effects of stigma. In a study of 1,824 individuals with psychiatric disabilities, those who had participated in peer support services during the previous four months reported greater scores across nine of ten empowerment factors than those who had not participated in such services (Corrigan, 2006). Another study also found that peer support services

enhanced the self-evaluations of individuals with mental health illnesses (Verhaeghe, Bracke, & Bruynooghe, 2005).

Public education. Many researchers have discussed the need for appropriate public education in order to decrease stigma and increase opportunities for social inclusion (e.g., Hayward & Bright, 1997; Link et al., 1999). Pescosolido and colleagues further discuss the idea that public education, based on the etiology of mental illnesses, has increased understanding of the diseases but has not changed discrimination against the individuals with the illnesses (2013). Link et al. indicate that public education should be aimed at the perception that individuals with mental illness are dangerous and work to change that perception so it is more closely related to actual risk. Hayward and Bright detail the need for media portrayals of individuals with mental illnesses as whole individuals who have the ability to be treated effectively. Despite these needs, Wahl (2004) has written extensively about the media depictions of mental illnesses, which often involve stereotyped characterizations, leading to continued stigmatization of this population.

Several studies have found that different types of anti-stigma campaigns increase the understanding of SMI etiology, but discrimination towards the individuals with the illnesses continues to exist. The Time to Change Campaign in England has found that tolerance of individuals with mental illnesses has improved over time, indicating a dose-effect relationship between the campaign and community awareness; however, intended behavior, or social distance, has not changed (Evans et al, 2014). Evans and colleagues assert that this is due to the campaign discouraging prejudice but not enhancing support

of individuals with SMIs. A study on the impact of a theatrical production for schools, *Walk in Our Shoes*, found that high school students expressed statistically greater willingness to interact with students with mental health illnesses following the performance than before it (Wong, Cerully, Collins, & Roth, 2014). However, the sizes of the social distance changes were minimal. Also, possibly due to the emphasis in the play, on the ability to recover, students were more likely, following the performance, to endorse the idea that an individual with a mental health problem was to blame for the illness (Wong et al.).

Corrigan commented that multiple, not singular, contacts with someone with mental illness is important for creating lasting changes in negative perceptions which lead to stigma (SAMHSA, 2008). In order for people to realize that they are in regular contact with someone with a mental illness, Corrigan reported that in order to change stigma, people with mental illnesses need to ‘come out of the closet.’ He stated further, that according to research, seeing people in one’s own community “coming out” has a much larger impact on stigma than seeing famous people “come out”.

Others have argued that SAMHSA needs to develop guidelines regarding self-disclosure (Hyman, 2008). These guidelines would work to make the process of self-disclosure smoother for the individuals disclosing. Hyman also recommended that following the development of these guidelines, consumer driven educational programs should be launched to encourage individuals to share their stories with the community. In fact, a consumer-driven and facilitated public education program, did positively impact

the attitudes of high school students towards individuals with SMIs (Spagnolo, Murphy, & Librera, 2008).

Advocacy. It has been argued that clinical psychology has not been significantly involved in the fight against stigma; specifically, clinical psychology has historically not been greatly involved in the research on the stigma of mental illnesses (Corrigan & Shapiro, 2010). Because clinical psychologists are specifically trained in the symptoms of mental illnesses, the lack of involvement in anti-stigma efforts is problematic. Clinical psychologists have a significantly greater understanding of the etiology, presentation and treatment of mental illnesses, compared with the general public; therefore, the field has an obligation to address the existing stigma about these illnesses.

Three types of advocacy are recommended by Corrigan and Shapiro: education, contact, and protest (2010). Protest efforts involve bringing attention to and rebuking stigma and discrimination resulting from stigma when it occurs. Education involves countering erroneous information about individuals with mental illnesses with accurate facts. Finally, clinical psychologists, who are also consumers, can join other mental health professionals in ‘coming out’ in order to increase the public’s awareness of regular contacts that they have with people who have mental illnesses (Corrigan & Shapiro; Salzer, 2001).

Summary

The present study examined the differences in reported SubSI and ObjSI between individuals diagnosed with SSDs and those diagnosed with MDD. Furthermore, the

amount of variance in QOL which can be predicted by type of diagnosis, SSDs or MDD, symptom severity, and SubSI and ObjSi was determined.

There was an effect of diagnosis on social inclusion showing a statistically significant effect of diagnosis on SubSI; however, there was not a significant effect of diagnosis on ObjSI. Overall, participants diagnosed with an SSD were found to report less social inclusion than participants diagnosed with MDD; specifically, participants diagnosed with an SSD reported significantly lower SubSI than participants diagnosed with MDD. Despite the statistical significance of the finding, it needs to be pointed out that this difference might not be as clinically significant as it appears statistically.

ObjSI, SubSI, HSC, and diagnosis were found to predict QOL significantly and accounted for 31.3% of the variance in QOL. Gender and CSI did not significantly predict QOL. Higher scores on the ObjSI and SubSI measures predicted higher QOL scores. Fewer symptoms indicated on the HSC predicted higher QOL scores. Finally, a diagnosis of SSD was also predictive of higher QOL scores than a diagnosis of MDD.

Utilizing the knowledge gained through this study, clinicians can work to tailor treatment goals, treatment planning, and therapeutic milieu more appropriately for their clients. Cognitive behavioral strategies including hierarchical, in vivo exposures can aid individuals with SMIs in their ability to cope with the negative effects of stigma and discrimination on QOL (Hayward and Bright, 1997; Perlick et al., 2001). Also, clinical researchers can utilize QOL as an outcome variable for determining treatment effects in a more robust manner. This study furthers the mental health delivery system's ability to create, as Swarbick (2009) wrote, "...a culture that is based on self-determination,

empowering relationships, and opportunities for persons in recovery to fully participate in all facets of community living” (pp. 206 – 207).

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