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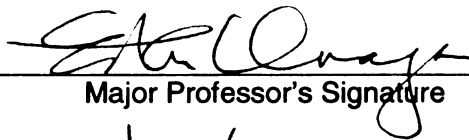
**THE RELATIONSHIP BETWEEN SOCIAL NETWORK  
SUPPORTS AND RECOVERY FROM MENTAL ILLNESS**

presented by

**FRANCESCA MARIA PERNICE-DUCA**

has been accepted towards fulfillment  
of the requirements for the

Doctoral degree in Family and Child Ecology

  
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**THE RELATIONSHIP BETWEEN SOCIAL NETWORK SUPPORTS AND  
RECOVERY FROM MENTAL ILLNESS**

**By**

**Francesca Maria Pernice-Duca**

**A DISSERTATION**

**Submitted to  
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## **ABSTRACT**

### **THE RELATIONSHIP BETWEEN SOCIAL NETWORK SUPPORTS AND RECOVERY FROM MENTAL ILLNESS**

**By**

**Francesca Maria Pernice-Duca**

Emerging evidence indicates that social network supports may act as facilitators to the recovery process from mental illness (Corrigan, Giffort, Rashid, Leary & Okeke, 1999; Corrigan & Phelan, 2004). Although much has been studied in the area of social support and mental health, the literature on the social networks of individuals and their relationship to the recovery process requires further examination. Marriage and Family Therapists (MFTs) can make a contribution to the understanding of social networks and recovery through the application of Family Systems Theory being applied to work with individuals living with chronic mental illness and their families. The Feminists' re-conceptualization (Knudson-Martin, 1996) of Bowen Family Systems Theory (Bowen, 1978) was used to understand the role of social and family networks to the recovery process. A cross-section of a larger, longitudinal study was employed to analyze social network profiles and a measure of recovery. A structured social network methodology (Herman, 1997) was used to study the social networks of 221 individuals living with a chronic psychiatric disability participating in psychosocial rehabilitation programs called clubhouses. A series of regression models were proposed to examine the relationship between social and family networks supports and the process of recovery as measured by the Recovery Assessment Scale (Corrigan, Giffort, Rashid, et al., 1999). A path analysis

was also used to explore whether clubhouse participation and cohesion was associated with social support network dimensions and recovery as an outcome.

Five main themes emerged from the results. First, families dominate social network support profiles among individuals living with chronic mental illness. Second, the size of network supports is relatively small, consisting of an average 5 members. Third, club members were least likely to be nominated as sources of support, while the number of clubhouse staff supports was associated with greater recovery. Fourth, engaging in reciprocally supportive relationships with social network supports was the single most important predictor of recovery. And finally, being a regular participant at the clubhouse is associated with greater affiliations and feelings of mutuality with club peers. Club members who shared a greater sense of clubhouse community and cohesion with club peers were also more likely to nominate more social network members, perceive greater positive appraisals of social support, as well as perceive themselves as sources of support to others. The path analysis failed to support the overall model predicting the path between clubhouse participation, sense of community, social networks supports, and recovery. However, this study did find support for a prior empirical investigation showing a significant relationship between social support networks and recovery. Furthermore, the measure of reciprocity with social support network members appears to be significantly related with the recovery process.

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## **DEDICATION**

To my major professor, Dr. Esther Onaga for friendship, encouragement, and support.

Your work gives voice to those who are seldom heard, and inspiration to those who seek hope. And to my best friend, and husband, Bradford Duca, and my two children, Dantè and Julien for being by my side through this 'seemingly' endless journey.

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## **CHAPTER 1**

### **INTRODUCTION**

Mental illness can have devastating effects on an individual's family and social relationships. Individuals with chronic or persistent mental illness can experience the loss of support from friends, family or partners, resulting in small or restricted social support resources. Small social support networks have been associated with mental health concerns such as isolation (Brewer, Gadsden & Scimshaw, 1994), and increased likelihood of depression (Lin, Ye & Ensel, 1999). Poor or inadequate social support networks have also been associated with increased mortality rates among the general population (Berkman, 1995; Berkman, Glass, Brissette & Seeman, 2000; House, Landis & Umberson, 1988). One of the earliest research studies on social networks and mental health began with Emile Durkheim's (1897) empirical examination of the effects of the lack of social network ties and community integration and the rate of suicide in metropolitan areas. Between 1969 and 1985, the interest in social network and mental health research proliferated with over 1,300 published research articles (Biegel, McCardel & Mendelson, 1985).

Social support networks among people living with severe or chronic mental illness such as schizophrenia, are typically small, and predominately consist of family members or mental health professionals (Davidson, Hoge, Merrill, Rakfeldt & Griffith, 1996; Goldberg, Rollins & Lehman, 2003; Hardiman & Segal, 2003; Perese, Getty & Wooldridge, 2003). Research has shown that small or restricted social networks threaten

psychological and emotional well-being (Green, Hayes, Dickinson, Whittaker & Gilheany, 2002; Pickens, 2003), quality of life (Tempier, Caron, Mercier & Leouffre, 1998), and increase the likelihood of psychiatric re-hospitalization (Goldberg, Rollins & Lehman, 2003). Cut-off or estranged family relationships have also been correlated with increased psychological distress and functional impairments (Doane, 1991; Fisk, Rowe, Laub, Calvocoressi & DeMino, 2000 ; Froland, Brodsky, Olson & Steward, 2000).

Individuals living with chronic and persistent mental illness experience functional impairments in daily living skills and social skills. These impairments can negatively impact social opportunities. Traditional medical model approaches continue to view these negative consequences of serious mental illness as inevitable, which can result in a loss of hope, despair, and chronic grief. The notion of recovery from mental illness has received increasing attention in the mental health field in the last decade. Emerging evidence indicates that social network supports play a significant role in the experiences of recovery from mental illness (Corrigan & Phelan, 2004). State and Federal Mental health organizations are beginning to recommend recovery oriented practices in the treatment of mental illness, emphasizing the importance of social ties as an integral part of the recovery process (Hogan, 2003). Longitudinal studies spanned across the last 30 years have documented recovery from serious mental illness, such as schizophrenia (DeSisto, Harding, McCormick, Ashikaga & Brooks, 1999; Harding, Brooks, Ashikaga, Strauss, & Breier, 1987a; 1987b). These longitudinal studies challenge traditionally held beliefs about chronic mental illness, and provide support for programs that increase social and vocational opportunities.

Recovery has been studied as a subjective experience through qualitative studies (Deegan, 1988; 2003), as well as an objective outcome measuring level of functioning and the absence of symptoms (Harding, 1986). Subjective accounts have described recovery from mental illness as “reawakening of hope from despair; breaking through denial and achieving understanding and acceptance; moving from withdrawal to engagement and becoming an active participant in life; it is active coping rather than passive adjustment (Beale & Lambric, 1995, p. 5). Recovery oriented philosophy in mental health has revolutionized service delivery options, including more peer support programs and psychosocial psychiatric rehabilitation.

The advent of psychiatric deinstitutionalization in Michigan raised a number of concerns among professionals and family members about transitioning former hospital patients into community living arrangements. In 1960, nearly 20,000 Michigan residents were living in psychiatric hospitals. From 1960 to 1998, the numbers drastically declined, with 1,244 people living in state hospitals as of 1998 (Michigan Department of Community Health; Division of Vital Records and Health Statistics, 2000). Individuals who had resided in psychiatric hospitals were now living in a variety of community residential settings ranging from lodge programs to adult foster care homes. Some have noted that a major drawback of deinstitutionalization was the concerns for many individuals to remain at risk for social isolation (Davidson, Hoge, Godleski, Rakfeldt & Griffith & Merrill, 1996). Psychiatric rehabilitation programs, such as clubhouses, became instrumental in transitioning individuals from the hospital to the community setting (Mastboom, 1992). Successful community living has been associated with

frequent family contact, participation in social and recreational activities, and increased social ties (Dickerson, Ringel & Parente, 1999).

Social ties and relationships translate into personal social networks of support composed of family, friends, and others in the community. Social networks act as life lines for individuals with mental illness, providing opportunities for socialization, companionship, and support. Berkman, Glass, Brissete & Seeman (2000) theorize a direct relationship between social networks and measures of psychological health, such as depression, coping effectiveness, self-efficacy, and overall well-being. In essence, social networks “define and reinforce meaningful social roles... which in turn provide a sense of value, belonging, and attachment” (Berkman et al., p. 849). The authors further contend that

...measures of social integration or connectedness have been such powerful predictors of mortality [because] these ties gives meaning to an individual’s life by virtue of enabling him or her to participate in it fully, to be obligated (in fact often to be a provider of support) and to feel attached to one’s community (p. 849).

The clubhouse program, which is based on psychosocial psychiatric rehabilitation principles rather than a medical model of treatment, values social relationships and social participation as an active agent of rehabilitation and recovery (Mastboom, 1992). It promotes a non-pathological orientation in working with individuals, which is consistent with Marriage and Family Therapy (MFT) values. Clubhouses are viewed as a place for people with chronic and persistent psychiatric disabilities where they feel they can

belong, learn new skills, and socialize. Clubhouses have been designed to increase social connections for individuals with little family or social network ties (Beard, 1992b). Further, they have also been cited as catalysts to recovery in the narratives of clubhouse members (Beard, 1992b; Ely, 1992; Deegan, 1988; Paul, 1992; Peckoff, 1992).

MFT theories such as Narrative, Structural, Experiential, Family Psychoeducation, and Bowen Family Systems Theory, can be viewed from the perspective of the recovery philosophy. Each of these approaches reaches beyond the medical model to identify strengths and non-pathological solutions within an ecological context to the challenges of mental illness. Narrative theory offers hope through re-storying and reclaiming one's identity as a person, not an illness (White & Epston, 1990). Experiential approaches provide 'here and now' experiences challenging set patterns of behaviors and attitudes (Whitaker & Keith, 1981). Salvador Minuchin introduced the importance of social networks in family therapy to the treatment of chronic mental illness, (Elizur & Minuchin, 1989) where an extended family member may become the most important person in the social network, and psychosocial programs are deemed necessary for recovery (Kaffman, 1989). The analysis of family subsystems can shed light on the impact of the psychiatric disability across the family life span, family roles and responsibilities, and shared experiences. Family Psychoeducation has proven crucial in the treatment of major bi-polar diagnoses and schizophrenia (McFarlane, Dixon, Lucksted, 2003). Tenets of Bowen Theory view healing from chronic mental illness as a "self-regenerative phenomena [defined as] not only being self responsible, but also self-actualizing" (Bowen, 1967, cited in Friedman, 1991, p.159). The Feminist elaboration of



Bowen Family Systems Theory underscores the importance of development of self in the context of social relationships (Knudson-Martin, 1996).

MFT training, values, and therapeutic relational orientations can specifically address systemic issues to facilitate the recovery process. This study bridges the importance of social network supports to the process of recovery. For persons with chronic mental illness, recovery may be characterized as a journey from alienation to partnerships with family and peers. Recovery can be viewed as a proxy to differentiation of self in the context of family and social relationships.

Mental illness is a significant event in the life course of multigenerational families. A salient relational feature of people living with chronic mental illness, such as schizophrenia, is the dependency on family members for support over a life time, which can pose a strain on family relations. Networks that are characterized as small, kin-dominated, and overly dependent increases the likelihood of emotional reactivity (Leff, 1976), increased burden of care, and less satisfying relational contacts. High levels of Expressed Emotion (EE) have been associated among people with such small, overly dependent family networks (Leff, 1979; Vaughn & Leff, 1981). Approaches that incorporate family network support have been found to reduce psychiatric relapse rates, hospitalization readmissions, family burden of care, and overall cost of outpatient treatment (Penn & Mueser, 1996). The clinical implications of this study demonstrate the need for MFTs and other mental health professionals to encourage a sense of hope of recovery to individuals challenged with serious and chronic mental illness and their families. The history of family systems approach, however, negatively portrayed the role of families in the etiology of major mental illnesses. Treatment approaches for

schizophrenia, for example, blamed family members for the onset or relapse of psychosis. Early Expressed Emotions studies (EE) (Brown, Birley & Wing, 1972) gave way for family therapists to play a role in treatment, which was not embraced by family organizations of the mentally ill (Nichols & McFarlane, 2001). More recent interventions have also focused heavily on hospitalization or psychopharmacological approaches with little regard for the role of the family (Walsh, 1996).

Community based mental health programs, such as Clubhouses can provide individuals with opportunities to expand social network size beyond family members, develop reciprocal and mutually supportive relationships with club peers which can lead to more satisfying supportive relationships with family members.

### **Purpose**

Early literature in the area of social networks suggests that social ties are important to mental health (Biegel, McCardle & Mendelson, 1985). A key component of the Clubhouse psychiatric rehabilitation program is to establish or maintain social relationships. Clubhouses offer individuals opportunities to meet new friends to expand personal networks, as well as to identify themselves as someone other than a person living with mental illness (Macias & Rodican, 1997). While a number of studies have found that people with severe mental illness have smaller networks, which mostly consist of kin, the social networks of clubhouse members have not been sufficiently described. Existing studies employ small sample sizes and are typically descriptive in nature (Beard, 1992; Perese, Getty & Wooldridge, 2003; Stein, Barry, Van Dien, Hollingsworth & Sweeney, 1999; Stein, Rappaport & Seidman, 1995). Further, the recovery provides a new lens from which the relationship between social network supports and mental health

can be investigated. It is unclear whether larger social support networks and the greater level of network support are related to the recovery process. This study proposes to fill the existing gap in the literature by examining presence of family and social support networks are related to the recovery process among a sample of clubhouse members with chronic mental illness. In addition, this study examined the relationship between clubhouse engagement, as measured by clubhouse participation and sense of community/cohesion with club peers, the extent of social network support, and the subjective experiences of recovery. It is contended that the social ecology of clubhouses does in fact foster a sense of community and provides opportunities to engage in supportive reciprocal relationships (Herman, Onaga, Pernice-Duca, Oh, 2005).

### **Theoretical Rationale**

#### *Ecological Rationale*

An important element to the field of Marriage and Family Therapy and to the discipline of Family and Child Ecology (FCE) is the relationship between individuals, children, and families and their environments (Griffore & Phenice, 2001). The study of social networks involves the reciprocal relations of individuals and their environments, which is a core dimension of the human ecological model (Bronfenbrenner, 1989; Bubloz, Eichert & Sontag, 1979). According to Hirsh (1981), a healthy social network that consists of supportive and reciprocal relationships can provide enriching opportunities, support development, and affirm positive social identities. Therefore, social networks can be viewed as 'systems' of inter-related individuals, information, energy, resources, and communication in transactional processes within an ecological context (Vaux, 1988). In this perspective, support is not a property of the person or the

environment, but rather the interaction between the two. This is consistent with Bronfenbrenner's (1979) theory of human development and viewing behavior as a joint function of the person and environment.

Two frameworks guide research questions and hypotheses. First, the underpinnings of clubhouses as they relate to social networks will be presented. Second, the contributions of the Feminist Perspective on Bowen Family Systems Theory is reviewed to discuss the concepts of recovery and development of self and differentiation.

### **Clubhouse Programs**

"A clubhouse is a community organized to help people living with serious mental illness as they manage their illness and rejoin the worlds of employment, education, family, and friends" (International Center for Clubhouse Development, 1998). The first psychosocial clubhouse emerged nearly 52 years ago when 10 residential psychiatric patients discharged from the New York State Psychiatric Hospital decided they needed a place to meet and discuss ways to readjust into society. The meeting place became known as "Fountain House." Today, Fountain House represents the model rehabilitation program found across the U.S. and the world. There are clubhouses modeled after Fountain House located in over 20 countries.

Like New York's Fountain House, four fundamental principles guide the Michigan clubhouse programs: (a) the clubhouse belongs to its members, (b) daily attendance is desired and makes a difference to other members, (c) members feel wanted as contributors, and (d) members feel needed (Beard, Propst, & Malamud, 1982). Clubhouse programs offer a range of community supports such as housing assistance, employment training and placement, and self-help resources.

The clubhouse model has an egalitarian social structure with members and staff sharing in clubhouse work and decision-making. The central tenet of the clubhouse model is what is known as the "work-ordered day." It mimics a normal workday in that the day begins at 9:00 A.M. and essentially ends at 5:00 P.M., with social activities and support groups occurring after hours. The work-ordered day is designed to provide individuals with a workday structure that incorporates work ethics and social skills needed to prepare one for community reintegration. Clubhouse members work side-by-side along with clubhouse staff, interacting through the work-ordered day activities. Clubhouse participants are referred to as "members", and membership is voluntary.

The clubhouse was designed to address the needs of people living with chronic or persistent mental illness who have encountered losses in social skills, friendships, family connections, and employment (Mastboom, 1992). As a rehabilitation program, clubs assist people in leading more productive, community oriented lives by encouraging skill development within an environment that supports them to meet the demands of daily living, socialization, and employment (Anthony, Cohen, Farkas & Gagne, 2002).

According to Beard, Propst & Malmund (1982), social interaction is an important aspect of the program. These authors assert that members 'feeling needed' is one of the three core elements of the clubhouse model. Therefore, it is contended that through clubhouse participation, members gain a sense of connection with others and, thereby, reduce isolation and increase social ties. Further, members also elicit support from their social support networks and engage in mutually supportive reciprocal interactions with network supports.

## **Family Systems Theory**

Social relationships are a universal, fundamental human need almost as powerful as the need for food, which if not satisfied, could thwart positive psychological development and adjustment (Baumeister & Leary, 1995). Research has shown that social isolation, lack of social ties and personal networks are predictive of death or mortality in the general population (Berkman, 1995; Berkman, Glass, Brissette, Seeman 2000; Cohen, 1988; House, Landis & Umberson, 1988).

Social relationships provide a number of psychological and practical benefits. Social relationships can be examined through social networks, contact with others, providing or giving support, or developing an affiliation with others. Social network supports have been argued to “enhance psychological well-being because they fulfill basic human needs”...for “autonomy, relatedness and competence” which foster enhanced “self – regard, self regulation, vitality, and feelings of connectedness with others” (Ryan & Solky, 1996, p. 250).

Murray Bowen, whose early work focused on a clinical population of people with schizophrenia and their families, viewed families as central to the development of the competent, autonomous adult (Bowen, 1966). Families are a primary unit of social relationships. Bowen viewed the family as an emotional and relational system. Bowen (1966) contended that the symptoms of mental illness resulted from a loss of self within the emotional system of the family. He believed one’s inability to function autonomously in the context of the family was predictive of functional impairments. The theory also postulates that family relations characterized by high levels of tension or physical and

emotional cut-offs exacerbate psychiatric symptoms. Bowen asserted that an inability to differentiate from others lead to increased emotional reactivity or high levels of tension and conflict when relating with significant others such as family members.

“Cut-offs” are defined as the loss or disruption of an important social or family relationships. Cut-offs can be an emotional or physical separation from a social relationship. The ability to maintain social ties rather than “cut-off” from family during significant life events, such as the experience of mental illness, can determine future recovery and quality of life (Tittler, 1998). This suggests that for individuals with chronic mental illness, social and family relations may run the risk of cut-offs because of strained interactions or withdrawal that can be a result of persistent symptoms.

At the other end of the continuum, enmeshment or fusion of family members is believed to thwart individual autonomy (Bowen, 1966). Fusion may be manifested through over-dependency between family members. For instance, a relative with a mental illness may be dependent on family members for financial or instrumental support, while simultaneously attempting to become more autonomous. This, in turn, creates ambivalent emotional ties to family members, which results in a significant source of stress.

Emotional reactivity, cut-offs and relational fusions are the consequences of the poorly differentiated person, according to Bowen (Kerr & Bowen, 1988; Bowen, 1978). Bowen’s signature concept of differentiation of self is defined as the ability to experience closeness with others while maintaining independence from them. Differentiation is the means by which individuals move toward delineation of the self in relation to other(s). Less differentiated individuals are believed to become easily distressed and suffer more

psychiatric symptoms, while highly differentiated persons demonstrate greater psychological adjustment.

While the benchmark of the healthy individual, according to original Bowen Family Systems Theory, is characterized as the “autonomous”, “being for self”, “goal-directed” person (Walsh & Scheinkman, 1989), these are typically qualities valued in males in Western societies. In contrast, the inclusive Feminist model of Bowen Family Systems Theory incorporates differentiation in the context of relationships. It values an orientation toward others, as well as social ties and emotional identification with others (Walsh & Scheinkman, 1989). In this view, individuals develop in the context of relationships, not separate from them. And like recovery, differentiation of self is independent of symptoms and severity of diagnosis (Greene, Gilbert, Hamilton & Rolling, 1986).

Social networks or relationships are hypothesized to foster the development of self-esteem, personal competencies, and independence (Cobb, 1976), which are consistent with the recovery from mental illness philosophy. The concept of differentiation is described as life long process in the development of self in relation to others. Similarly, the concept of recovery has also been described as continuous journey that incorporates multiple relational and autonomous dimensions, including the willingness to ask for help, reliance on others, and goal orientation and success (Corrigan & Phelan, 2005). More highly differentiated individuals may remain in satisfying contact with families, and establish more mutually based relationships with others.

The study incorporates an expanded version of Bowen’s Family Systems Theory (Bowen, 1978) with an inclusive definition of differentiation. Although Bowen did not



directly talk about recovery from mental illness, Bowen theory does postulate that positive family relationships that support a balance between connection and autonomy are related to increased differentiation. Bowen Theory focused on how the “self” functions in relation to others. In an expanded feminist version of Bowen’s Family systems theory, individuality (i.e., capacity to function as an autonomous self) and togetherness (i.e., capacity to function in relationship to others) are viewed as distinct dimensions of emotional differentiation equally lead to development of self (Knudson-Martin, 1994; 1996). In contrast to Bowen’s original conceptualization of differentiation, individuals can possess varying capacities of autonomy and togetherness. We can develop self either through separateness or connection with others. Persons who tend to experience the self through their connections with others develop mutual relationships and well integrated sense of self. This may be indicative of a recovery process in which individuals begin to engage in more mutually supportive relationships with members of their social networks as opposed to being solely dependent on them for emotional and social support. If the development of self can be theorized as a proxy of the recovery, then positive social network supports are viewed as a critical element to the recovery process. Therefore social networks characterized as small and highly dependent on family place family relations at increased risk for stress and emotional reactivity. Increased stress and emotional reactivity is theorized to hinder differentiation, which may also affect the psychological process of recovery

Based on this framework, social network relations with family members characterized by satisfying contacts and reciprocity would be predictive of greater subjective accounts of recovery. Further, greater family network supports would also be

related to specific recovery domains that reflect aspects of the development of self, such as personal confidence and being oriented toward personal goals and success.

Overall, this study examines the relationship between social network measures and recovery through the inclusive lens of Bowen Family Systems' Theory. If the construct of recovery can serve as a proxy to Knudson- Martin's reconceptualization of development of self in relations to others, then social network supports are hypothesized to be significantly related to the process of recovery. Therefore, it is reasonable to question which social and family network dimensions relate to recovery and whether engagement in clubhouse programs can serve as a way for people to increase network size and support, as well as engage in satisfying and mutual relationships with families and others.

## Definition of Terms

The following section describes the terms used in this study.

Serious/Chronic Mental Illness/Severe Psychiatric Disability: Federal definition of severe mental illness includes a diagnosable mental, behavioral, or emotional disorder of sufficient duration that results in functional impairments which substantially interferes with or limits one or more major life activities. Participants in this study have a primary diagnosis of major depressive disorder, bi-polar disorder, or psychotic disorder, such as schizophrenia.

Community Support Programs (CSPs): Community based psychosocial rehabilitation program for individuals with chronic mental illness (National Institute of Mental Health [NIMH]). Designed to decrease repeated hospitalization and increase psychosocial functioning and community integration.

Psychosocial Rehabilitation: (Also known as psychiatric rehabilitation). Psychosocial rehabilitation (PSR) programs is a universal term to refer to approaches that incorporate social aspects of treatment and recovery, that involve daily living skills rehabilitation, social skill development, and role functioning (Anthony, Cohen, Farkas & Gagne, 2002). A core value of psychosocial rehabilitation is the person-centered approach which is a processing involving the *whole* person: their strengths, interests, hopes, and fears (Anthony, Cohen, Farkas & Gagne, 2002). It views the person as an *individual* rather than an illness or a label, focusing on choice, growth potential, and improving functioning rather than reducing symptoms. Programs are a deviation from the traditional medical model of 'day treatment programs' in which mental health

consumers are recipients of services as opposed as directors of their recovery. Clubhouse programs are a form of psychosocial rehabilitation programs.

Clubhouse Program: A voluntary PSR program delineated by membership.

Clubhouses are based on an egalitarian structure to promote cohesion, equality, and social connectedness. Core elements of the clubhouse are social interaction, work, and empowerment.

Clubhouse Member: Anyone with a psychiatric disability who attends the clubhouse at least once at any time.

Clubhouse staff: A person employed by the clubhouse and auspice agency to work side by side with clubhouse members. Clubhouse staff may or may not be recovering from a psychiatric disability. Clubhouses maintain a low staff to member ratio, typically, one staff for every 15-20 members.

Clubhouse peers: Anyone who participates in the clubhouse program, including staff and members.

Social Network: A list of people nominated by the focal person who are perceived to be individuals the focal person perceives to have a relationship with or is a source of support (e.g., turns to in times of need, to have fun, or to talk to).

Social Network Support Dimensions: Measures pertaining to the number of people on a network and the extent of perceived support, perceived reciprocity, level of satisfaction, level of importance, and frequency of contact with network members.

Reciprocity in Social Network Relations: The extent to which one perceives the relationship as a exchange of mutual support between both parties. Reciprocity is an

important element in relationships (Wellman, 1985). It provides equity in the relationship and satisfies the need to give and meaningfulness in social relationships.

Clubhouse Participation: Extent of participation in the clubhouse through the ‘work-ordered’ day, number of hours attending the club in a given day or week, and length of clubhouse membership. Social activities with clubhouse peers during and after clubhouse hours consist of social gatherings, outings, or community events.

Sense of Community: A community may be viewed as a group of people in a shared environment with common characteristics or interests, or in a social relationship. Sense of community refers to concepts of cohesion which can fellowship through shared values (McMillan & Chavis, 1986). Buckner (1988) describes it as a “sense of belongingness, fellowship, ‘we-ness’ experienced in the context of a functional group or geographically based collective” (p. 773).

Clubhouse Engagement: A construct specified in this study that delineates the extent to which clubhouse members are engaged in the clubhouse philosophy and demonstrate a sense of affiliation with peers. It is the extent to which members attend the club and have developed supportive and reciprocal relationships with club peers.

Recovery: The recovery literature defines recovery as both a subjective and experience. For the purposes of this study, recovery is defined as a psychological construct defined as an ongoing process involving the perception or experiences of a person living a satisfying life given the constraints of mental illness.

### **Assumptions and Limitations**

For the purposes of this study, it is assumed that utilizing self-report interviews with people with mental illness is a valid and reliable method to gather information on

clubhouse member characteristics and perceptions of experiences. It also assumes that gathering social network information is a valid way to understand *who* is considered part of the member's network and their relationship to that member.

In the strictest sense of the concept, Social Network Analysis (SNA) is a method of mapping relationships and connections between people, groups, organizations, and other entities. The term 'node' is used to denote people or entities. Lines depicting and relationship or social exchanges are drawn between nodes. This type of mapping provides a visual and mathematical representation of relationships. SNA frequently involves several levels of analysis; with individuals embedded in multiple networks. This is referred to as 'nested design' or hierarchical data. Examples of studies using nested data may be families embedded in a larger network, much like Bronfenbrenner's Microsystems (1979). We may be nested in our work organizations, individuals nested in families, families nested in neighborhoods, neighborhoods in communities, in societies, and so forth (Hannaman, 1998). Traditional SNA was not used in this study because it was outside the original scope of the larger clubhouse study.

There are a number of limitations presented by the current study. First, it is questionable whether the perception of *who* is in one's social network is correct. Studies that employ true social network methodology typically utilize multiple sources to confirm or deny whether someone is part of an individual's social network. These studies can be expensive to conduct. But as Stein, Rappaport, and Seidman's (1995) showed, network members from 97 clubhouse members' social network were corroborated by at least one other person in the network. Results from matched interviews also demonstrated high correlations between clubhouse member and the nominated social network member. In

sum, the study found moderate to high agreement between reporters on factual information about the network structure (e.g., frequency of contact, type of contact) and global aspects of the relationship (e.g., satisfaction of the relationship).

Second, the current study also is limited by its use of a cross-sectional design, which does not allow for causal inferences, a test of directionality, or an examination of changes over time. The purpose of the current study, however, is not to test the *impact* of mental illness on social relationships, but rather to describe the social network supports of clubhouse members and the relationship to recovery.

Third, this study also fails to distinguish between positive or negative social network relationships. A number of studies have revealed that not all social network nominations are individuals with whom the participant shares a positive relationship (Brenner, Norvell & Limacher, 1989; Green, Hayes, Dickinson, Whittacker & Gilheany, 2002; Pickens, 2003; Pagel, Erdly, & Becker, 1987; Rosenfield & Wenzel, 1997; Uchino, Holt-Lunstad, Smith & Bloor, 2004). Although the social network interview does not ask participants to report individuals with who they share a negative relationship, it does inquire about the importance and satisfaction with each network member.

The results of the structured social network interview are dependent on the methodology, such as the type of questions asked to elicit network information. The interview does not ask participants about the specific type of support received. For example, specific questions of who provides financial, emotional, and instrumental support can conjure rather different network nominations (Bass & Stein, 1997; Lovell, Barrow & Hammer, 1984). Instead, general support questions were used to probe and gather information about the people who provide emotional and financial support, as well

as who they engage in leisure activities with. A unique aspect of the study, which is absent from other social network support studies involves mental health participants, is the extent to which individuals provide or reciprocate support to network members.

### **Overview**

This chapter included an introduction, purpose of the study, and theoretical rationale. The theoretical underpinnings of the clubhouse model and the contribution of a Feminist Elaboration of Bowen Family Systems Theory were presented to support the research questions. Definition of terms, and assumptions and limitations were delineated.

A review of the literature relevant to this study is presented in Chapter Two. Chapter Three presents research questions, conceptual models, and provides a description of the data set, participants, and measures for this study. Chapter Four describes the results, followed by the discussion and conclusion found in Chapter Five.



## **CHAPTER TWO**

### **REVIEW OF THE LITERATURE**

This chapter consists of a literature review that addresses major areas of this study. First, a broad overview of mental illness as a problem is presented, followed by a review of the social network literature, and a brief review of the role of family networks. A literature search on social networks and recovery from mental illness resulted in a handful of relevant articles. Therefore, studies falling under the umbrella of social networks, social network supports, and mental health were reviewed. Mental health outcome studies examining the relationship between social relationships and psychological well-being, wellness, and functioning were used as a proxies to the construct of recovery. Social network research involving clubhouse programs and other mental health consumer programs were included.

#### **Mental Illness as a Problem**

The label of a severe psychiatric disability from a community mental health definition typically includes diagnoses of schizophrenia, major depression, and bi-polar depression. In a given year, 5% to 7% of adults have serious mental illness (U.S. Department of Health & Human Services, 1999). Individuals with severe psychiatric disabilities have reduced life expectancy (Berren, Hill & Merikel, et al., 1994) and increased risk of death (Kouzis, Eaton & Leaf, 1995). Mental illness is ranked as the 4<sup>th</sup> most debilitating illnesses among non-communicative diseases in the world (WHO, 2001). Over 15% of the burden of disease in industrialized countries is accounted by mental illness, which is greater than the burden caused by all cancers combined (Murray

& Lopez, 1996). In a given year, approximately 6.5 million Americans become disabled by severe mental illness (Narrow, 1998). Data from the Global Burden of Disease study found that among mental illness, major depression, bipolar, schizophrenia, and severe obsessive compulsive disorder constitute the top four disorders resulting in the greatest number of years lost of healthy life (Murray & Lopez, 1996). Schizophrenia is estimated to affect 2.5% of the nation's population. Major depression is the leading cause of number of healthy years lost to a disability. It is projected that psychiatric and neurological conditions will grow to reach the number one position in disease burden by 2020, greater than cardiovascular and cancer conditions (Murray & Lopez, 1996). According to the Surgeon General's Mental Health Report (U.S. Department of Health & Human Services, 2001), the direct costs of mental illness are "exceedingly high" with the U.S. spending nearly 70 billion dollars on services in a given year. Yet the indirect costs have totaled more than 80 billion in lost productivity in work, school, and in the home (Rice & Miller, 1996; 1998). It is estimated that only 16% of people experiencing or suffering from psychiatric disability actually seek treatment (Narrow, 1998).

The social consequences associated with severe psychiatric disabilities may arguably be more devastating than the illness itself. While the loss of daily living skills, employment or housing permeates the demographic profiles of persons hospitalized for a mental illness, stigma, social rejection (Estroff, 1981), and the loss of social and family relationships (Boydell, Gladstone & Crawford, 2002; Davidson & Stayner, 1997; Deegan, 1988), saturate the narratives of many of those affected by mental illness (Macias & Rodican, 1997, Newton, 2001).

## **Social Network Research**

### *Definition*

Social support, social ties, and social networks are all distinctly defined concepts with roots to the attachment and sense of belonging literature (Vaux, 1988). Theories posited on the fundamental need to belong or attach have been proposed by a number of well known theorists (e.g., Bowlby, Ainsworth, Horney, Stack Sullivan, Freud, Alder, and Bowen). Attachment theory has been used to describe the human propensity toward social contact, bonding, and relating that is believed to be associated with positive psychological adjustment, as well as human survival.

Although many theorists and researchers use the terms of social network and social support interchangeably, they are very distinct concepts (Berkman, Glass, Brissette & Seeman, 2000; Vaux, 1988). Social networks appear to be an umbrella term for a number of concepts related to social relationships and social supports. Mitchell (1969) originally defined social networks from the general systems perspective as “the system of relationships with other individuals” (p. 12 cited in Vaux, 1988). Personal social networks are also defined as a collection of individuals who know and interact with the focal person (Milardo, 1988) and as “support that leads one to believe that he or she is cared for, loved, valued, and belongs to a network with mutual obligations” (Cobb, 1976, p. 7, cited in Vaux, 1988).

### *Measurement of Social Networks*

Social networks can be examined in terms of size, structure, relationships, composition (i.e., proportion of family, friends, etc.), homogeneity of network members (Uchino, Holt-Lundstad, Smith & Bloor, 2004), frequency of contact, geographic

proximity, intimacy, degree of reciprocity, and type of support (Vaux, 1988). Other methods to examine social networks include the density (i.e., extent to which members know one another) and the multiplexity (i.e., extent to which members fulfill more than one role or function) (Goldberg, Rollins & Lehman, 2003).

Different types of support can be elicited from a social network support interview. Common forms of support include financial (e.g., extent to which you can depend on someone for money), instrumental (e.g., practical assistance, transportation, house cleaning), material (e.g., clothing, supplies, food), and emotional (e.g., listening, guidance, advice). Specific questions about these forms of support can evoke different sources of support and network sizes (Bass & Stein, 1997; Lovell, Barrow & Hammer, 1984).

Some social network studies have demonstrated gender differences. Alexander's (2001) interviews with 18 men diagnosed with major depression found that having a significant partner did not increase the likelihood of nominating that person as a confident on the men's social network. Male participants reported refraining from burdening others with problems, desiring to keep problems to themselves, or waiting for others to notice a problem. In another small qualitative study, women identified more reciprocal relationships among women (Pickens, 2003). Some have argued that women are socialized to illicit help from their social networks (Rogers, Anthony & Lyass, 2004), while men are socialized to be less dependent on others.

### *Social Networks and Mental Illness*

Social networks among people with serious mental illness are small, ranging from five to ten members, but always half the size reported in the general population (Bass &

Stein, 1997; Borge, Martinsen, Rudd, Watne & Friis, 1999; Froland, Brodsky, Olson & Steward, 2000; Green, Hayes, Dickinson, Whittaker & Gilheany, 2002; Goldberg, Rollins & Lehman, 2003; Hardiman & Segal, 2003; Perese, Getty & Wooldridge, 2003; Rosenfield & Wenzel, 1997; Seidman, Sololove, McElroy, Knapp & Sabin, 1987).

Networks consisting of less than five members have been associated with more severe psychiatric diagnoses, such as schizophrenia and related psychotic disorders (Goldberg et al., 2003). Social relationships among people with psychiatric disabilities are characterized as less reciprocal, with a greater likelihood of being a recipient of support than a provider of support (Wilson, Flanagan & Rynders, 1999). Studies have shown the social networks of individuals with severe psychiatric disabilities are typically composed of relatives, mental health services providers or professionals, while friendships are limited or rare (Rosenfield & Wenzel, 1997).

The concern that emerges from these studies is that small networks often have more network members performing multiple functions of support, which may contribute to burden of care for families (Fadden, Bebbington, Kuipers, 1987) and increase emotional reactivity among family members (Leff, 1979). Larger networks are presumed to be more accessible and diverse, thus placing less burden on any one network member, and increasing the likelihood of greater forms of support.

Studies have found increases in social network size to reduce loneliness and isolation, and improve psychosocial functioning and psychiatric symptoms (Biegal, Tracy & Corvo, 1994; Davidson, Shahar, Stroyner, Chinman, Rakfeldt & Kraemer Tebes, 2004; Froland, 1978; Froland, Brodsky, Olsm & Steward, 1979). Small social networks may be the result of disrupted relationships from the presence of a serious mental illness

(Boydell, Gladstone & Crawford, 2002), repeated or prolonged hospitalizations (Albert, Becker, McCrone & Thronicroft, 1998; Froland et al., 2000), psychotic symptoms (Goldberg et., al, 2003), social withdrawal (Rosenfield & Wenzel 1997), stigma and social rejection (Perlick, Rosenheck, Clarkin, Sirey, Salahi, Struening & Link, 2001). Studies have also pointed to brain abnormalities such as ventricle size differences that inhibit the development of social relationships among persons with schizophrenia (Seidman, 1983; Seidman, Sokolove, McElory, Knapp & Sabin, 1987). Although many of these studies are correlational employing cross-sectional data, thus making it difficult to assess directionality and causality, they have established a strong relationship between the presence of mental illness, the lack of social network ties, and poor psychological well-being.

### *Family Networks*

Studies have shown that positive connections between family members and friends who are accessible, express affection, visit and join for social activities, and are available in a time of need, play a significant role in fostering psychological well-being and personal self efficacy among people living with chronic mental illness. Among a small sample of 30 mental health consumers, extended family has been found to provide a significant portion of the emotional support (81.4%), as compared to co-workers (74.5%), friends (64.3%), and family of procreation (63%) (Connelly & Walsh, 1996).

Caring for a family member with mental illness may limit the number of positive interactions and create feelings of emotional stress and caregiver burden (Hatfield & Lefley, 1987). Stressful or strained network relations risk emotional or physical cut-offs from important relationships. Bowen Theory asserts that unsupportive family

relationships are predictive of psychological distress. In a study that included nearly 300 psychiatric interviews, Fisk, Rowe, Laub & DeMino, (2000) found individuals who had experienced severed or estranged family relations reported greater psychological distress, and continued to maintain a “powerful emotional connection” to family members despite the cut-off relationship. Positive family relations were found to influence successful transitions to independent community living, which has been corroborated by other studies (Wood, Hurlburt, Hough & Hofstetter, 1998; Calsyn & Winter, 2003).

Persons with severe psychiatric disabilities frequently report less satisfaction with the quality of their family relationships (Lehman, Ward & Linn, 1982), but significantly turn to family more often in times of need, (Froland, et al., 1979). Family relationships have often characterized as dependent and non-reciprocal among individuals with psychiatric disabilities, (Green, Hayes, Dickinson, Whittaker & Gilheany 2002). The role of family networks from the consumer perspective was explored through a small qualitative study by Green et al., (2002). Participants described having the comfort of family “*being there*” even if relationships were characterized as emotionally unsupportive. Mental health consumers primarily viewed their relationships with family as ‘*overly-dependent*’, on financial or material support, which resulted in high level of emotional ambivalence toward kin. The onset of mental illness was blamed for disrupting parent-child relationships, “*friends drifting*” away, and feelings of loneliness. The desire for social contact for many was so strong, that some reported simply “*going shopping*” to engage in social contact. Psychosocial mental health programs were credited for providing social connections that participants would have not otherwise formed.

Building social networks and social ties with others beyond families can reduce the burden on families. Reform efforts in community mental health services raised awareness of increasing interventions that: 1) build new network ties; 2) maintain and strengthen existing social ties; and 3) enhance family ties (Biegel, Tracy & Corvo, 1994).

Cross-cultural studies among people living with schizophrenia revealed differences in recovery rates due to familial connections. In a review of early WHO cross-cultural research in recovery from schizophrenia, Calabrese & Corrigan (2005), discussed how developing countries were 30% more likely to meet recovery criteria from schizophrenia than more industrialized countries like Germany and the U.S. The authors contended that cultures in developing countries place greater importance to maintaining family and social relationship, and social roles (e.g., teacher, mother, worker), while Western cultures tend to place greater emphasis on autonomy from the nuclear family and de-emphasize the importance of extended family members.

### **Recovery from Mental Illness**

Although recovery is uniquely defined by the individual, it has also come to be defined as a measurable outcome in psychosocial programs, as well as a subjective attitude independent of symptoms (Anthony, 1993; Corrigan & Ralph, 2005; Deegan, 1988; Liberman & Kopelowicz, 2005; Liberman, Kopelowicz, Ventura & Gutkind, 2002; Schiff, 2004). Available and accessible social and family network support are significantly associated with recovery (Corrigan & Phelan, 2004; Liberman, Kopelowicz, Ventura & Gutkind, 2002). Recovery has also been associated with participation in family psychoeducation (Resink, Rosenheck & Lehman, 2003).



### *Defining Recovery*

The word “recovery” can evoke variety of meanings, each individually construed to reflect personal experiences. The concept of recovery is multidimensional, encompassing physical and mental health, as well as interpersonal well-being (DeMasi, Markowitz, Videka-Sherman, Sofka, Knight & Carpinello, 1996). Anthony (1993) summarizes recovery as a deeply personal and unique process of changing one’s attitudes, values, feelings, goals, and skills in life given the constraints of mental illness. Some studies have demonstrated two-thirds of people with schizophrenia achieving full recovery (Davidson & McGlashan, 1997; Harding, Brooks, Ashikaga, Strauss & Breier, 1987). While recovery has been typically defined from a medical model that involves elimination of symptoms and returning to previous levels of functioning (Mueser, Corrigan, Hilton, Tanzman, Schaub, Gingerich, Essock, Tarrier, Morey, Vogel-Schibilia & Herz, 2002), others have defined recovery as a process despite the presence of psychiatric symptoms (Resnick, Rosenheck & Lehman, 2003).

Definitions share similar themes to Bowen’s observations of healing from chronic mental illness. Bowen (1967) viewed healing as a “self-regenerative phenomena...[defined as] not only being self-responsible, but also self-actualizing ...the act of taking responsibility for one’s own emotional being and destiny is not only key to survival, but that very attitude creates the self that is the necessary resource for that end” (cited in Friedman, 1991, p. 159). Likewise, major proponents in the domain of recovery also view healing as a self-actualizing journey traveled through self-efficacy, positive social identity, change in attitude, hope, and self-advocacy (Ralph & Muskie, 2000; Beale & Lambric, 1995). Ralph’s (2000) review of the recovery literature prepared for

the Mental Health Report of the Surgeon General (U.S. Department of Health and Human Services, 1999), described '*external factors*' such as social relationships, interconnectedness with others, family, friends, and professional support, and the presence of people who encouraged and believed in the individuals' ability to cope and recovery from mental illness as indicative of the recovery process.

### *Social Networks and Recovery*

Until recently, the concept of recovery from mental illness has not been a distinct measurable construct in quantitative studies (Loveland, Weaver-Randall, & Corrigan, 2005; Ralph, Kidder & Phillips, 2000). The concept of recovery is closely linked to the notion of wellness or well-being (Ralph, & Corrigan, 2005). Traditional mental health outcome studies have used a constellation of measures assessing 'wellness or well-being' that are now considered to reflect various dimensions of the recovery process (Lieberman & Kopelowicz, 2005; Resnick, Rosenheck & Lehman, 2004). Studies have demonstrated strong associations between social network support and indicators of wellness, including health status (Berkman, 2000), mental health (Biegel, McCardle & Mendelson, 1985; D'Augelli, 1983) psychosocial and psychological functioning (Rogers, Anthony & Lyass, 2004) clinical symptoms and quality of life (Goldberg, Rollins & Lehman, 2003; Markowitz, 2001).

A panel study with 4,000 subjects conducted by Calsyn and Winter (2002), confirmed a recursive relationship between network contact and psychiatric symptoms. Increased contact with friends and family reduced psychotic symptoms, which also lead to increased support from family and friends. Path models hypothesizing the relationship between network support and presence of psychotic symptoms confirmed that friends and

family reduced symptoms at two consecutive time points in the study. As symptoms worsened, contact with friends and family increased.

Social networks composed of peers with a mental illness appear have positive impacts on psychological well-being as compared to networks composed of '*normals*' (i.e., those without a mental illness) (Boydell, Gladstone & Crawford, 2002). The Yale Supported Socialization Partnership Project (Davidson, Haglund, Stayner, Rakfeldt, Chinman & Kraemer Tebes, 2001), however, found that mental health consumers significantly expressed a greater desire to socialize with others who were unlike themselves (i.e., shared a psychiatric disability). Participants who reported attending social mental health clubs, such as clubhouse programs, reported a desire to develop social connections based on mutual interests instead of the shared experience of a disability. Rosenfield & Wenzel (1997) found whether they are based within the mental health system or not, *any* supportive ties increased wellness.

A classic social network study by Froland, Brosky, Olson & Stewart (1979) examined the available network support and the contribution to social and psychological adjustment among mental health consumers in inpatient, outpatient, and day treatment settings. Social networks characterized as less reciprocal, less satisfying, and having infrequent contact with family members were indicative of consumers who expressed more distress, were less productive, and had repeated experiences with hospitalization and treatment. Increased psychological distress was present among those who reported absent or less supportive family networks. The importance of this early study raised awareness of the relationship between absent, or poor family relations and the need to

strengthen family and social ties for those who placed less emphasis on these sources of support.

Goldberg, Rollins & Lehman (2003) used secondary cross-sectional data to examine demographic, clinical, and life satisfaction as social network correlates. Larger social networks were significantly related to higher level of education, greater life satisfaction, greater satisfaction with social relations, and higher self-esteem ratings. Network size, however, was unrelated to age, gender, or history of hospitalization.

In a controlled experimental study, Davidson et al. (2004) found outcomes measuring psychological well-being (e.g., life quality, self-esteem), depression, psychiatric symptoms, and health were largely dependent on the frequency of contact with others. Participants were randomly assigned into one of three conditions: (1) a mental health consumer paired with another mental health consumer, (2) a mental health consumer paired with a community volunteer, (3) and a stipend only group. Researchers hypothesized that increases in well-being are a result of engaging in social activities with their assigned partner. Results showed that participants paired with mental health consumers who failed to maintain regular contact fared better than those paired with a community volunteer. These mental health consumers who were paired with a non-mental health consumer community volunteer and did not engage in regular social activities together deteriorated over time. However, if participants meeting with a community volunteer met regularly, they fared better than all other groups.

Brier and Strauss (1984) described the role of social relationships and recovery with 20 hospitalized individuals experiencing psychosis. Data on the benefits of social ties was collected during the hospitalization period and one year following discharge. The

authors identified 12 themes characterizing ways in which social network relationships are beneficial to the recovery process. Themes relevant to aspects of the current study are described. First, social relationships provided *constancy* in associating with people they knew before the psychiatric hospitalization. This helped individuals to connect to a pre-hospital identity. Social relationships also provided *social approval and integration* which increased a sense of acceptance and belonging to a larger community. *Modeling* socialization behavior of others assisted individuals in incorporating positive behavior. *Reciprocal relations* were important in equalizing the relationship in the ability to share with others as well as be of assistance to others. Social relationships also provided the motivation to achieve higher levels of functioning through encouragement.

The current study attempted to replicate some findings from a similar investigation between social network supports and recovery. Corrigan & Phelan (2004) examined secondary data collected from 1,824 individuals involved in Consumer Operated Services Project (COSP) (Campbell, Johnsen, Lichtenstein, Noel, Yates, McDorel Herr, et al. 2003). The Recovery Assessment Scale factors (Corrigan, Giffort, Rashid, Leary & Okeke, 1999) served as dependent variables while social network dimensions assessed by the Social Network Scale (SNS) were employed as independent variables (Stein, Rappaport & Seidman, 1995). The SNS measure requires participants to generate a list of people in the focal person's life who are perceived as supportive. Network size is equated to 'network support' and participants rated the extent of satisfaction and mutuality with each network member. The Recovery Assessment Scale is composed of a five factors structure defining recovery as (1) Personal Confidence and Hope; (2) Willingness to Ask for Help; (3) Goal and Success Orientation; (4) Reliance on

Others; and (5) Not Dominated by Symptoms (Corrigan, Salzer, Ralph, Sangster & Keck, 2004). The study demonstrated that satisfaction with network supports was significantly related to overall network size and family network size. Network support was also related to the recovery dimensions of Personal Confidence and Hope, Willingness to Ask for Help, Goal and Success Orientation, and Reliance on Others. Family network support was significantly related to Reliance on Others, but failed to reach significance with other recovery dimensions. However, network support size of friends and professionals correlated with all the recovery domains. The study also failed to find a relationship between network mutuality (extent of relationship reciprocity) and recovery domains. This study is important for several reasons. First, it uses a structured social network measure to assess the number and size of networks, as well as gather information about the degree of reciprocity between the focal person and network members. Second, it examines the correlations between specific network clusters and recovery factors. A limitation of the study is that it equates 'network size' to 'support' suggesting that each network member is perceived to provide the same level of support to the focal person.

Creating a culture of healing and recovery is the current trend for psychosocial services by increasing best practices around the goals of recovery (Anthony, 2000; Frese, Stanley, Kress, & Vogel-Scibilia, 2001; Torry, & Wyzik, 2000). At the core of the recovery movement in mental health, there is a focus on social, functional, and growth-potential aspects of the individual. In contrast, the medical model relies on pathology and treating the symptoms instead of the whole person. Recovery from mental illness, does not indicate a 'cure' from the illness; instead individuals report attitudinal changes, or a return to social and cognitive functioning. Clubhouses can serve as a place for individuals

to lead more productive, community oriented lives. The clubhouse program was designed to address the needs of people with chronic or persistent mental illness who have encountered a sense of loss in skills, friendships, family connections, and employment (Mastboom, 1992). Clubhouse program encourage participation in the operations and daily maintenance of the clubhouse. Members are encouraged to work in various 'units' of the clubhouse with other members, such as the kitchen, or clerical units. Social activities typically occur after hours. Although a significant element of the clubhouse program is to facilitate skill development, social interaction and social activities play an important role in clubhouse culture. In fact, the number one reason clubhouse members come to the clubhouse is to socialize (Herman, Onaga, Ferguson, Pernice-Duca, Oh & Weaver Randall, 2002). The clubhouse model encourages engagement in philosophy of the clubhouse through participation in the work of the clubhouse with club peers as well as promoting social interaction. The main domains of clubhouse programs consist of: social (e.g., recreation, support groups, outreach, psycho-education, social activities), vocational (e.g., supported, transitional, competitive, peer-run employment programs), educational supports, residential (e.g., housing information, supported housing options, clubhouse apartments), medical (e.g., medication management with nurses or community based psychiatrists), and financial services (e.g., member bank). It is unclear whether or not social interactions at the clubhouse increase a club member's social networks supports, and such reciprocal interaction generalizes to relationships beyond the clubhouse doors.

### *Social Networks, Recovery, and Clubhouses*

Social network support has a history of being incorporated into a variety of social intervention programs ranging from health care promotion to adolescent parenting to delinquency prevention (Whittaker & Garbarino, 1983). Peer support has been proposed as a key ingredient in programs for people with severe mental illness (Campbell & Leaver, 2003). Programs designed to increase social networks among people with severe mental illness do in fact achieve success (Davidson, Haglund, Stayner, Rakfeldt, Chinman, & Kraemer Tebes, 2001; Wilson, Flanagan, & Rynders, 1999; Mowbray & Tan, 1992).

Mental health services in the era following de-institutionalization have strongly followed a social support framework of intervention, attempting to increase social contact and engagement by increasing social network resources. In the 1970's, mental health policy in the U.S. utilized informal social networks and support systems as resources for mental health patients transitioning into the community following long-term hospitalization. From a policy and services standpoint, less reliance on formal professional support systems and services helped to contain costs associated with providing a continuum of care. In 1977, the National Institute of Mental Health developed one of the first national initiatives to utilize the social network research and psychosocial rehabilitation services began assisting persons with chronic mental illness with housing, daily living skills, employment and socialization opportunities (Turner & TenHoor, 1978).

Positive and supportive mental health environments foster a greater likelihood of nominating peers in the social network of consumers of mental health services (Hardiman



& Segal, 2003). The FRIENDS program, which is based on the philosophy that social networks evolve from building a strong caring intentional community, has been found to increase and maintain social networks over time to impact overall functioning (Wilson, Flanagan, & Rynders, 1999). The central values of the FRIENDS program are recovery oriented and recognizing mental health well-being has a direct relationship to the involvement with others.

Clubhouse programs are being recognized as a valuable and cost effective option to assist in the recovery process from mental illness (Landis, 1999). Social interaction and activities play an important role in clubhouse culture. The clubhouse has been found to foster cohesion, friendships, and feelings of belonging, otherwise known as a 'sense of community' (Herman, Onaga, Pernice-Duca, Oh, Ferguson, 2005). In an unpublished report to the Department of Community Health (Herman, Onaga, Ferguson, Pernice-Duca, Oh & Weaver-Randall, 2002). Clubhouse members reported socializing and making friends as the number one reason for attending the program. The clubhouse has also been deemed a place where these friendships have lead to personal narratives of recovery (Macias & Rodican, 1997). Creating a culture of healing is the current trend for psychosocial services by increasing best practices around the goals of recovery (Anthony, 2000; Frese, Stanley, Kress, & Vogel-Scibilia, 2001; Torry & Wyzik, 2000).

Social network studies with clubhouse members have been limited and mixed. Stein et al., (1999) found that clubhouse members nominated an average of 16 network members, with an average of 5 friends, 7 family members, and 4 professionals. In a separate study by Stein, Rappaport and Seidman (1995), clubhouse members identified an average of 6 network members as sources of help or assistance, those of which 2.4

were family network members, 1.8 friends, and 1.6 professionals. Clubhouse members also identified at least one conflictual relationship in their network. The study also found that when reports about the quality of relationship matched a nominated family members' report, clubhouse members exhibited higher social adjustment scores and lower symptoms and distress. Further, clubhouse members who reported greater dissatisfaction with family network relations experienced more severe psychiatric symptoms, and poor social functioning, especially when the quality of the relationship was incongruent between reporters. The authors contend that the lack of congruency in reporting between clubhouse members and nominated family network members may be in part due to high emotional reactivity. This suggests lower satisfactions with contact and relationships may be indicative of lower levels of differentiation.

Another study with 34 clubhouse members, Perese, Getty & Wooldridge (2003) found that clubhouse members reported fewer friendships and social network support as compared to the general population of non-mental health consumers. Clubhouse members were more likely to report friendships are more positive sources of support than family members. Interestingly, the study found that clubhouse members who reported greater sources of social support were also more likely to participate in self-help support groups at the clubhouse.

### **Summary**

The studies reviewed reflect the social networks characteristics among people with serious mental illness and the relationship between social relationships and mental health, specifically psychological well-being and recovery. There were few studies that specifically described the social network characteristics of clubhouse members (Perese et

al., 2003; Stein, Rappaport & Seidman, 1995; Stein, Barry, Van Dein, Hollingsworth & Sweeny, 1999), and only one study to date specifically examines social network support, reciprocity, and network satisfaction with the recovery domains set forth by the Recovery Assessment Scale (Corrigan & Phelan, 2004). This measure of a subjective experience of recovery is used in this study.

Most social network studies using sample of people living with serious mental illness employed small sample sizes and mostly qualitative. Cross-sectional studies demonstrate a strong correlation between network dimensions and recovery type outcomes. Longitudinal and controlled experimental designs demonstrated a causal link between the lack of social network supports and increased psychiatric symptoms, poor psychological functioning, and lower quality of life.

Clubhouse studies and other non-traditional mental health programs provide evidence that people tend to seek emotional and social support that provide socialization opportunities. These opportunities are hypothesized to improve overall social adjustment by way of increasing self worth or affirming one's social identity as someone other than a mental health patient. According to Hirsch (1981) personal networks are conceptualized as 'personal communities' that work to support healthy social identities to in turn influence psychological well-being. One pathway to defining our social identities is to achieve meaningful participation in one's community. The clubhouse program is an environment that is designed to create, enhance, and maintain personal networks composed of family, friends, club peers, and others. Therefore personal networks are theorized to affirm our social identity through aspects of support and mutual reciprocity.

Overall, as Goldberg, Rollins & Lehman (2003) stated, “whether considered outcomes or predictors, clinical and psychosocial functioning are clearly related to social network structure” (p. 399). These studies highlight the significance of this research in supporting existing programs designed to increase or improve social network relations, and expanding our understanding of the role of social and family network supports to the recovery process.

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## **CHAPTER THREE**

### **METHOD**

The current study is part of the Flinn Clubhouse Project, funded in part by the Flinn Family Foundation. The larger study employed a longitudinal design with one follow-up period with numerous measures. By contrast, this study utilizes a cross-sectional dataset collected from the first interviews with clubhouse members. This chapter describes the methodology for the Flinn Clubhouse Project and the present study. Research questions are also presented.

#### **Description of the Flinn Clubhouse Project**

The Flinn project was conducted by a joint partnership between the Dr. Esther Onaga of Michigan State University and Dr. Sandra Herman, of the Michigan Department of Community Health. The original study examined 40 clubhouses in Michigan, and sampled 18 clubhouses for in-depth clubhouse member interviews. The criteria for selecting the 18 clubhouses included: 1) clubhouses were Medicaid enrolled, 2) clubhouse managers completed a clubhouse program assessment developed by the Flinn Project researchers, 3) Clubhouse staff and members participated in a clubhouse 'values' Delphi survey developed by the Flinn Project researchers. The Values survey assessed the importance of club values from members and staff. The survey was used to validate the study's logic model by identifying which components of the model clubhouse members and staff believed to be important in a 'very good clubhouse.' The values assessed were recovery, treatment choice and control, community and social integration, skills and abilities, and partnerships between staff and members. Responses

were received for 313 members, 136 staff, and 40 managers responded to the survey. Their responses were then aggregated to obtain a clubhouse rating of importance for each value.

Eighteen clubhouses were selected based on the results of the Staff and Member Values Survey to determine which clubs the Flinn Research Team was to visit. Clubhouses were ranked from lowest to highest on the way they scored the values survey. A sub-sample of 18 clubhouses were selected to represent value scores from low, middle and high ranges, in addition to daily member attendance, total members employed, location, and percent of members with schizophrenia. These clubhouses represent the range in size, location, and clubhouse environments. Three of these 18 clubhouses were excluded because they served as pilot sites to test the interview protocol. Thus a sample of 221 participants from 15 clubhouses participated in this study.

### **Research Questions**

Based on the review of literature, there are limited studies examining the social network support dimensions of clubhouse members. Further, the lack of empirical quantitative studies investigating the relationship between social network supports and recovery warrant further examination. Variables selected for the models and the hypothesized paths were based on a theoretical rationale that integrates the clubhouse philosophy, social network research, and Feminist informed Bowen Family Systems Theory. The purpose of this study was three-fold: (1) Describe the role of social networks among clubhouse members; (2) Examine the relationship between social network supports and recovery, and; (3) Test a path model that incorporates the overall

theory of the relationship between clubhouse engagement, the social network supports, and the recovery process.

### *Research Questions*

Research questions are divided into three sections covering social network characteristics, social network and recovery, and social networks and clubhouses.

#### *Social Network Support Characteristics*

1. What is the size of the social network?
2. What type of relationships compose the network?
3. Do social network support dimensions (support, reciprocity, satisfaction with relationship, importance of network relationship, and frequency of contact) vary with age, gender, level of education, ethnicity, living arrangements, family composition, level of functioning, clubhouse participation, and clubhouse sense of community/ cohesion?

#### *Social Network Supports and Recovery*

4. Are social network support dimensions, (support, reciprocity, satisfaction with relationship, importance of network relationship, and frequency of contact) related to recovery and recovery domains?
  - a. Which social network support dimensions are more predictive of the recovery?
  - b. Which network supports (e.g., family, friends, clubhouse staff, clubhouse members, etc.) are more predictive of recovery?



5. Is there a positive relationship between greater family network supports (i.e., support, reciprocity, satisfaction with contacts, importance of family members on the network, and frequency of contact) and recovery?
  - a. Are greater family network supports predictive of the recovery domains of Personal Confidence & Hope, Reliance on Others, and Goal & Success Orientation?
  - b. What type of activities characterizes the interactions between clubhouse members and nominated family members?

#### *Social Network Supports and Clubhouses*

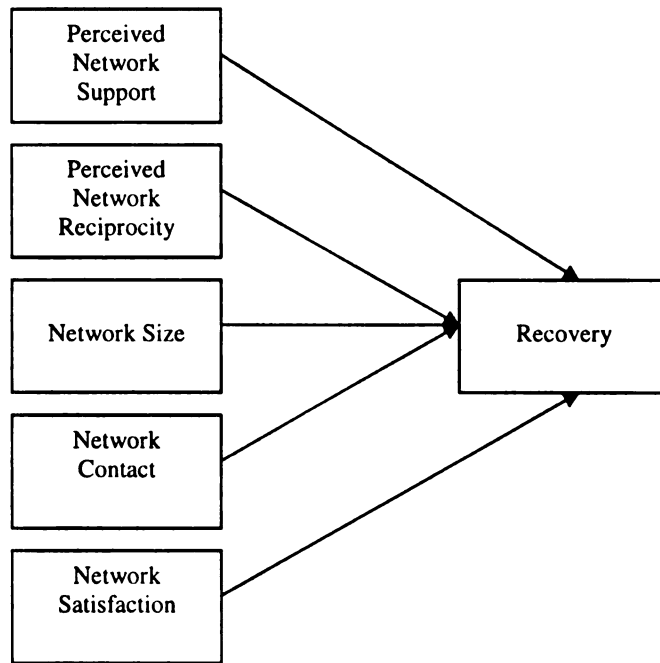
6. What is the relationship between clubhouse engagement, as measured by level of clubhouse participation and extent of clubhouse sense of community/cohesion, social network supports (size, support, reciprocity, satisfaction and contact), and recovery?

An exploratory path analysis was used to examine whether coming to a psychosocial clubhouse and developing mutual and reciprocal relationships with others is related to greater social networks, more satisfying contacts with others, and greater support and reciprocity with network members, which then is related to greater sense of recovery.

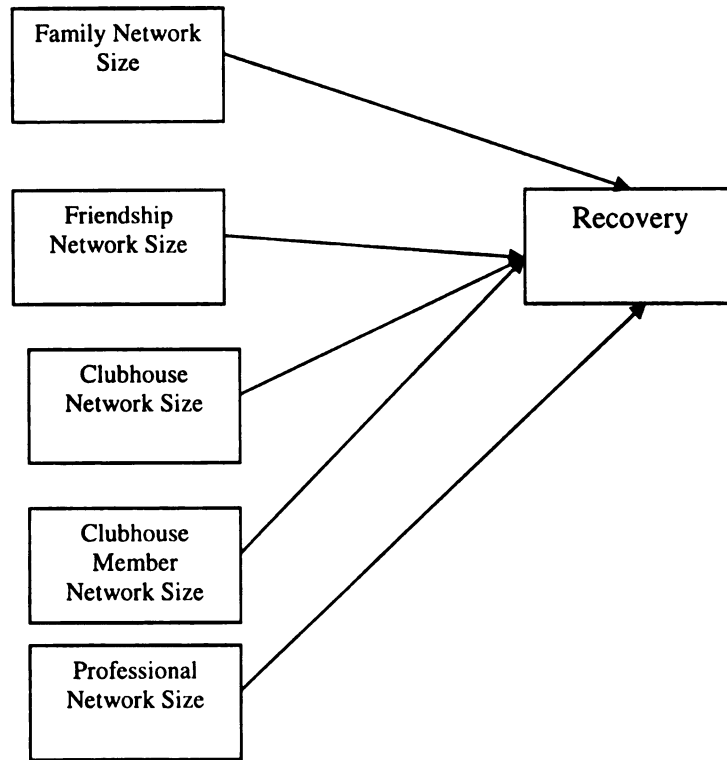
#### **Conceptual Models**

The relationship between social network support dimensions and recovery from mental illness among clubhouse users was examined. The study incorporated a human ecology framework to study social networks and integrated Feminist informed Bowen Family Systems Theory. Figures 3.1 through 3.4 display the relationships among the

variable of interest in this study. Specifically, the relationships between predictor variables and criterion variables are presented in graphic format.



*Figure 3.1.* Model A: Total Network Support Predicting Recovery



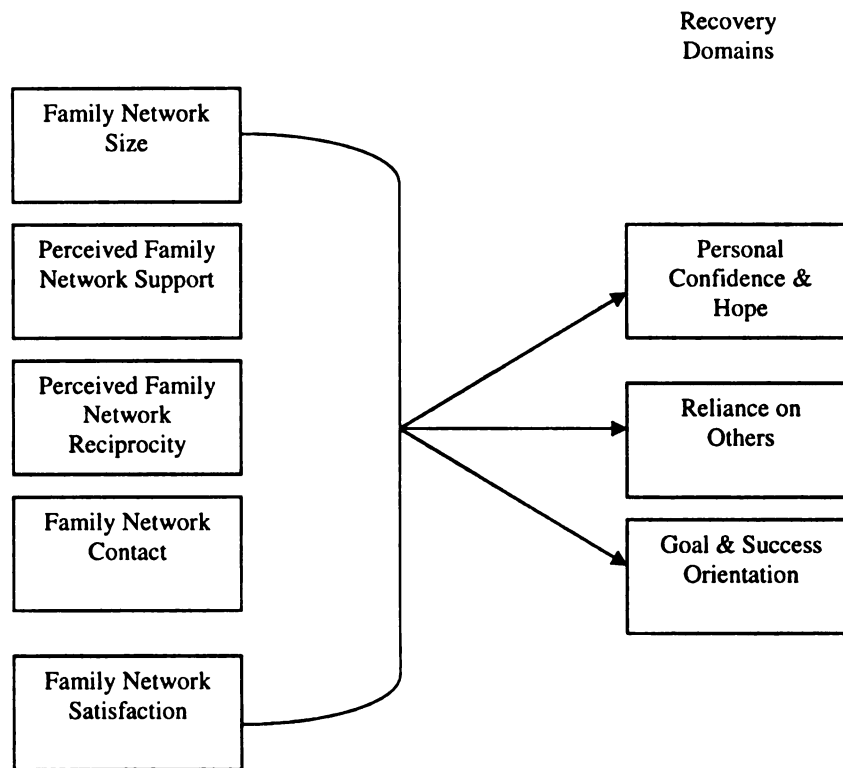
*Figure 3.2. Model B: Network Members*

A series of regression models examining the relationship between personal networks and recovery dimensions were performed. Regression Model A (Figure 3.1) hypothesized that increased network support, network reciprocity, network contact, network satisfaction, and importance are predictive of increased recovery scores as measured by the Recovery Assessment Scale (Corrigan, Giffort, Rashid, Leary & Okeke, 1999).

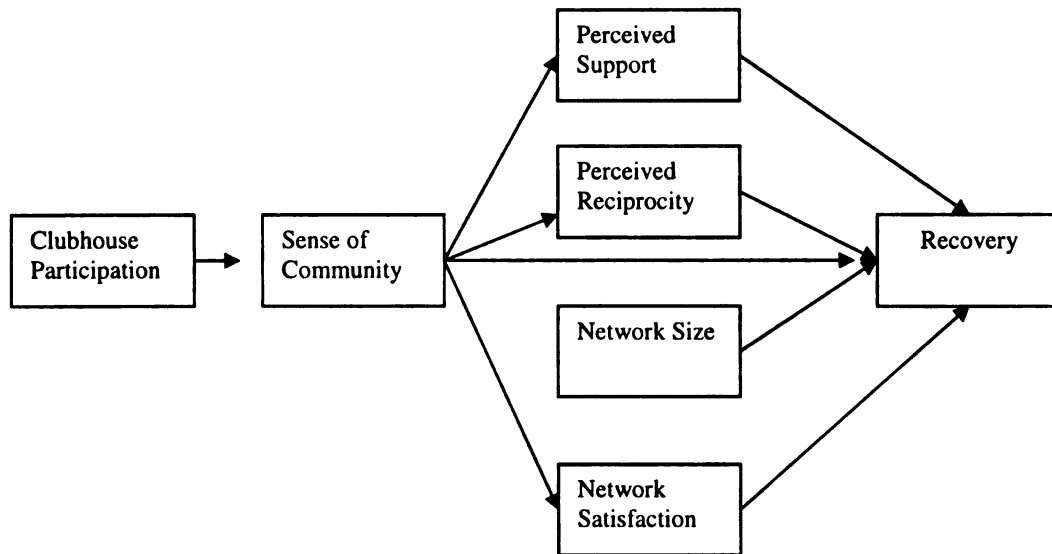
Regression Model B (Figure 3.2) examines which group of network member contributes to overall recovery scores. Regression Model C (Figure 3.3) examines the extent of family network variables and the relationship to recovery domains such as

Personal Confidence and Hope, Goal and Success Orientation, and Reliance on Others.

These domains are suggested to be indicators of greater development of self or differentiation among individuals living with a chronic mental illness.



*Figure 3.3* Model C: Family network predicting recovery domains



*Figure 3.4* Initial path-analytic model: Influence of clubhouse engagement on social networks and changes in recovery.

The path model in Figure 3.4 hypothesizes that clubhouse participation leads to increased sense of community and cohesion among clubhouse peers, which consists of developing relationships based on mutual support. Club community and cohesion is hypothesized to be related to opportunities to increase network size, support, as well as engage in more satisfying and reciprocal relationships with others. The presence of larger networks, greater levels of support and reciprocity, satisfying contact with network members, and increased contact with network is then hypothesized to be related to greater level of recovery.

Corrigan & Phelan (2004) conducted Pearson Product Moment correlations between social network size and recovery domains also used in this study. Their analysis with over 1,000 mental health consumers, did not measure the quality of network support. It was implied by the number of network members nominated. This study utilized both number of network supports nominated as well as the level of perceived support *received* and *provided* to each network member. The path model incorporates elements of clubhouse philosophy that are assumed to foster greater network size that and sources of support. The initial path model hypothesized greater clubhouse participation is related to greater sense of community and cohesion among clubhouse members, which is a measure of mutual support, sense of belonging, and affiliation with peers. Having a sense of club community and cohesion then is hypothesized to be related to greater overall social network size, network satisfaction, perceived network support and reciprocity, which is then related to greater recovery.

### **Sample**

Participants for this study were clubhouse members from 15 clubhouses in Michigan who participated in the Michigan Flinn Clubhouse Project. A total of 221 clubhouse members volunteered for an in-depth, face to face structured interview. A power analysis (Cohen, 1992) with an alpha level at .05, power at .80, and medium effect size (.30) and 8 predictors variables requires a minimum of 107 participants. The project team contacted the clubhouses to arrange for an on-site visit to conduct interviews with clubhouse members. Up to 15 interviews were allotted for each clubhouse, however, the number of participants who volunteered from each clubhouse ranged from 10 to 17 members to yield an average of 14 volunteers from each site. Seven clubhouses had 15

volunteers, three clubs had 16 volunteers, and five clubhouses had 10 to 14 volunteers. To be eligible for clubhouse membership, one is required to have a psychiatric diagnosis. Interviews were excluded from consideration if the interviewee was severely cognitively impaired and unable to complete or comprehend the interview protocol. Data for the first interview was collected from August, 2000 through February, 2001.

### **Procedures**

This study utilized a cross-section of the data from the original longitudinal design. Clubhouse participants were self-selected volunteers. In keeping with the tenets of clubhouse values, permission to recruit clubhouse members was obtained from the clubhouse membership through consensus at their general house meeting. A detailed letter describing the project and purpose of the in-depth interview was mailed to each of the 18 clubhouses. Letters described the nature of the interview, the potential for a follow-up interview six months later, and a financial compensation of \$20. Letters were addressed to clubhouse members, staff, and the clubhouse manager (Appendix A). Clubhouses interested in participating notified the research team by fax or telephone to indicate their voluntary participation. At that time, a date was also selected for the first interview visit. Clubhouses were provided flyers advertising the project. Clubhouse managers were provided a volunteer sign up sheet with 15 interview slots and 5 waiting lists positions for the pre-scheduled interview date. Clubhouse managers distributed "consent to contact" forms to potential clubhouse interviewees so that a researcher team member could contact them for an interview at different time or date. Interviewees who signed up for an interview and could not attend the pre-scheduled interview date were asked to complete and submit a 'consent to contact' form to the research team to a

schedule a separate interview time. Club managers assisted in gathering information about potential interviewees to increase likelihood of representation on diagnosis, employment, and length of membership. A waiting list with alternates was used as in the case that scheduled interviewees failed to show for an interview. Interviews were conducted in a private area at the clubhouse or at nearby facility. Each interview was approximately one hour in length.

The project guaranteed participants that all interview information would be kept strictly confidential and they would be paid for their participation. Consent from each participant was obtained prior to the start of the interview (Appendix B) and interviewees were compensated \$20.00 for each completed interview. Participants with legal guardians were required to obtain consent from their guardian prior to scheduling an interview with the research team (Appendix C). Clubhouses were compensated \$100.00 for hosting the on-site interviews for the day and assisting in recruitment procedures. All study procedures for the larger study and the current proposal were approved by human subjects review committee at Michigan State University (Appendix D). Interviews were assigned a site ID number followed by an individual ID number to replace names. A master list of project ID names with corresponding names was kept by the principal MSU investigator in a locked password protected computer file.

Interviewers were instructed to maintain notes pertaining to the quality of the interview, questions that arose during the interview, and observations related to the participant's interview behavior (e.g., whether participants were having difficulty completing particular questions or sections of the interview, difficulty with



comprehension, cognitive impairments, or psychotic symptoms interfering with completion) . Incomplete or incoherent interviews were excluded in the final database.

### **Measures**

A one-hour structured interview included the following content areas: 1) clubhouse participation, 2) relationships with staff and members, 3) employment, 4) social support networks, 5) health & medications, 6) history of mental illness, 7) mental health service use, 8) extent of daily functioning, 9) sense of recovery, 10) sense of community, 11) staff relationships, and 12) demographic information. The interview protocol combined established survey instruments with questionnaires developed by the Flinn Project researchers to address specific aspects of the clubhouse. An overview of measures and data sources relevant to this study is provided in Table 3.1.

Table 3.1

*Measures Included in Current Study.*

Construct	Measure	Variables
Demographics	Demographic Questions	Gender Age Ethnicity Level of education Marital status Family composition Diagnosis Level of Functioning History of Hospitalization Living arrangements
Clubhouse Participation	Clubhouse Participation Section	Clubhouse attendance (# of days by # of hours per day)
Clubhouse Cohesion	Sense of Community (Buckner, 1988)	Total Score
Social Network	Social Network Questionnaire (Herman, 1997)	Network Size Network Composition Frequency of contact with members Perceived Support Perceived Reciprocity Relationship Satisfaction Relationship Importance of relationship
Recovery	Recovery Assessment Scale (Corrigan, Giffort, Rashid, Leary & Okeke, 1999).	Total score 5 Recovery Factor Scores

*Demographics*

Demographic Questions. Information on demographics consisted of the following: age, gender, ethnicity, and level of education, living arrangements, diagnosis, level of disability, and history of hospitalization (see Appendix E). Diagnostic information was

obtained through the clubhouse manager's client files. A release of information was signed prior to the interview by each participant to release information pertaining to diagnosis contained in their membership file (Appendix F). The level of one's disability, was assessed using the Social Functioning Scale (Birchwood, Smith, Cochrane & Wetton,1990). This measure has 13 questions pertaining to an individual's perception of their ability to function independently. The scale was initially designed to measure the efficacy of family interventions with people with schizophrenia. Results from a validity and reliability study indicated the measurement of skill and behavior was relevant to the population and is a reliable and valid instrument. Questions include: "How well are you able to... use public transportation, budget money, cook for yourself, take care of personal hygiene?." The measure was adapted to the Flinn Project. Additional response categories were created to delineate the extent to which clubhouse members were able to function independently or with assistance. The measure was scored using the following categorical response scale: 1) able; 2) able with club help; 3) able with other help; and 4) need help not currently receiving.

Clubhouse members who participated in this study were similar to the general population of clubhouse members in Michigan for study year of 2000 (Michigan Department of Community Health 2000; see Table 3.2).

Table 3.2

*Statewide Demographic Data on Clubhouse Members from the Michigan Department of Community Health Funding Year 2000 compared to Flinn Project Participants Project Year 2001*

Demographic Variables	Categories	State Data on Clubhouse Members (N = 3,613)	Flinn Project Clubhouse Members (N = 221)
Age in Years	Range	17 to 89	21 to 66
	Mean	44.08	43.30
	Standard Deviation	11.35	9.92
Gender	Male	52.7%	46.6%
	Female	47.3%	53.4%
Ethnicity	Native American	0.7%	1.8%
	Asian Pacific Islander	0.5%	0.0%
	African American/Black	13.0%	10.4%
	White	83.5%	81.9%
	Latino	1.7%	0.5%
	Multi-racial	0.5%	4.5%
	Arab American	0.1%	0.5%
Living arrangement	Homeless	3.3%	0.0%
	Living with family – dependent	23.9%	11.7%
	Living alone, with spouse, or non-relative	37.0%	49%
	Foster family home	4.9%	0.0%
	Specialized residential home	9.1%	1.0%
	General group home	14.9%	17.2%
	Prison, jail, juvenile detention	0.4%	0.0%
	Nursing care facility	0.6%	0.0%
	Institutional setting	1.3%	0.0%
	Support independence program (SIP)	2.3%	11.5%
Employment status	Unemployed	27.2%	61.5%
Educational status	Less than high school	24.2%	17.2%
	High school GED	70.0%	39.8%
	In school K-12	4.3%	NA
	In training program	0.7%	4.1%
	Special education	0.9%	NA
Income	<\$5,000	14.0%	9.2%
	\$5,000 to \$9,999	68.9%	68.6%
	\$10,000 to \$14,999	13.7%	15.9%
	\$15,000 to \$19,999	2.6%	2.3%
	≥\$20,000	3.8%	2.3%
Axis I Diagnosis	Schizophrenia & other psychosis	59.6%	53%
	Mood disorders	28.6%	32.9%
	All other	11.7%	14.2%

Clubhouse Participation. Two questions pertaining to clubhouse participation comprised the '*participation*' variable (Appendix G) . Participants were asked to estimate the number of days they attended the clubhouse per week. They were also asked to report how long they stayed at the clubhouse during their visit. A numeric value was derived by multiplying number of days attended the clubhouse by number hours per day.

Social Network Interview (adapted from the Substance Abuse and Mental Illness Project; Herman, 1997). Measures of clubhouse members' social networks was based on the social network analysis approach of McCallister and Fischer (1983). This measure has been used as a valid measure in studies employing psychiatric populations (Ribisl, 1995). The Social Network Interview methodology uses probe questions to facilitate the nominations of network members, which has been a recommended method for research with people with schizophrenia and other special populations (Phillips, 1981, cited in Ribisl, 1995).

Four probe questions were used to elicit personal network members. The first question was "When you are concerned about a personal matter- - for example, something you are worried about or you are concerned about someone you are close to - - who do you talk with?" Three additional questions followed: "Who do you spend your time with, that is- who do you hang out with?"; "who would you ask if you needed to borrow some money?" and "is there anyone else important in your life who you have not mentioned?"

The social network method begins by asking each respondent the first probe question and then writing down the first name and the first initial of the last name on the

network list. Responses were recorded for this question until the respondent was finished and was prompted with “is there anyone else...?” The same procedure was used for questions 2 to 4. After enumerating the network list, respondents were asked to complete the demographic information for each nominated network member (i.e., sex, relationship), type of interaction (i.e., “what types of things do you & \_\_\_\_\_ do together”), frequency of contact, how important the person is to the respondent, how satisfied the participant is with their relational contact, how much support the network member provides, and how much support the participant provides to the network member (see Appendix H for network measure).

Social network characteristics compiled from this network measure include: network size (number of distinct people enumerated on the list), composition (clusters or groups of type of people, e.g., family, friends, professionals), type of interaction (e.g., what do you do with this person?), frequency of contact (1= yearly or less, 2 = few times a year, 3 = monthly, 4 = weekly, and 5 = daily), satisfaction with relationship contacts (1 = not at all to 5 = extremely satisfied), relationship, importance (1 = not all important to 5 = extremely important), extent of perceived support ( 1 = none to 5 = extremely), and extent of support provided (i.e., reciprocity, 1= none to 5 = extremely) .

Social network size was represented as the total number of social network members nominated, up to 12. If a participant reported they had no network members to offer support, they were retained in the sample to represent lack of a support network.

Recovery. The Recovery Assessment Scale (RAS) (Corrigan, Giffort, Rashid, Leary & Okeke, 1999). The Recovery Scale was used to measure the extent to which clubhouse members perceived a sense of recovery from mental illness (Appendix I). The

Recovery Scale is a 41-item questionnaire with a 5 point Likert scale assessing extent of agreement (1 = strongly disagree to 5= strongly agree). Items reflecting recovery as a psychological construct include: “ I can identify what triggers the symptoms of my mental illness, ” “Fear doesn’t stop me from living the way I want to,” “I can handle it if I get sick again.”

The development of the RAS was based on the analysis of narratives among people with severe mental illness and their recovery process. Overall, the Recovery scale yielded test –retest reliability at  $r = .88$  and Cronbach’s  $\alpha = .93$  for internal consistency (Corrigan, Giffort, Rashid, Leary & Okeke, 1999). The RAS has been found to be positively associated to indicators of well-being, such as quality of life, social support, empowerment, and self-esteem, but inversely related to psychiatric symptoms and age (Corrigan et al., 1999). Corrigan, Salzer, Ralph, Sangster & Keck, (2004) examined the factor structure of the RAS through a confirmatory factor analysis with a sample of 1,824 participants from the national Consumer Operated Services Project. The study revealed that recovery is a multidimensional construct composed of five factors, which correlate with other measures of psychological functioning and symptoms. Cronbach’s alphas ranged between .74 and .87. The factors closely match those found in an earlier unpublished report by the Flinn Project (Herman, Onaga, Ferguson, Pernice-Duca, Oh & Weaver-Randall, 2002). RAS factors are based on 24 of the 41 scale items. RAS factors are: Personal Confidence and Hope ( $\alpha = 0.87$ ), Willingness to ask for help ( $\alpha = 0.84$ ), Goal and success orientation ( $\alpha = .82$ ), Reliance on others ( $\alpha = .74$ ), No domination by symptoms ( $\alpha = .74$ ) (e.g., “I understand how to control the symptoms of mental illness”).

To determine the overall recovery, a total score was calculated for each participant. The greater the score, the greater the subjective attitude of recovery.

Sense of Community/Cohesion Scale (Buckner, 1988). Sense of community, which is one concept of cohesion, has been found to be a core element of the clubhouse model (Herman, Onaga, Pernice-Duca, Oh, Ferguson, 2005). Sense of community is assumed to facilitate the development of social networks within the clubhouse (Appendix J). To measure the extent to which individuals felt as though they belonged to the clubhouse, attained mutual relationships, were accepted, and perceived themselves as part of a clubhouse culture was measured with the Sense of Community/Cohesion Scale developed by Buckner (1988). The original instrument was developed to measure neighborhood cohesion (Neighborhood Cohesion Instrument, NCI Buckner, 1988) and consisted of three scales measuring attraction to the neighborhood, neighboring characteristics, and psychological sense of community. The original version was consisted of 39 items with test retest reliability of  $r = .80$  and internal consistency of .97.

Flinn project researchers utilized the Sense of Community Scale to understand clubhouse community from the perspective of the clubhouse member. Eleven items from the original Buckner scale and 5 items were developed by the Flinn project team from a previous clubhouse concept mapping study (Herman, Onaga, Pernice-Duca, Oh, Ferguson, 2005) were included to reflect specific items to the clubhouse community and cohesion. Statements included: "I feel like I belong to this clubhouse", "Being part of the clubhouse helps me deal with mental illness", "Being a member of this clubhouse helps me have hope for the future." A principle components analysis revealed a two structure instrument, comprised of Benefits of Membership and Recovery, and Sense of



Community and Fellowship. The internal consistency of the measure is .91. A total score is the sum of all item responses; the greater the score, the greater sense of community.

The resulting clubhouse sense of community scale contains 15 statements, measured on a 5 point Likert scale. Respondents were asked to indicate the extent to which they agreed or disagreed with each statement.

### **Data Analyses**

The analyses involved four main components: (1) descriptive statistics of clubhouse members, (2) descriptive statistics of the social networks of clubhouse members (3) two separate sets of multiple regression analyses using aggregated social network variables and recovery (4) three separate multiple regression analysis employing family network support variables and three different recovery factor dependent variables, (5) one path analytic model hypothesizing relationships between clubhouse participation, cohesion, social networks, and recovery. Path analysis is an extension of multiple regression, except it is used to predict to more than one dependent variable simultaneously. The path coefficients for the model were determined using SPSS AMOS statistical program. The program generates indices for model fit. Demographic variables that significantly correlate with the dependent variables were entered first as covariates in the model.

## **CHAPTER FOUR**

### **RESULTS**

Several analyses were conducted to explore the relationship between social networks and recovery. A series of multiple regression analyses were performed between social network predictors and recovery. A path model exploring the relationship between clubhouse engagement, social network support dimensions, and recover was analyzed using SPSS AMOS 5.0. First, descriptive statistics on clubhouse member demographic variables and social network variables were computed. Second, the results of multiple regression analyses are presented. Finally, an initial hypothesized path model was explored. An alpha level of .05 was used for all statistical tests. An alpha level of .01 was used for any demographic variables that co-vary with the criterion variable recovery and recovery domains.

#### *Sample Characteristics*

A total of 221 participants from 15 clubhouses participated in an interview between August 2000 and January 2001. Sample characteristics are similar to clubhouse demographic statistics collected on 3,613 clubhouse members by the Michigan Department of Community Health during the 2000 funding year (see Table 3.2 in Chapter 3). Table 3.2 shows that the sample used in this study is representative of clubhouse members in the state. Table 4.1 summarizes clubhouse member demographics.

The sample was comprised of slightly greater number of women than men, 53.4% vs. 46.6% respectively. Participants ranged in age from 21 to 66 years, with an average of 43 years. About a third of the clubhouse members were between the ages of 36 and 45

years (34.1%). The majority of the participants were Caucasian (81.9%). African Americans were the second largest group (10.4%). Statewide data on clubhouse demographics demonstrate a slightly greater percentage of African American clubhouse participation (13%) than the current sample. Asian Americans were not represented in the current sample, and comprise of .05% of clubhouse membership statewide. Level of income for over 50% of the sample ranged between \$6,000 and \$9,000 per year, while 26% reported income between \$9,000 and \$25,000. A portion of the participants were living on less than \$6000 per year (17.8%). The main source of income reported was from Social Security (93.2%).

The majority of clubhouse members never married (80%), while 11.8% indicated having a spouse or a live-in partner. Divorced, separated, or widowed clubhouse members constituted 8.2% of the sample. A third of clubhouse members reported having children (33.5%), with 16.4% of the sample as parents of children under the age of 18. Family composition and marital characteristics are similar to other studies involving clubhouse members (Perese, Getty, & Wooldridge, 2003). Nearly a fourth of the sample reported living with family members, while 75% reported living alone or a non-relative roommate. Overall, 69.7% of clubhouse members were living in independent living arrangements. Clubhouse members were typically unemployed (61.5%). A majority of clubhouse members completed high school or experienced some college (66.9%).

The sample consisted mostly of clubhouse members diagnosed with schizophrenia and other psychotic disorders (52.5%), followed by mood disorders (32.6%). A total of 180 (81%) participants reported hospitalization data. Participants recalled the year in which they were last hospitalized. On average, clubhouse members

reported 5.6 years since their last psychiatric hospital admission. Number of years since last hospitalization was calculated from the year the interview was conducted.

Table 4.1

*Participant Demographics (N = 221)*

Variable	Categories	% of sample	Number of Cases
Gender	Male	46.6%	103
	Female	53.4%	118
Ethnicity	Caucasian	81.9%	181
	African American	10.4%	23
	Latino	.5%	1
	Arab American	.5%	1
	Multi-racial	4.5%	10
	Native American	1.8%	4
	Other	.5%	1
Age (M = 43.3)	21 – 35	21.3%	47
	36 – 45	34.1%	82
	46 – 56	28.7%	69
	57 – 66	10.6%	23
Level of Education	Less than High School	17.2%	38
	Diploma, GED	39.8%	88
	Some College, less than degree	27.1%	60
	Associates Degree or Certificate Program	9.0%	20
	Bachelor's or Master's Degree	6.8%	15
Religious Affiliation	Christian	83.1%	182
	Jewish	.9%	2
	Muslim	.5%	1
	Agnostic	.5%	1
	Other	5.4%	12
	None	9.5%	21
Employment Status	Employed	38.5%	85
	Unemployed	61.5%	136
Residency Status	Lives with Family	25.3%	56
	Lives with Roommate(s)	29.4%	65
	Lives Alone	45.2%	100
Living Arrangement	Private Residence	70.7%	156
	Group Home	17.2%	38
	Residential Treatment Setting	1.0%	2
	Supervised Home or Apartment	11.5%	25
Who Participant Lives With	Lives with Family of Procreation	10.4%	23
	Lives with Family of Origin	14.5%	32
	Lives Alone	46.2%	102
	Lives with Roommate	29.4%	65

**Table 4.1 *cont.***

Variable	Categories	% of sample	Number of Cases
Marital Status	Never Married	80.1%	177
	Spouse/Live in Partner	11.8%	26
	Divorced/Separated	7.7%	18
	Widowed	.5%	1
Primary Psychiatric Diagnosis	Mood Disorder	32.9%	72
	Schizophrenia & Related	53.0%	116
	Other Axis I & II Diagnoses	14.2%	31
	Declined to disclose	.9%	2

Level of the functioning measured by the Social Functioning Scale (Birchwood, Smith, Cochrane, & Wetton, 1990) assessed 'how able' clubhouse members performed daily living tasks. This variable was used as a possible covariate to recovery. The lowest possible score is 13 with a maximum of 39 on the scale. Results of the scores ranged from 15 to 39 with a mean of 33.5, a mode of 38 and a standard deviation of 4.6. A frequency distribution revealed that most clubhouse members have sufficient independent living skills and appeared not to be hindered by their disability. Because of a lack of sufficient range, this variable was removed as possible covariate in the subsequent analyses.

Clubhouse members attended the clubhouse an average of 18 hours a week. The median number of years of clubhouse membership was 3 years, ranging between less than 1 year and 28 years.

## **Descriptive Characteristics of Social Networks**

*Research Question 1 & 2: What is the size of the social network? What type of relationships composes the network?*

To address the first set of research questions of the study, descriptive statistics were computed to calculate the percentage of family, friends, and others nominated on the social network interview. The relationship of the nominated network member to the focal person was originally coded in the following 10 categories on the Social Network Questionnaire: (1) Family member, (2) friend, (3) neighbor, (4) professional, (5) club staff, (6) club member, (7) co-worker, (8) group home member, (9) guardian, (10) school friends, and (11) other. Research team members were required to specify 'other' types of the relationship if it did not fall within one of these 10 categories. Additional relational categories that emerged included payees, and pastors or clergy. Frequency distributions revealed that clubhouse members rarely nominated guardians (.4%), payees (.4%) group home peers (1.6%), and co-workers (2.7%), neighbors (3.1%) pastors, and clergy (4.6%). School friends were non-existent on the network. The low frequency distributions allowed for type of relationship to be collapsed into five main categories: (1) Family, (2) Friends, (3) Professionals, (4) Clubhouse staff, (5) Clubhouse members. Relationships coded as 'Professionals' consisted of counselors, therapists, medical professionals (e.g., nurses, doctors, psychiatrists), church clergy, as well as adult foster care staff. Friends consisted of roommates, neighbors, co-workers, and general friendships and acquaintances in the community. Family consisted of family of origin and procreation, fiancés, significant others, and legal guardians.

Descriptive statistics on the composition of the social network were performed. Means and percentages of network relationships are presented in Table 4.2. The calculation of means and standard deviations for the number of network members nominated in each cluster does not include the value of '0' for 'no' network members. These calculations were based on the number of members nominated on the network. The percentage of family, friends, clubhouse peers, and professionals are also summarized. The social networks of clubhouse members were fairly small, with an average of five nominations. Only two participants were identified as isolates, with no social network nominations reported. In contrast, 22 (9%) clubhouse members reported having networks composed of 10 or more people. Over 97% of the participants identified at least one or more members on their social networks. Family members were the largest group to compose social networks (76%). The second largest group was friends with 49% of network composition. Clubhouse staff ranked as the third largest group (42%) followed by professionals (34%), and finally clubhouse members (28%). Unexpectedly, clubhouse members made up the smallest composition of the network.



Table 4.2

*Composition of Social Network\**

Variable	Value	Frequency	%	Mean $\pm$ SD/ Range
Family			76%	2.6 $\pm$ 1.7 (1– 8)
# of Family Members	0	52	23.5	
	1	54	24.4	
	2	45	20.4	
	3	32	14.5	
	4	15	6.8	
	5	8	3.6	
	6 or more	15	6.8	
Friends			49%	2.1 $\pm$ 1.5 (1– 9)
# of Friends	0	111	50.2	
	1	47	21.3	
	2	33	14.9	
	3	13	5.9	
	4	7	3.2	
	5	4	1.8	
	6 or more	6	2.8	
Club Staff			42%	2.2 $\pm$ 1.5 (1 – 9)
# of Club staff	0	128	57.9	
	1	41	18.6	
	2	28	12.7	
	3	5	2.3	
	4	12	5.4	
	5 or more	7	3.3	

\*Calculations of means and standard deviations do not include the value of '0'

Table 4.2 *cont.*,

Variable	Value	Frequency	%	Mean $\pm$ SD/ Range
Professionals			34%	1.5 $\pm$ .80 (1-4)
# of Professionals	0	144	65.2	
	1	48	21.7	
	2	18	8.1	
	3	9	4.1	
	4	2	.9	
Club Members			28%	1.8 $\pm$ 1.1 (1 – 5)
# of Club Members	0	158	71.5	
	1	37	16.7	
	2	14	6.3	
	3	6	2.7	
	4	2	.9	
	5	4	1.8	
Total # of Network Nominations	0	2	99%	5.0 $\pm$ 3.0 (1-12)
	1	19	8.6	
	2	34	15.4	
	3	28	12.7	
	4	31	14.0	
	5	21	9.5	
	6	18	8.1	
	7	21	9.5	
	8 or more	47	21.3	

\*Calculations of means and standard deviations do not include the value of '0'

## Social Network Dimensions & Club Member Characteristics

*Research Question 3: Do social network support dimensions vary with age, gender, level of education, ethnicity, living arrangements, family composition, level of functioning, clubhouse engagement (level of participation and clubhouse community/cohesion)?*

Statistics were computed for respondents who reported the presence of at least one member from the following network clusters: family, friends, professionals and clubhouse staff, and clubhouse members. Statistics were also computed for total network supports. One way ANOVAs were performed on social network support dimensions and club member characteristic. ANOVAs were performed for all social network support relationships (i.e., Family network, friend network, professionals, etc). Descriptive statistics for total social network support dimensions are presented by network cluster in Table 4.3.

Table 4.3

### *Means and Standard Deviations for Social Network Dimensions*

Variables	Total Network (N= 221) M/SD	Family (n = 169) M/SD	Friends (n = 111) M/SD	Professionals (n = 77) M/SD	Clubhouse Staff (n = 92) M/SD	Clubhouse Members (n = 63) M/SD
Perceived Support	3.1/.82	3.1/.74	3.1/.75	3.2/.64	3.2/.63	3.2/.68
Perceived Reciprocity	2.7/1.06	2.8/.99	2.8/.96	2.6/1.0	2.8/1.0	3.0/.80
Importance	3.4/.73	3.4/.64	3.4/.59	3.4/.61	3.4/.65	3.3/.61
Contact	3.9/.82	3.8/.71	3.8/.72	4.0/.62	4.1/.68	4.1/.54
Satisfaction	3.0/.92	3.1/.78	2.9/.80	3.1/.76	3.2/.72	3.1/.64

Studies have shown that individuals diagnosed with schizophrenia and have smaller social networks. Clubhouse members with schizophrenia are the largest diagnostic group in the overall study, which is representative of the diagnostic representation of clubhouse users across the state. Therefore to differentiate between diagnostic groups, diagnostic categories were collapsed to form two distinct categories (i.e., Schizophrenia and Related Disorders vs. Others) and dummy coded (1 = schizophrenia, 0 = non-schizophrenia). There were 103 clubhouse members diagnosed with schizophrenia and related disorders, and 116 members with mood disorders and other type I and II diagnoses. Effect sizes for significant independent variables are reported. Independent variables include: diagnosis, gender (1= female, 0 = male), living arrangements (1 = dependent, 0 = independent), ethnic group (1= minority, 0 = non-minority), level of education (1 = less than diploma, 2 = diploma or equivalent, 3 = greater than high school ), marital status (1= married, live-in partner, widowed, separated/divorced, 0 = never married), and family composition (0 = no children, 1 = have children). Pearson Product Moment Correlations were performed between continuous demographic variables and social network variables. These variables include: (1) age, (2) number of years since last hospitalization, (3) clubhouse participation (4) clubhouse membership, (5) and level of functioning. Significant results are summarized below. An average of 1 to 3 cases had missing data on one or more independent or dependent variable. Pairwise deletion of cases was performed for statistics.

No significant differences were found between total network size and diagnosis,  $F(1, 218) = 3.04, p = .08$ . Clubhouse members with schizophrenia rated their networks as more important,  $F(1,218) = 4.15, p = .0, d = .27$  *small effect* than club members with

other diagnoses. Club members with schizophrenia reported greater contact with overall network members,  $F(1,218) = 6.96, p = .00, d = .36$ , *small effect* (*Schizophrenia* = 103,  $M = 4.6/2.7$ ; *Other* =  $5.4/3.3$ ); contact with friends,  $F(1,219) = 7.22, p = .00, d = .53$ , *medium effect* (*Schizophrenia* = 5,  $M = 4.1/1.51$ ; *Other* = 60,  $M = 3.7/1.83$ ); family,  $F(1, 219) = 4.87, p = .02, d = .36$  *small effect*, (*Schizophrenia* = 70,  $M = 4.0/1.58$ ; *Other* = 98,  $M = 3.7/1.78$ ); and clubhouse staff,  $F(1,219) = 5.30, p = .02, d = .48$ , (*Schizophrenia* = 45,  $M = 4.3/1.53$ ; *Other* = 47,  $M = 4.0/1.78$ ). However, these members had significantly smaller family networks,  $F(1, 219) = 7.22, p = .00, d = .36$ , *small effect* (*Schizophrenia* = 103,  $M = 2.1/1.6$ ; *Other* = 116,  $M = 2.6/1.3$ ).

Greater satisfaction with overall network relationships were found among men than women,  $F(1,215) = 5.85, p = .01, d = .3$ , *small effect* (*Males* = 103,  $M = 3.2/1.23$ ; *Females* = 118,  $M = 2.9/1.9$ ). Males also rated satisfaction with family contact higher than females,  $F(1, 167) = 7.30, p = .00, d = .53$ , *moderate effect* (*Males* = 86,  $M = 3.2/1.69$ ; *Females* = 83,  $M = 2.8/1.83$ ). However, the importance of friends on the network was greater among females,  $F(1, 110) = 6.14, p = .01, d = .52$ , *moderate effect* (*Males* = 66,  $M = 3.2/1.67$ ; *Females* = 45,  $M = 3.5/1.51$ ).

The sample included a small number of ethnic minorities, which resulted in unequal sample sizes for the analysis of variance. Given the problem of unequal sample sizes, the Brown-Forsythe and Welch statistics were used to assess difference in social network variables by ethnic group. These statistics test for the equality of group means and is preferable to the F statistic when the assumption of equal variances does not hold. The Brown-Forsythe and Welch statistics were all significant. A total of 39 clubhouse members who reported family on their networks were identified as ethnic minorities as

compared to 180 non-minorities. Ethnic minorities reported more frequent contact with network members,  $F(1, 218) = 4.53, p = .03, d = .37$ , *small effect*; professionals,  $F(1, 76) = 13.95, p = .00, d = 1.71$ , *large effect* (Minority = 14,  $M = 4.5/.36$ ; Other = 63,  $M = 3.8/.61$ ); and clubhouse staff,  $F(1, 92) = 4.89, p = .02, d = .61$ , *moderate effect* (Minority = 17,  $M = 4.5/.41$ ; Other = 76,  $M = 4.1/.71$ ); greater family reciprocity,  $F(1, 168) = 6.24, p = .01, d = .54$ , *moderate effect* (Minority = 27,  $M = 3.2/.73$ ; Other = 142,  $M = 2.7/1.0$ ).

Level of education was divided into three groups: (1) less than high school diploma, (2) high school diploma or equivalent, and (3) greater than high school. Clubhouse members with a high school education or greater reported less reciprocity with network members,  $F(2, 217) = 3.20, p = .04$ , [(1) = 38,  $M = 3.1/.92$ ; (2) = 87,  $M = 2.8/.99$ ; (3) = 93,  $M = 2.6/1.0$ ]; less satisfaction with network contacts,  $F(2, 216) = 3.12, p = .04$  [(1) = 38,  $M = 3.35/.77$ ; (2) = 87,  $M = 3.10/.81$ ; (3) = 92,  $M = 2.95/.86$ ]; and nominated less clubhouse staff,  $F(2, 220) = 3.08, p = .04$  [(1) = 38,  $M = 1.44/2.1$ ; (2) = 88,  $M = .88/1.4$ ; (3) = 95,  $M = .74/1.2$ ] as compared to club members with less than a high school education.

Greater frequency of family contact was found among club members who were ever married,  $F(1, 168) = 7.39, p = .00, d = .58$ , *medium effect* (No = 133,  $M = 3.7/.75$ ; Yes = 36,  $M = 4.1/.45$ ). No social network differences were among club members with children and those without children. Clubhouse members living independently reported greater family contact,  $F(1, 168) = 4.81, p = .03, d = .29$ , *small effect* (Independent = 115,  $M = 3.95/.66$ ; Dependent = 54,  $M = 3.70/.79$ ); and more frequent contact with friends,  $F(1, 110) = 8.28, p = .00, d = .61$ , *medium effect*

(*Independent* = 79,  $M = 4.0/.65$ ; *Dependent* = 32,  $M = 3.59/.80$ ). Although club members who were living independently reported greater contact with family, they were more likely to report receiving less family support than club member members living in dependent arrangements such as adult foster care home, residential centers, or with family of origin,  $F(1, 168) = 5.22, p = .02, d = .37$ , *small effect* (*Independent* = 115,  $M = 3.08/.78$ ; *Dependent* = 54,  $M = 3.35/.61$ ). Clubhouse member living independently were also more likely to report less total network support,  $F(1, 217) = 5.54, p = .01, d = .35$ , *small effect* (*Independent* = 152,  $M = 3.11/.76$ ; *Dependent* = 66,  $M = 3.36/.63$ ).

Correlations were performed among all social network variables and identified continuous variables (i.e., age, clubhouse participation, clubhouse membership, hospitalization, and level of functioning). Younger club members perceived greater family support,  $r(169) = -.16, p = .03$ , and less likely to report professionals on their networks,  $r(221) = .15, p = .02$ . Clubhouse members participated in the clubhouse more often were more likely to report greater satisfaction with their network supports,  $r(221) = .14, p = .03$ ; report greater contact with staff,  $r(92) = .35, p = .00$ ; and greater contact with professionals,  $r(77) = .35, p = .00$ . However, the length of one's clubhouse membership was not related to any social network variables. Clubhouse members who were more recently hospitalized were more likely to perceive greater reciprocal relations between themselves and clubhouse staff,  $r(77) = -.26, p = .02$ . This finding may be suggest that staff members attempted to reach out and include more recently hospitalized club members in mutually supportive activities of the clubhouse.

### *Social Networks and Clubhouse Engagement*

To examine whether greater clubhouse engagement was related to nominating more clubhouse peers and more overall network members, an additional set of Pearson Product Moment Correlations were performed with clubhouse participation, length of clubhouse membership, and sense of clubhouse community/ cohesion variables with total network size, and number of clubhouse staff and clubhouse members nominated on the network. No associations were found between level of clubhouse participation, the length of one's membership and the overall size of the social network,  $r(220) = .00$ , and likelihood of nominating more clubhouse peers,  $r(220) = .07$ . Further, the level of club participation and length of membership were not associated with the number of clubhouse staff or members nominated on the network. However, clubhouse sense of community/cohesion was positively related to level of participation,  $r(221) = .19$ ,  $p = .00$ ; and the number of clubhouse staff nominated on the network,  $r(221) = .24$ ,  $p = .00$ . Sense of club community/cohesion showed a moderate relationship with perceived network support,  $r(221) = .37$ ,  $p = .00$ ; perceived reciprocity,  $r(221) = .44$ ,  $p = .00$ ; importance of network members,  $r(221) = .26$ ,  $p = .00$ ; and satisfaction with network relations,  $r(221) = .36$ ,  $p = .00$ . Network contact was not related to sense of club community/cohesion.

The relationship between club cohesion and family network support was also explored among participants who reported family on their networks. The purpose was to explore whether affiliations with the clubhouse was related to more satisfying contacts with family network members, greater family reciprocity, and reliance on less support. Club sense of community/cohesion demonstrated a modest positive correlation with



perceived family reciprocity,  $r(169)=.42, p = .00$ ; perceived family support,  $r(169)=.36, p = .00$ ; and weak association with satisfaction with family contacts,  $r(169)=.32, p = .00$ .

### Recovery

*Research Question 4: Are social network support dimensions, (support, reciprocity, satisfaction with relationship, importance of network relationship, and frequency of contact) related to recovery and recovery domains?*

Means and standard deviations for the Recovery Assessment Scale are presented in Table 4.4. Scores were greater in the recovery domains of Reliance on Others, Goal & Success Orientation, and Willingness to Ask for Help.

Table 4.4

#### *Descriptive Statistics for the Recovery Assessment Scale and Recovery Factors*

Recovery Assessment Scale Dimensions N = 220	Mean $\pm$ SD
Personal Confidence & Hope	3.87/.78
Willingness to Ask for Help	4.10/.82
Goal & Success Orientation	4.22/.67
Reliance on Others	4.24/.61
No Domination by Symptoms	3.63/.95
Total Score	165.27/23.28

Correlations between recovery scores and selected demographic variables, and aggregate social network support variables are presented in Table 4.5. The strength of these relationships is similar to the correlations found in Corrigan & Phelan's (2004) study. Total network size demonstrated a weak relationship with Personal confidence and Hope, Goal and Success Orientation, Reliance on Others, and the total recovery score. Perceived support and reciprocity demonstrated a modest relationship with the total recovery score, and across all five recovery domains. Frequency of contact with network members appeared to be least related to recovery domains, while greater satisfaction with network contact was related to greater recovery. Social network support measures appeared to have the least relationship with recovery domain of No Domination by Symptoms. Family network size was not significantly related to the total recovery score. Weak relationships emerged between number of family supports and Personal Confidence & Hope, and Reliance on Others. However, the number of clubhouse staff reported as supports was significantly related to recovery, with modest relationships in all recovery domains except Willingness to Ask for Help. A weak relationship emerged between number of clubhouse members nominated and Reliance on Other, and total recovery score. The presence of professionals nominated on the network did not correlate with recovery or recovery domains. The number of friends nominated as supports demonstrated a weak relationship with Personal Confidence & Hope, and Goal & Success Orientation, and overall recovery.

Table 4.5

*Correlation of Member Characteristics, Clubhouse Engagement, Social Network Supports by Recovery Dimensions, N = 220*

	Personal Confidence & Hope	Willingness to Ask for Help	Goal & Success Orientation	Reliance on Others	No Domination by Symptoms	Total Recovery Score
Gender	-.09	-.06	-.02	-.01	.05	-.06
Ethnicity	.08	.04	-.03	-.05	.08	.03
Age	.00	.04	-.08	-.10	.14*	-.01
Education	-.20**	-.08	-.16*	.02	-.03	-.11
Living Arrangements	-.11	-.16*	-.07	-.15*	-.11	-.24**
Diagnosis of Schizophrenia	-.18**	-.25**	-.12	-.13*	-.10	.22*
Clubhouse Participation	.08	.03	.01	.03	.07	.05
Sense of Community/Cohesion	.42**	.28**	.45**	.47**	.26**	.50**
Total Network Size	.24**	.12	.18**	.29**	.12	.25**
Total Perceived Support	.33*	.28**	.43**	.37**	.21**	.41**
Total Perceived Reciprocity	.42**	.35**	.43**	.37**	.18**	.46**
Total Network Importance	.14*	.16*	.23**	.24**	.02	.19**
Total Network Contact	.08	.04	.10	.18**	.10	.13*
Total Network Satisfaction	.34**	.26**	.34**	.30**	.16*	.35**
Family Network Size	.13*	.11	.04	.16*	.06	.12
Friend Network Size	.13*	.12	.16*	.10	-.02	.13*
Professional Network Size	-.03	-.06	-.05	.02	-.06	-.03
Club Staff Network Size	.26*	.18	.28**	.39**	.33**	.36**
Club Member Network Size	.09	.01	.12	.13*	.11	.13*

Table 4.6

*Correlations among Social Network Support Clusters and Recovery Dimensions*

Network Cluster	Social Network Variable	Personal Confidence & Hope	Willingness to Ask for Help	Goal & Success Orientation	Reliance on Others	No Domination by Symptoms	Total Recovery Score
Family n = 169	Perceived Support	.29**	.22**	.42**	.33**	.23**	.39**
	Perceived Reciprocity	.39**	.31**	.43**	.33**	.17*	.44**
	Satisfaction	.31**	.19*	.29**	.22**	.20**	.29**
	Importance	.10	.09	.18*	.19*	.01	.14
	Contact	-.00	-.2	.01	.06	.09	.06
Friends n = 110	Perceived Support	.38**	.23**	.44**	.31**	.13	.39**
	Perceived Reciprocity	.38**	.25*	.52**	.24*	.25*	.45**
	Satisfaction	.30*	.16	.35*	.20*	.12	.26**
	Importance	.09	.08	.24*	.14	.04	.15
	Contact	-.08	-.10	.03	.07	.01	-.01
Club Staff n = 92	Perceived Support	.26*	.18	.28**	.39**	.33**	.36**
	Perceived Reciprocity	.39**	.38**	.41**	.38**	.22**	.45**
	Satisfaction	.19	.22*	.18*	.36**	.29**	.27**
	Importance	.23*	.12	.27**	.23*	.17	.27**
	Contact	.02	-.01	.03	.10	.15	.11
Professionals n = 77	Perceived Support	.23*	.24*	.21	.26*	.31**	.36**
	Perceived Reciprocity	.44**	.38**	.42**	.39**	.30**	.50**
	Satisfaction	.35**	.22	.25*	.29**	.17	.34**
	Importance	.12	.18	.14	.14	.15	.18
	Contact	.21	.04	.21	.10	.17	.23*
Club Member n = 63	Perceived Support	.09	.19	.24	.09	.14	.20
	Perceived Reciprocity	.28*	.43**	.35*	.03	.11	.32**
	Satisfaction	.24	.13	.19	.09	.16	.14
	Importance	.08	.15	.16	.08	.10	.10
	Contact	.00	-.01	.16	.18	.14	.17

Correlations between recovery scores and social network supports by cluster (e.g., family network, friends, professionals) are presented in Tables 4.6. A breakdown of the quality of support by each network cluster provides a more complete view of which aspect of the supportive relationship was related to greater recovery. Perceived support, reciprocity and satisfaction were significantly related to recovery among club members who reported family, friends, club staff, and professionals in their networks. Clubhouse staff emerged as important relationship in the network composition, and greater contact with professionals was weakly related to recovery. Reciprocity emerged as the only variable related to recovery and recovery domains among club members who nominated other club members on the social network.

*Research Question 4a: Which social network support dimensions are important to recovery?*

Standard multiple regression analyses were performed to test a series of models between social network measures and recovery total score. Table 4.7 displays the unstandardized regression coefficients (B) and standard error of (B), the standardized regression coefficient ( $\beta$ ), the  $R^2$ , and adjusted  $R^2$  for Models A through C. Social network support variables served as the independent variables and recovery served as the criterion. SPSS was used for all analyses and missing cases were deleted pairwise for all regression analyses. Assumptions for regression analysis were examined and skewness, outliers, and normality, linearity, and homoscedasticity of residuals were within normal range.

For the first model (i.e., Network Support), total network size, perceived network support, perceived network reciprocity, network satisfaction, and frequency of contact with network members were entered as predictor variables to predict recovery total score. R for regression was significantly different from zero,  $F(6, 219) = 19.29, p < .001$ . Three of the six predictors contributed significantly to the model. Total network reciprocity was slightly more important to predicting recovery total score. Altogether, 29% of the variability in recovery scores was predicted by knowing the scores of these three variables.

*Research Question 4b: Which network supports (e.g., family, friends, clubhouse staff, clubhouse members, etc.) are more predictive of recovery?*

A regression analysis was performed with predictors in Model B and recovery total score. The total number of family members, friends, professionals, clubhouse peers was entered into the model as independent variables. This analysis included the entire sample of participants who reported a presence or lack of support from any of these network clusters. R for regression was significantly different from zero,  $F(5, 219) = 8.43, p < .01$ . The number of clubhouse staff support nominated on the social network was more important to recovery than other relationships. The number of supportive friendships emerged as the second most level of support. Although the model is significant, the size of network support by cluster only explains less than 10% of the variance in recovery.

*Research Question 5: Is there a positive relationship between greater family network supports (i.e., support, reciprocity, satisfaction with contacts, importance of family members on the network, and frequency of contact) and recovery?*

To test the notion that greater family network supports (i.e., Model C) is indicative of the recovery process, a standard multiple regression was performed. Family network size, perceived family support & reciprocity, satisfaction with family contacts, and family network contact were entered as independent variables. R for regression was significantly different from zero,  $F(6, 219) = 9.07, p < .001$ . Reciprocal support with family members was more indicative to recovery, followed by greater levels of perceived support. Although the model is significant, only 20% of the variability in recovery was predicted by knowing the scores of these five variables. Frequency of family contact and satisfaction with family contacts were not significant in the model.

Table 4.7

*Summary of Social Network Models Predicting Recovery Assessment Scale Total Score and Factors*

Model	Variables	<i>B</i>	<i>SE B</i>	$\beta$	<i>t</i>
Model A Network Support, Dependent Variable: RAS total score					
	Total Network Size	1.37	.44	.18	3.12**
	Total Network Support	4.04	2.18	.14	1.85 <sup>†</sup>
	Total Network Reciprocity	6.60	1.60	.30	4.11**
	Total Network Contact	-0.97	1.77	-.03	-.54
	Total Network Satisfaction	3.67	1.80	.14	2.04*
	$R^2=.29$ .Adjusted $R^2 = .29$ , $R = .54^{**}$				
	$F(5,219) = 17.75, p = .00^{**}$				
Model B Network Member, Dependent Variable: RAS total score					
	No. of Family	1.43	.824	.11	1.74
	No. of Friends	2.29	1.00	.15	2.29*
	No. of Professionals	-1.16	1.76	-.04	-.66
	No. of Clubhouse Staff	3.09	1.05	.19	2.94**
	No. of Clubhouse Members	2.88	1.51	.12	1.90 <sup>†</sup>
	$R^2=.08$ Adjusted $R^2 = .06$ , $R = .29^{**}$				
	$F(5, 219) = 4.00, p = .00$				
Model C Family Network, Dependent Variable: RAS total score					
	No. of Family	.858	.928	.06	.92
	Family Support	5.59	2.60	.18	2.14*
	Family Reciprocity	7.26	2.01	.31	3.60**
	Family Satisfaction	2.27	2.31	.08	.98
	Family Contact	-.877	2.33	-.02	-.37
	$R^2=.24$ .Adjusted $R^2 = .22$ , $R = .49^{**}$				
	$F(5, 166) = 10.51, p = .00^{**}$				

\*  $p < .05$ , \*\*  $p < .01$ , <sup>†</sup>  $p = .06$



*Research Question 5a: Are greater family network supports predictive of the recovery domains of Personal Confidence & Hope, Reliance on Others, and Goal & Success Orientation?*

To examine the notion that indicators of recovery occur in the context of positive family supportive relationships, a separate series of standard multiple regression analyses were performed. The domains of Personal Confidence & Hope, Reliance on Others, and Goal & Success Orientation were selected to reflect aspects of the ‘development of self in relation to others’ concept of differentiation as conceptualized by Knudson -Martin’s Feminist perspective of Bowen Family Systems Theory. It was expected that family relationships characterized as more supportive, more satisfying, and more reciprocal would be indicative of participants who are more confident, hopeful, and goal oriented, and able to utilize social supports. It is argued that family network supports influence recovery through means of relating that supports autonomy, which is consistent with the Feminist informed Bowen’s Family Systems Theory of development of self and differentiation. Table 4.9 displays the unstandardized regression coefficients ( $B$ ) and standard error of ( $B$ ), the standardized regression coefficient ( $\beta$ ), the  $R^2$ , and adjusted  $R^2$ . Sample sizes used in this set of analyses are based on participants who nominated at least one family member on the network. Family network size, perceived family network support, perceived family network reciprocity, family network satisfaction, family network importance, and family contact were entered as predictor variables and the recovery dimensions of Goal and Success Orientation, Personal Confidence & Hope, Reliance on Others (Model D, E, & F).

The regression analyses demonstrated mixed results between family network support variables and indicators of recovery. Results of Model D demonstrate greater perceived reciprocity with family network members and satisfaction with contacts were positively related to increases in a sense of personal confidence and hope. The results from Model E indicate perceived support and reciprocity as a significant predictor to the recovery domain of Reliance on Others. In the last Model, the recovery domain of Goal and Success Orientation was also dependent on greater perceived support and reciprocity with family.

Table 4.8

*Relationship between Family Network Support Dimensions and Recovery Domains*

Model	Variables	<i>B</i>	<i>SE B</i>	$\beta$	<i>t</i>
Model D: Family Network Support and Personal Confidence & Hope					
	No. of Family	0.09	.029	.024	0.33
	Family Support	0.10	.086	.11	1.25
	Family Network Reciprocity	0.22	.063	.32	3.58**
	Family Network Importance	-0.16	.089	-.15	-1.84
	Family Network Satisfaction	0.17	.075	.20	2.38*
	Family Network Contact	-0.11	0.07	-.11	-1.54
	$R^2=.22$ .Adjusted $R^2 = .19$ , $R = .46^{**}$				
	$F(6, 166) = 7.34, p = .00$				
Model E : Family Network Support and Reliance on Others					
	No. of Family	.002	.025	.08	1.06
	Family Support	.158	.072	.20	2.17*
	Family Network Reciprocity	.112	.053	.19	2.10*
	Family Network Importance	-.011	.075	-.01	-0.15
	Family Network Satisfaction	.039	.063	.05	0.62
	Family Network Contact	.003	.061	.00	0.05
	$R^2=.15$ .Adjusted $R^2 = .12$ , $R = .39^{**}$				
	$F(6, 167) = 4.99, p = .00$				
Model F: Family Network Support & Goal and Success Orientation					
	No. of Family	-.007	.027	-.02	-.28
	Family Support	.238	.080	.26	2.95**
	Family Network Reciprocity	.196	.059	.29	3.31**
	Family Network Importance	-.098	.083	-.096	-1.17
	Family Network Satisfaction	.089	.070	.10	1.24
	Family Network Contact	-.093	.068	-.10	-1.37
	$R^2=.25$ .Adjusted $R^2 = .22$ , $R = .50^{**}$				
	$F(6, 167) = 9.15, p = .00^{**}$				

\*  $p < .05$ , \*\*  $p < .01$ ,  $^{\dagger} p = .05$

*Research Question 5b. What type of activities characterizes the interactions between clubhouse members and nominated family members?*

A total of 169 clubhouse members nominated at least one family member. A qualitative analysis of the open-ended responses was performed on a single open ended question. Participants were asked what they did with each person nominated on the social network (i.e., “What type of things do you do with Sally?”). Open-ended responses were examined for participants who nominated family members on the social network. Responses were coded as follows: (1) Social/Leisure interactions, (2) Financial/Material support interactions, (3) Instrumental support interactions, (4) Emotional support interactions (5) Reciprocal support interactions (e.g., participant indicated provided some type of support to network members). Responses may have included various types of interactions. Each type of interaction was coded separately, thus yielding non-exclusive categories. Each category was ranked by frequency of occurrence. Overall, clubhouse members described positive interactions and activities with family members. Social/Leisure activity was the most frequently identified interaction ( $f = 272/123\%$ ). Social and leisure activities with family members were described as “visiting”, “talking on the phone,” “going out to eat,” “hanging out,” or “taking walks.” Instrumental Support Interaction ranked second, as many clubhouse members described family network members assisting them with shopping, transportation, assistance with community resources, or doing laundry. Emotional Support Interactions ranked third (e.g., “talk about problems,” “family gives me advice,” “talk about personal matters”).

*Research Question 6: What is the relationship between clubhouse engagement, as measured by level of clubhouse participation and extent of clubhouse sense of community/cohesion, and greater social network supports (size, support, reciprocity, satisfaction, and contact), and recovery?*

### **Intercorrelations among Path Study Variables**

Zero-order correlations among all 21 study variables are featured in Table 4.9. The intercorrelations among the demographic variables are displayed in the first triangle (Variables 1 – 6) of the diagonal. The next segment is composed of social network predictor variables (7- 12), followed by the recovery domains and total score (13 – 18). Clubhouse engagement variables are located on the last two rows of the matrix. The sample size for this matrix was 221, and 220 for recovery factors. Correlations were calculated using pairwise deletion of cases.

**Table 4.9**  
**Zero-Order Correlations of Demographic Variables, Predictor & Criterion Variable in Regression and Path Models**

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1. Gender	-																		
2. Ethnicity	.01	-																	
3. Age	.11	-.08	-																
4. Education	.13	-.12	.14	-															
5. Living Arrangement	.09	-.02	.01	.14	-														
6. Schizophrenia	.21	-.01	.08	.00	.16	-													
7. # of supports	.03	.00	.01	.02	-.13	-.11	-												
8. Support	-.01	.04	-.11	-.12	-.14	.01	.12	-											
9. Reciprocity	-.04	.10	-.11	-.17	-.12	.10	.14	.59	-										
10. Importance	.05	-.02	-.14	-.08	.00	.13	-.01	.61	.45	-									
11. Satisfaction	-.20	.05	-.06	-.18	-.09	.02	.10	.53	.43	.51	-								
12. Contact	.00	.08	-.09	-.11	.04	.17	-.03	.25	.28	.25	.38	-							
13. Personal Confidence & Hope	-.09	.08	.00	-.20	-.11	-.18	.24	.33	.42	.14	.34	.08	-						
14. Willing to Ask for Help	-.06	.04	.04	-.08	-.16	-.25	.12	.28	.35	.16	.26	.04	.60	-					
15. Goal & Success	-.02	-.03	-.08	-.16	-.07	-.12	.18	.43	.43	.23	.34	.10	.76	.50	-				
16. Reliance on Others	-.01	-.05	-.10	.02	-.15	-.14	.29	.37	.37	.24	.30	.18	.55	.46	.50	-			
17. No Domination by Symptoms	.05	.08	.14	-.03	-.15	-.10	.12	.21	.18	.02	.16	.10	.49	.32	.39	.34	-		
18. Recovery Total	-.06	.03	-.01	-.11	-.11	.22	.25	.41	.46	.19	.35	.13	.90	.68	.82	.66	.56	-	
19. Club Participation	-.14	.14	.03	-.12	-.24	-.03	.00	.10	.07	-.05	.11	.09	.08	.03	.01	.03	.07	.05	-
20. Sense of Community	.00	.08	.04	-.07	-.09	-.03	.19	.37	.44	.26	.36	.12	.42	.28	.45	.47	.26	.50	.24

Note: N = 221/220.  $r$ 's > .139 are significant at the  $p < .05$ , and  $r$ 's > .179 are significant at the  $p < .01$ . \* Coding for these dichotomous variables is: Gender 0 = Female, 1 = Male; Ethnicity 0 = Non-Minority, 1 = Minority; Living arrangement, 0 = dependent(family of origin, supervised living), 1 = independent; Schizophrenia, 0 = Non-Schizophrenia Diagnosis, 1 = Schizophrenia

### **Direct and Indirect Pathways to Recovery**

Path analysis was used to explore the relationship clubhouse engagement variables, social networks, and recovery. Path analysis is a series of hierarchical regressions predicting to multiple dependent variables. Standardized coefficients are used to generate the direct and indirect effects of predictor variables to dependent variables (Klem, 2000). A path analysis using SPSS AMOS 5.0 statistical program was used to test the model (see Figure 4.1). Clubhouse participation served as an exogenous variable. Sense of clubhouse community/cohesion served as a mediating variable between level of clubhouse participation and social network variables. The Sense of Community/Cohesion scale was used as a measure of clubhouse engagement in this study to assess the extent to which clubhouse developed as sense of members engaged with peers, experienced a sense of bonding through meaningful activities, and expressed loyalty to club friendships. It was expected that greater club cohesion would generalize beyond the clubhouse walls and be more predictive of greater network supports; increase network size, greater satisfaction with contacts, more reciprocal relationships with others.

Demographic covariates related to recovery were not entered into the model. A cut-off of  $r = .25$  or 6% variance explained for possible demographic covariates, or an alpha level below .01 was used to include covariates. This is to reduce the likelihood of a Type I error. A diagnosis of schizophrenia has a weak association with recovery with a coefficient of .22 at the .01 level. This variable was excluded from the path analysis. The rationale for excluding this variable from the analysis is based on results of the regression model A (Network Support) in predicting recovery. Such a weak association added very

little to the overall model to explain social relationships and recovery. In fact, entering diagnosis into the model resulted in a .05  $R^2$  change.

Assessing 'goodness of fit' in path models involves testing individual path coefficients and an overall test of the model with all its paths. Structural equation modeling goodness of fit measures were used as indicators of model fit. A model that fits the data will reveal the sum of path values from social network support variables to recovery to equal the regression coefficient for recovery predicted by network variables.

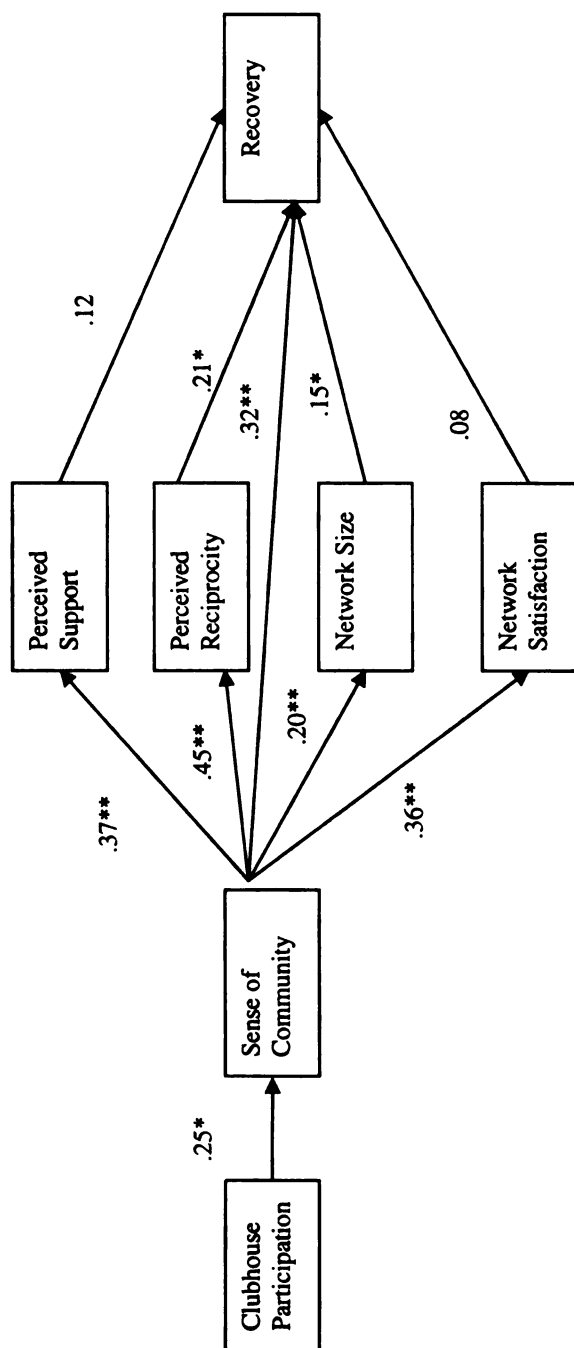
The relationship of the social network support variables to recovery is modest, with poor model fit. Regression coefficients are presents in the path model located in Figure 4.1. A significant chi-square value indicates the specified full social network support model was different from the underlying data covariance structure  $\chi^2(11) = 124.34$ ,  $p = .00$ . Three additional indices were used to assess model fit; the Root Mean Square Error of Approximation (RMSEA), which indicates a good model if values are close to zero; Akaike Information Criterion (AIC) close to zero reflects good fit; and Expected cross-validation index, (ECVI) reflects the discrepancy between model-implied and observed covariance matrices. Goodness of fit tests were also consistent in indicating that the social network support model did not fit the data, RMSEA = 0.217; AIC = 172.34; ECVI = .78 . Good of fit statistics determine if the model tested should be accepted or rejected. The purpose of this analysis was to explore a model hypothesizing relationships among variables, given the assumptions of the study.

Regression coefficients remain uninterpretable as a result of poor model fit. Although regression coefficients are significant, the paths hypothesized may have unidentified variables not included in the model.



The correlations implied in the model between perceived network support, reciprocity, satisfaction, and network size to recovery are small and not equal to the observed correlations (see table 4.9). However, model fitness does not imply the model is correct (Klem, 1995). The position of the relationship in the model could be arranged in a variety of ways and one may still achieve a good measure of fit. But the results of the path model indicate the specification of the model may be incorrect; that is, there are other moderating or intervening variables not identified in the model better able to explain the variability in recovery.

The model was trimmed to include two network support variables: total network support and total network reciprocity. The model fit statistics were slightly better, but the underlying covariance structure of the data did not fit the model  $\chi^2(4) = 68.09, p = .00$ .



*Figure 4.1* Path-analytic model: Influence of clubhouse engagement on social networks to recovery.

## **CHAPTER 5**

### **DISCUSSION**

The purpose of this study was to examine the relationship between social network supports and a self-reported measure of recovery from mental illness. Clubhouse members, on average nominated five network members, mostly consisting of kin. This finding is similar to other social network studies using psychiatric samples, however lower than what was expected among clubhouse members. Based on the assumptions of the clubhouse model, it was expected that clubhouse members would dominate network profiles, but clubhouse members were least likely to be nominated. Family emerged as the largest network support cluster. Friends outside the clubhouse were the second largest group to comprise the network. Clubhouse staff was the third largest network support cluster. This finding was surprising, since clubhouses typically have a small staff to member ratio. Further, greater sense of community was related to greater nominations of clubhouse staff, not members. Contrary to the clubhouse principles that promote member and staff collegiality, these results suggests the presence of a less egalitarian structure between members and staff than expected. Perhaps the simple fact that staff are paid employees while members are not, already creates a hierarchical division. Very early studies of groups of people living with psychiatric disabilities have found the powerful influence professional staff play in social and communication dynamics between staff and people with psychiatric disabilities (Learner & Fairweather, 1963). The presence of staff encourages less dependency on other clubhouse members for support,

Club members may have also perceived other club members as part of a larger collective, therefore making it difficult to identify individual members. During data collection, some participants attempted to nominate the clubhouse, as opposed to isolating one or two members.

Despite research showing smaller social networks among individuals with more severe diagnoses, such as schizophrenia, this study demonstrated no difference in network size among club members with and without schizophrenia. This suggests clubhouse members are equally likely to have small to larger networks, independent of diagnoses. However severity of the diagnoses was associated with smaller family networks. These members reported greater contact with family, as well as friends. This suggests that clubhouse members with schizophrenia have access to other forms of support beyond the family. Most studies have found that over-dependency on families for support was indicative of increased family stress.

### *Social Networks & Recovery*

The results of the study showed social network supports dimensions to be positively related to subjective experiences of the recovery process. However associations were weak to modest. According to the analysis, the single most important predictor to recovery was reciprocity. Clubhouse members who perceived themselves in more reciprocal, supportive relationships with their support network were more to be farther along in their recovery process.

The network support size of club staff and friendships outside the clubhouse were more predictive of overall recovery than the size of family, professionals, and clubhouse members combined. Although family was the largest network cluster, it did not emerge

as a significant predictor of recovery. A study from the Yale Supported Socialization Partnership Project may provide an explanation. Mental health consumers in the Supported Socialization Project (Davidson, Haglund, Stayner, Rakfeldt, Chinman & Kraemer Tebes, 2001) who also attended clubhouses expressed a greater desire to be around others 'who were unlike themselves' (i.e., have a psychiatric disability) and to develop social connections based on mutual interests instead of the shared experience of a disability. Findings from the unpublished Flinn Report (Herman, Onaga, Ferguson, Pernice-Duca, Oh & Weaver-Randall, 2002) revealed that only 5% of clubhouse members reported "receiving support from staff and other members" as main reason to attend the club. Therefore, it may not be surprising that a low number of clubhouse members made the list.

A large number of participants reported social and leisure activities with families, followed by financial and material support interactions. The study attempted to capture a 'glimpse' of the type of things club members do with family. A limitation of this question, "what types of things do you do with \_\_\_\_?", was that it did not gather information about the specific type of support each person provided. Responses that expressed some type of support were spontaneous, since respondents were more inclined to answer the question with a description of an activity. However, the analysis of the open-ended item suggests that clubhouse members generally reported positive interactions, consisting of fun and enjoyable activities with family (e.g., "going bowling"; "going fishing"; "talking on the phone"). Some club members also described the type of support they provided their family, such as cutting the lawn for an elderly parent or providing child care for a sibling.

### *Social Network Support Dimensions & Recovery*

The strongest correlate to the construct of recovery found in this study was the dimension of perceived reciprocity with network supports. Clubhouse members who viewed themselves as ‘providers of support’ or giving back in a relationship were more likely to have greater recovery scores. Having hope, confidence, and strategies in managing symptoms were all indicators of recovery in this study. Reciprocity emerged as the single most important correlate because individuals feel part of a community they are able to contribute to. For individuals living with chronic mental illness, this becomes especially significant in creating a view of themselves as active members of their support networks, and not as passive recipients of support.

In terms of the influence of family network supports, the results indicated that being able to ‘*give back*’ to family members who provide support was associated with greater personal confidence and hope, goal oriented activity. The study also found that more satisfying and supportive contact with family was associated with greater aspects of recovery as being more confident and hopeful. A qualitative exploration of the interactions between family members and participants revealed a large percentage of participants reporting social and recreational activities with family members. A small number of participants also described things they did for family, such as cutting the lawn for an older parent or babysitting for a sister. The notion that recovery can occur in a context of supportive relationship provides some preliminary support for the Feminist informed Bowen Family Systems Theory concept of differentiation (Knudson -Martin, 1996). More satisfying relationships with family contacts together with positive appraisals of family support was characteristic of more confident and hopeful club

members, which can be argued to be indicative of greater level of differentiation. Greater support and reciprocity with family members was also associated with being more goal and success oriented, and more able to elicit and rely on social support. These findings provide support for the notion that we develop and recover in the context of supportive relationships. It recognizes the interdependency of social relationships and recovery.

### *Social Networks & Clubhouses*

Clubhouse tenure was not associated with the number of club staff or members nominated on the network. Both club tenure and weekly participation were also not related to larger networks. This finding does not confirm the assumption that merely attending and being a clubhouse member is associated with larger social networks. However, greater club participation (i.e., more days and hours per week) was associated with increased sense of cohesion with club peers. Coming to the clubhouse more often created more opportunities to build mutual relationships and develop an affiliation with people with similar experiences. Greater clubhouse affiliation translated into opportunities to increase social network size and foster greater reciprocity with network members. Sense of clubhouse community also emerged as significant correlate to recovery. This finding is supported by another study in which clubhouse members identified *social connections and recovery* as two major concepts defining the clubhouse experience (Herman, Onaga, Pernice-Duca, Oh, & Ferguson, 2005).

### *Path Results*

One advantage of using path analysis is that multiple dependent variables can be examined simultaneously unlike in regression. It was proposed that access to the clubhouse through participation and gaining a sense of belonging with peers at the

clubhouse would increase network size, support, opportunities for mutual relationships and overall satisfaction, in relation to recovery. The model did not fit the data well, but some important conclusions can still be drawn. First, clubhouse participation was significantly related to clubhouse cohesion; feelings of belongingness and the extent to which members were engaged in mutually obligated relationships. Clubhouse members who perceived themselves to be part of a greater community, were also more likely to have greater numbers of network members, share in reciprocally supportive relationships. These findings support claims of the approach of clubhouse rehabilitation. As Berkman et al., (2000), from the Harvard School of Public Health stated in her analysis of empirical evidence on the relationship between social networks and health:

...measures of social integration or connectedness have been such powerful predictors of mortality [because] these ties gives meaning to an individual's life by virtue of enabling him or her to participate in [the network] fully, to be obligated (in fact often to be a provider or support) and to feel attached to one's community (p. 849).

People tend to seek emotional and social support that provide socialization opportunities. These opportunities may improve overall social adjustment by way of increasing self confidence or affirming one's social identity as someone other than a mental health patient. Social networks were presumed to provide meaningful roles and opportunities for mutual exchanges of support, which is a hypothesized to be related to recovery.

A major disadvantage using a path analysis method is that multiple models may be correct or incorrect in explaining the data. Model specifications for this study were incomplete. Since specification is usually based on previous knowledge or theory,



potential variables related to recovery were excluded from the model and this study.

Recovery is a very complex construct that has multiple dimensions.

Social relationships, alone, do not explain the variability in recovery. However, the purpose of the analysis was to explore a pathway to recovery through clubhouse engagement and social network supports. The standardized betas generated by the path analysis and correlations between variables showed that clubhouse participation, sense of community and the relationship between social network dimensions fit the data well. The expected relationship between total network support, reciprocity, network satisfaction and network size and recovery contributed to poor model fit, despite moderate correlations. It is clear that recovery goes beyond the influence of social relationships. The literature in recovery suggests a constellation of variables that contribute to recovery, which were beyond the scope the current study.

### **Limitations**

It is important emphasize that the sample used in this study, albeit on the severe end of the continuum of mental illness, are more stable than a general population of people living with chronic mental illness who are uninvolved with mental health services. Further, the *cause* of one's illness remains unknown; that is, whether the illness was attributed by biological influences, cognitive – affective basis of behavior, or social influences. The etiology of the illness was not a focus on the study, and participants were selected on the basis of being a clubhouse member, not the illness.

A major limitation of this study was the use of cross-sectional data to test predictive relationships between network support dimensions and recovery. It is equally plausible the relationship between network supports and recovery is bi-directional. This

study does not imply causal relationships or emphasize direct, linear relationships between variables. It is unclear from this study what affects recovery, since recovery may have occurred before a clubhouse membership. However, studies in psychosocial rehabilitation and recovery have found evidence for increased subjective and objective reports of recovery. Further, randomized, controlled studies have demonstrated support for the direction of greater network supports, social contact, and increased psychological functioning, adjustment, and well-being. Overall, the strongest relationship to emerge from this study was between perceived reciprocity and recovery. Whether recovery is an outcome or a predictor, perceiving oneself as an equal player in a meaningful relationship where there is some level of give and take does relate to increase in a sense of purpose, hope, and confidence. Reciprocity may work to reinforce positive social identities.

The study failed to include a more diverse representation of clubhouse members with cultural and ethnic backgrounds. Although low, this is consistent with demographic profiles for clubhouses across the state of Michigan. Early research shows no significant differences in network size and characteristics between Caucasian and African American persons with schizophrenia, however, older African Americans with schizophrenia tend to have smaller, kin dependent networks without outside formal contacts (Cohen & Kochanowicz, 1989).

Another limitation of the study included the poor distinction of social network relations during data collection. Family of origin, procreation, and other kin were simply grouped into the category of 'family' without differentiating the individual's role within the family. Nearly all social network studies reviewed failed to differentiate who in the family was included in the network. Understanding *who* in the family is most often part

of the network may clarify the quality of the relationships and *who* in the family of people living with chronic mental illness are sources of support. A great majority of clubhouse members fell within the age range of 36-45, which indicate active activity with family of origin and procreation.

Survey measures such as the Corrigan Recovery Scale may not adequately capture the dynamic process of recovery from mental illness. Yet, direct clinical observations or measures may assume that the absence of symptoms is indicative of recovery. The recovery construct is considered an attitudinal scale and based on reflections of personal experiences and feelings. There has been minimal research to test the validity and reliability of the Recovery Assessment scale used in this study (Loveland, Weaver Randall & Corrigan, 2005). Further, the item response design ranged from 1 (strongly disagree) to 5 (strongly agree), which included a middle response of 3 (not sure). Including a middle alternative can affect responses and the conclusions that can be drawn from the data. Inclusion of a middle alternative in attitudinal scales may attract a significant number of respondents who may be unsure of their opinion. It may be argued that being unsure of agreeing or disagreeing with a statement may suggest that the respondent is finding themselves in the cross-road between low recovery experiences and high indicators of recovery experiences.

The research and literature in recovery is ill defined and continually emerging. The results of this study provide some evidence of the relationship between social network support and recovery, as were found by Corrigan & Phelan (2004). In sum, five main findings emerged from this study. First, families continue to dominate social network support profiles among consumers of mental health; second, network support

sizes are still relatively small; third, club members were least likely to be nominated as sources of support; fourth, engaging in reciprocal supportive relationships with members of one's social network was the single most important concept related to recovery; and fifth, being a regular participant at the clubhouses was related to having a sense of clubhouse community. Overall, sense of community was significantly related increased perceptions of reciprocal relationships with others, more satisfying contact with network supports, and modestly related to an increase in social network size. Taken together, however, these network support dimensions failed to be largely associated with recovery as an overall outcome as revealed by the path analysis. This leads to further exploration of additional correlates to the recovery process not explained by social relationships alone. Loveland, Weaver Randall & Corrigan suggest that social indicators comprised of variables such as employment status, history of hospitalization, and housing may be more related to the construct of recovery, which are considered standards of independent functioning.

### **Clinical Implications**

The literature review found a lack of reciprocity as a salient feature of the social relationship between people living with chronic schizophrenia and network members. This characteristic leaves one highly dependent on others, which can significantly result in strained or stressed interpersonal conflict, and increase emotional reactivity among family members. Although clubhouse members significantly reported greater perceived support from the network, the perception that members viewed themselves as being a provider of support was important in the recovery process.

A recovery orientation offers hope, while normalizing the experiences that can accompany the illness. These approaches are consistent with the values of MFTs, where there is less emphasis on pathology and more attention to individual strengths, personal experiences, affirmation, and acceptance of self. MFTs work collaboratively, using a non-pathological framework to cognitively reframe one's internalized stigma of being labeled with a mental illness. MFTs clinically focus on personal growth and acceptance, management of symptoms in contrast to elimination of the illness, and utilizing extended family supports, which are all parallel to the dimensions of recovery.

According to the Feminist Elaboration of Bowen Family Systems Theory (Knundson-Martin, 1996), individuals develop in the context of relationships, moving toward differentiation in relation to others, not independent from them. The tension between the needs for individuality and the needs for togetherness are not viewed as competing needs, but as compatible. Development of self occurs through connection with others which fosters increased capacity to orient oneself toward relationships, experience more satisfying social contacts, while increasingly developing a distinct sense of self. Overall, this inclusive view of differentiation assists in examining how others are involved with the focal person, by creating a picture of how this person interacts with others.

The concept of recovery in this study is reflective of a personal ideology that incorporates autonomy, social support, and personal confidence. The capacity to function autonomously, while staying connected and engaged with family members was a key finding of this study. Reciprocity with family members emerged as the single most important predictor to recovery among participants who identified family support in their

social network profile. This suggests that recovery is dependent on mutual exchanges of support, which is indicative of one who is more integrated and connected on Knudson-Martin's (1996) dimensions of differentiation. The notion that one can give back in a supportive relationship has significant implications for interventions with family members. MFTs can carry forth that message of "hope and recovery" and identify strategies to increase the likelihood of subjective experiences of recovery, such as confidence, hope, autonomy, and reliance on positive social supports. A timely issue of the Family Therapy Magazine published by the American Association of Marriage and Family Therapists highlighted the recovery movement and described clubhouses, and other psychosocial or peer support programs (AAMFT, May/June, 2005). This study gives attention to an important area in mental health. It gives the message that people living with chronic mental illness can experience meaningful supportive relationships with others, especially families.

Social Network Therapy (SNT) (Wasylenki, et al., 1992) is a specific way the results of this study can be translated or generalized into interventions with individuals and their families. Clinicians can assist individuals and their family members to move from small, kin-dominated networks to include people in the community. Case studies and outcome evaluations using Social Network Therapy have demonstrated greater satisfying family contact between clients and members of their family, less reliance on family support, and greater reciprocity in family relationships. SNT has been described as an intervention to increase overall network size by members beyond the immediate family. Eco-maps provide a concrete baseline assessment on one's social network connections. Clinical strategies include 'constructing' a network by adding new

members. This can be achieved by including peer support programs, clubhouses, and other groups. Clinicians also hold consultation meetings with network members to effect change, as well as take on the role as the network 'coach'. This aspect attempts to educate members about the illness, reduce emotional reactivity among members, and increase more positive interactions. This last strategy is very similar to Bowen Family System Theory of 'coaching' (Bowen, 1978).

The study also demonstrated that contact with family was not an overall predictor of recovery domains. This can suggest that as networks expand to include others beyond kin, there is less reliance on family. This can also help in making for more satisfying contact with family members, instead of contact characterized by high level of strain, burden, or negativity. More satisfying contact with family network members was related to greater personal confidence aspect of recovery, which is consistent with greater level of differentiation.

Overall, the clinical implication of the current study is relevant to professionals in the field of Marital and Family for a number of reasons. First, the current study highlights the parallels between MFTs training and the construct of recovery, and the need for MFTs to return to the roots of the field with a more expansive perspective of mental illness and families. Marital and Family Therapists are in a unique position to respond to the need for training professionals to work with people with psychiatric disabilities and their families (Leroy, Zippel, Marsh, Finely, 2000; Zippel, Spaniol & Rogers, 1990), since the modern family therapy movement was an outgrowth of psychiatry (Broderick & Schrader, 1991). Given the infamous history between family therapy and mental illness, it is important that MFTs shift toward using effective models

in working with individuals and their families. For example, family psychoeducation models have demonstrated efficacious in reducing relapse and hospitalization.

Incorporating an orientation toward recovery compliments these any of these treatment approaches while maintaining consistency with MFTs values.

### **Conclusion**

Mental illness affects not only individuals, but the families who care about them as well. This research showed that social networks members significantly contribute to their recovery process. More importantly, the opportunity to ‘provide support or give back’ to family members, or others is a crucial aspect of the recovery process. Family therapists who work with individuals with chronic psychiatric disabilities are encouraged to assist them in ways to expand social network resources. Assisting them to cognitively reframe their identity as a potential resource to others and focusing less on the self as ‘disabled’ would be helpful.

Caution must be taken in interpreting and generalizing the results of this study, however. This study used a cross-sectional design, which does not allow us to assert that increased social network supports led to increased experiences in recovery. However, this study did establish a relationship between network supports and recovery, as well as clubhouse engagement, social network supports, and recovery. Relationships were modest, suggesting social relationships alone do not account for the variability in recovery. However, the results of this study support findings found in one other social network study using the same recovery measure (Corrigan & Phelan, 2004; Corrigan, Giffort, Rashid, Leary, & Okeke, 1999).



## **Future Research**

Although a number of articles are written about recovery, there is little research examining social network supports and the recovery process. Organizations, programs, and mental health agencies are moving toward creating a culture of recovery. Future research can continue to examine the role social network supports and recovery. Studies must include baseline assessments before interventions and track network growth over time. A scale assessing differentiation along with a subjective measure of recovery can service as a method of assessing how recovery and differentiation of self change in relation to others. It is important to emphasize that differentiation does *not* equate to autonomy. However, as the interpersonal environment of individuals living with chronic mental illness expands to include members beyond kin, it increases the likelihood of more balanced, reciprocal, and satisfying relationships with family that may not be dominated by high levels of emotional reactivity which is characteristic of small, overly dependent family networks (Leff, 1976). Clubhouses can serve as an environment to create new networks, decrease dependency on family, and develop social skills through socialization and interactions in mutual and social reciprocal relationships. Reciprocation of support with members of one's social support network is powerful in changing views of the self from a passive recipient of support to an active resource to others.

## APPENDICES

## APPENDIX A

### Letter to Clubhouse

## **Appendix A**

### **Letter to Clubhouse**

**Dear Clubhouse Members, Managers, & Staff:**

In the past several years, very little formal research on the benefits of psychosocial programs and clubhouses has been conducted in the human services field. However, over the past two years, Michigan State University and the Michigan Department of Community Health have partnered on a project called "The Flinn Clubhouse Project" which has been designed to help us understand how clubhouse programs benefit their members.

During this time, The Flinn Clubhouse Project has been working with several Michigan clubhouses in developing a greater understanding of clubhouse programs for people with mental illness. To date, several clubhouses have participated in various phases of the project such as competing mail in surveys, implementing a member - driven computer database system, and participating in site visits.

These and several other project activities have invaluable contributed to the clubhouse knowledge base in Michigan. One of the intended outcomes of the project will be to compile a handbook of unique clubhouse practices and positive psychosocial outcomes in Michigan clubhouses.

As we move into our third year, The Flinn Clubhouse Project would like to interview members about their experiences as a clubhouse member and their experience with mental illness. Our hope is that an in-depth interview will provide richer, more meaningful information that incorporates the multifaceted aspects of each individual's experiences and the impact of their participation in psychosocial programs.

On the following page is an outline of how we will attempt to facilitate participation of those who are interested in the Member Interview. Please review the process and feel free to call Sandy Herman (517/335-0130) or Esther Onaga (517/355-0166) for clarification or further information.

We hope that your clubhouse will seriously consider this opportunity to be part of a unique knowledge base that will help increase understanding of clubhouse operations and people with mental illness.

Sincerely,

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Sandra Herman, PhD

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Esther Onaga, PhD

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Francesca Pernice-Duca

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Katie Weaver-Randall

---

Chandra Donnell

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SuMin Oh

## **APPENDIX B**

### **Participant Consent**

## **Appendix B**

### **Participant Consent**

#### **Flinn Clubhouse Project**

#### **Psychosocial Rehabilitation in Michigan**

#### **Participant Consent Form**

##### **Purpose**

The purpose of the interview(s) is to learn about your experiences as a clubhouse member and your experiences with mental illness. The interview(s) will cover a variety of topics that are related to your clubhouse membership and who you are.

We will ask you demographic information about where you live, your clubhouse participation and how you feel about the clubhouse, and information about areas in your life that may change with participation. These areas are things like your feelings of empowerment and recovery, your achievements in daily life, your work and social activities, and your physical and mental health.

##### **Interview Procedures**

Participating in the interview(s) will involve the following:

*Contacting You:* We will be interviewing you over the next year. The first interview will take place in the late summer/early fall of 2000. The second interview may take place 6 months later, in the spring/summer of 2001. You will be asked to give us permission to contact people or agencies who will be able to assist us in contacting you in case we are unable to locate you for a possible 2<sup>nd</sup> interview. We will only ask them how we can contact you, and no other questions.

*Interviews:* The interview(s) will have several sections and questions. The interview(s) will be approximately 1 hour long. You can withdraw from the interview(s) at any time. Your answers will be strictly confidential during and after the interview(s). Your privacy will be protected to the maximum extent allowable by law.

##### **Benefits to You**

In the past, many people have found participating in this type of study an interesting and educational experience. For your participation in the interview(s), you will receive \$20 in cash for the first interview and we will pay you in cash if we are able to conduct a second interview.

##### **Risks**

We anticipate no risks to you from participation in these interviews. Some questions may be about difficult or emotional subjects. If you feel uneasy about any of these questions, you can choose not to answer the questions or end the interview.

##### **Voluntary Participation**

Your participation in these interview(s) is completely voluntary. Whether or not you agree to participate will have no effect on the services you receive from the clubhouse or mental health services. You are free to withdraw from participating at any time. You do not have to respond to any question you do not want to answer.

#### Confidentiality

All information during the interview(s) will be kept strictly confidential. Your privacy will be protected to the maximum extent allowable by law. We will not use your name on the interview(s). Instead a number will be used to code your answers. The only people who will have access to your answers will be the Flinn Clubhouse Project Staff. We will be interview about 300 people and all the answers will be groups together and not on an individual basis.

#### Questions or Concerns

If you have any questions or concerns regarding this project, please call the people who are in charge of this project, Dr. Esther Onaga at 517/355-0166 or Dr. Sandra Herman 517/335-0130.

If you have any questions and concerns about your rights as a participant of a study, please call Dr. David Wright, Chair, Michigan State University, University Committee on Research Involving Human Subjects (UCRIHS) 517/355-2180

---

#### Consent Statement

You are being asked to participate in a study that may involve two separate interviews 6 months apart. You indicate your voluntary agreement to participate in the interview(s) under the conditions listed above by signing this consent form.

I have read and been explained the procedures and nature of the interview(s). I have had an opportunity to raise questions and have them answered. I voluntarily agree to participate.

---

participant name (please print)

---

participant signature

---

interview signature

---

date

---

date

## **APPENDIX C**

### **Guardian Consent**



## **Appendix C**

### **Guardian Consent**

Guardian Consent for clubhouse member to be interviewed

Flinn Clubhouse Project

Member Name \_\_\_\_\_

#### **Purpose**

The purpose of this interview is to ask the member named above a variety of topics- demographics information on who he or she is and where he or she lives, information about clubhouse participation and how he or she feels about the club, and information about areas in his or her life that may change with club participation. These areas are things like feelings of empowerment and recovery, achievements in daily life, work and social activities, and physical and mental health status.

#### **Amount of contact**

We will be interviewing clubhouse members over the next year, once in late the summer and fall of 2000 and possibly at another time in the spring and summer of 2001. Each interview will take about an hour.

#### **Benefits**

The clubhouse member will be paid \$20 for the first completed interview. There will not necessarily be any other direct benefits to him or her.

#### **Risks**

No risk to the member is anticipated from participating these interviews. If the member feels uneasy about any of the questions, he or she can choose not to answer them or end the interview.

#### **Voluntary participation**

The member's participation is completely voluntary. Whether or not he or she agrees to participate will have no effect on the services received. The member is free to stop the interview at any time. The member does not have to answer any questions he or she does not want to answer.

#### **Confidentially**

All information given to us will be kept strictly confidential. Individual responses and information will not be shared with others. The only people who will have access to member's answers will be the Flinn Clubhouse Project Staff. All data will be compiled together and presented together, not on an individual basis. The privacy of the member will be protected to the maximum extent allowable by law.

If you have any questions or concerns regarding this project, please call the people who are in charge of this project, Dr. Esther Onaga at 517/355-0166 or Dr. Sandra Herman 517/335-0130.

If you have any questions and concerns about your rights as a participant of a study, please call Dr. David Wright, Chair, Michigan State University, University Committee on Research Involving Human Subjects (UCRIHS) 517/355-2180.

**Consent Statement**

By signing this consent form, I am being asked to agree to permit the clubhouse member named above, for whom I am legal guardian, to participate in this study under the conditions listed above. A copy of this form will be provided to me.

---

guardian signature

---

date

## **APPENDIX D**

### **Human Subjects Approval Letter**

**MICHIGAN STATE**  
**UNIVERSITY** Appendix D  
**Human Subjects Approval Letter**

**Initial IRB  
Application  
Approval**

November 9, 2004

To: Esther Onaga  
27 Kellogg  
Msu

Re: **IRB # 04-874** Category: EXEMPT 1-4  
**Approval Date: November 5, 2004**  
**Expiration Date: November 4, 2005**

Title: MICHIGAN PSYCHOSOCIAL CLUBHOUSE PROJECT DATA

The University Committee on Research Involving Human Subjects (UCRIHS) has completed their review of your project. I am pleased to advise you that **your project has been approved.**

The committee has found that your research project is appropriate in design, protects the rights and welfare of human subjects, and meets the requirements of MSU's Federal Wide Assurance and the Federal Guidelines (45 CFR 46 and 21 CFR Part 50). The protection of human subjects in research is a partnership between the IRB and the investigators. We look forward to working with you as we both fulfill our responsibilities.

**Renewals:** UCRIHS approval is valid until the expiration date listed above. If you are continuing your project, you must submit an **Application for Renewal** application at least one month before expiration. If the project is completed, please submit an **Application for Permanent Closure**.

**Revisions:** UCRIHS must review any changes in the project, prior to initiation of the change. Please submit an **Application for Revision** to have your changes reviewed. If changes are made at the time of renewal, please include an **Application for Revision** with the renewal application.

**Problems:** If issues should arise during the conduct of the research, such as unanticipated problems, adverse events, or any problem that may increase the risk to the human subjects, notify UCRIHS promptly. Forms are available to report these issues.

Please use the IRB number listed above on any forms submitted which relate to this project, or on any correspondence with UCRIHS.

Good luck in your research. If we can be of further assistance, please contact us at 517-355-2180 or via email at [UCRIHS@msu.edu](mailto:UCRIHS@msu.edu). Thank you for your cooperation.

Sincerely,



Peter Vasilenko, Ph.D.  
UCRIHS Chair

c: Francesca Pernice-Duca  
B125 West Fee Hall

**APPENDIX E**  
**Demographic Questions**

## Demographic Questions

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**Read the following to the respondent:**

This interview should take about one hour to complete. During this time I will be asking you several questions about different parts of your life. Many of the questions are easy to answer, others may require a little more time and thought. If any of the questions make you feel uncomfortable please tell me.

The topics that will be covered in this interview include questions about employment, your living situation, your use of the clubhouse program, your physical and emotional health as well as several other topics. I want to assure you that all of your responses to these questions are completely confidential. Your responses will not be shared with anyone at the clubhouse or any other agency.

Do you have any questions before we begin?

(If you are providing food, then ask) Do you have any special dietary restrictions (e.g. low-salt, low-sugar) due to any health problems such as diabetes, hypertension, or weight-restrictions? (If so, please describe in "Notes" section on previous page & give appropriate food as a snack)

## Living Arrangement (LA)

**Instructions** : First, have the participant describe their living situation. Record any relevant information in the box provided below. Then, based on the participant's description answer questions LA1 and LA2. Probe until enough information is gathered in order to accurately answer LA1 and LA2.

Could you tell me a little bit about your living situation? For example, where do you live, who do you live with?

LA1. Where does participant currently live? Check (✓)one that best describes participant's situation.

Homeless (1)	✓
Living in private residence with family members (2)	
Group home (3)	
Nursing care facility (4)	
Residential Treatment setting (5)	
House or apartment (6)	
Supervised home/apartment (7)	
Other _____ Specify (8)	



LA2. Who currently lives with participant? [Check all that apply]

Item	Category	Yes (1)	No (0)
LA2a.	alone	<input type="checkbox"/>	<input type="checkbox"/>
LA2b.	parents	<input type="checkbox"/>	<input type="checkbox"/>
LA2c.	siblings	<input type="checkbox"/>	<input type="checkbox"/>
LA2d.	spouse or partner	<input type="checkbox"/>	<input type="checkbox"/>
LA2e.	friends or roommates who are consumers or clubhouse members	<input type="checkbox"/>	<input type="checkbox"/>
LA2f.	friends or roommates who are <u>not</u> consumers or clubhouse members	<input type="checkbox"/>	<input type="checkbox"/>
LA2g.	own children under age 18	<input type="checkbox"/>	<input type="checkbox"/>
LA2h.	own children over age 18	<input type="checkbox"/>	<input type="checkbox"/>
LA2i.	grandparents	<input type="checkbox"/>	<input type="checkbox"/>
LA2j.	aunts, uncles or other relatives	<input type="checkbox"/>	<input type="checkbox"/>
LA2k.	others specify	<input type="checkbox"/>	<input type="checkbox"/>

## Family configuration (CF)

### Instructions.

If answer LA2, live with spouse or partner, clarify status and check appropriate box. Otherwise, ask question CF1.

CF1. Are you married or do you have a live-in partner?

- ☐ Yes, married (1)
- ☐ Yes, live-in partner (2)
- ☐ No (0)

CF2. Do you have children? (If already know participant has children from LA2 check yes and ask CF2a and CF2b)

- ☐ No (0)
- ☐ Yes (1) If yes, How many children do you have:

CF2a Under age 18? \_\_\_\_\_

CF2b Over age 18? \_\_\_\_\_

## Income (INC)

INC1. Which category best describes your income during the last 12 months (last year)? Check the one which best describes the participant's situation.

✓	Income range	✓	Income range
	Less than \$500 (1)		\$10,000 to \$10,999 (12)
	\$500 to \$999 (2)		\$11,000 to \$14,999 (13)
	\$1,000 to \$1,999 (3)		\$15,000 to \$19,999 (14)
	\$2,000 to \$2,999 (4)		\$20,000 to \$24,999 (15)
	\$3,000 to \$3,999 (5)		\$25,000 or more (16)
	\$4,000 to \$4,999 (6)		Unknown (99)
	\$5,000 to \$5,999 (7)		
	\$6,000 to \$6,999 (8)		
	\$7,000 to \$7,999 (9)		
	\$8,000 to \$8,999 (10)		
	\$9,000 to \$9,999 (11)		

INC2. What was the main (principal) source of your income? Check all that apply.

Item	Category	Yes (1)	No (0)
INC2a.	Employment wages (1)	<input type="checkbox"/>	<input type="checkbox"/>
INC2b.	Retirement Income (2)	<input type="checkbox"/>	<input type="checkbox"/>
INC2c.	Alimony, child support	<input type="checkbox"/>	<input type="checkbox"/>
INC2d.	SDA, SSI, SSDI	<input type="checkbox"/>	<input type="checkbox"/>
INC2e.	Other public assistance	<input type="checkbox"/>	<input type="checkbox"/>
INC2f.	Unemployment compensation	<input type="checkbox"/>	<input type="checkbox"/>
INC2g.	Spouse, Partner, or friend	<input type="checkbox"/>	<input type="checkbox"/>
INC2h.	No income source	<input type="checkbox"/>	<input type="checkbox"/>
INC2i.	Other(specify):_____		

**Living Independence (LI)**  
(Birchwood, 1990 Social Functioning Scale)

**Instructions:** Read each question to the person and based on his or her response circle the number that best describes the person's ability to do or use each of the following.

**Introduction:** *Now I would like to tell me how well you are able to do each of the following activities.*

**[Give Participant Card #3]**

Question	Able	Able with Club Help	Able with other help	Need Help(not currently receiving)	Don't Know/ Unsure	Not applicable (Specify)
LI 1. How well are you able to use public transportation?	4	3	2	1	9	8
LI2. How well are you able to handle money (e.g., making change)?	4	3	2	1	9	8
LI3. How well are you able to budget money?	4	3	2	1	9	8
LI4. How well are you able to cook for yourself?	4	3	2	1	9	8
LI5. How well are you able to do the weekly shopping?	4	3	2	1	9	8
LI6. How well are you able to look for a job? (or wanted to look for a job)	4	3	2	1	9	8
LI7. How well are you able to wash your own clothes.	4	3	2	1	9	8
LI8. How well are you able to take care of personal hygiene.	4	3	2	1	9	8
LI9. How well are you able to clean, tidy your living space?	4	3	2	1	9	8

Question		Able	Able with Club Help	Able with other help	Need Help(not currently receiving)	Don't Know/ Unsure	Not applicable
LI10.	How well are you able to purchase items from shops?	4	3	2	1	9	8
LI11.	How well are you able to leave the house alone?	4	3	2	1	9	8
LI12.	How well are you able to choose and buy clothes?	4	3	2	1	9	8
LI13.	How well are you able to care for your personal appearance?	4	3	2	1	9	8

## DEMOGRAPHIC INFORMATION (DI)

I would like to find out a little bit about your background. You may skip any questions that you do not want to answer.

<b>DI1. What is your date of birth?</b>			
	<b>Month</b>	<b>Day</b>	<b>Year</b>

DI2. I just want to confirm your gender:

What is your gender?

☐ Female (1)

☐ Male (2)

DI3. How do you describe your race, ethnicity or cultural background?

<b>DI3a. Race/ethnicity</b>		<b>DI3b. If Hispanic is selected, Mark all that apply</b>		
<b>Mark one category</b>		<b>No (0)</b>	<b>Yes (1)</b>	<b>Category</b>
<input type="checkbox"/>	Native American (1)	<input type="checkbox"/>	<input type="checkbox"/>	Mexican
<input type="checkbox"/>	Asian or Pacific Islander (2)	<input type="checkbox"/>	<input type="checkbox"/>	Mexican American
<input type="checkbox"/>	African American or Black (3)	<input type="checkbox"/>	<input type="checkbox"/>	Chicano/Chicana
<input type="checkbox"/>	White (4)	<input type="checkbox"/>	<input type="checkbox"/>	Cuban
<input type="checkbox"/>	Hispanic (5)	<input type="checkbox"/>	<input type="checkbox"/>	Puerto Rican
<input type="checkbox"/>	Multi-racial (6)	<input type="checkbox"/>	<input type="checkbox"/>	Other Spanish
<input type="checkbox"/>	Arab American (7)	<input type="checkbox"/>	<input type="checkbox"/>	None
<input type="checkbox"/>	Other (8) _____ Specify			

**Educational status**

DI6. How far did you go in school? (Highest level of school completed.) Check one.

✓	<b>LEVEL</b>
	Never went to school (0)
	1 <sup>st</sup> - 8 <sup>th</sup> grade (1)
	9 <sup>th</sup> - 12 <sup>th</sup> grade, but did not graduate (2)
	High School Diploma (3)
	GED (4)
	Some college, less than degree (5)
	Completed certificate or license program (such as chef, plumber, electrician, etc.) (6)
	2 year college diploma (7)
	4 year college diploma (8)
	Master degree (9)
	Doctoral degree or professional degree (10)

## **APPENDIX F**

**Release for Diagnostic Information**



**Appendix F**  
**Release for Diagnostic Information**

Information on Diagnosis

You are participating in the Flinn Clubhouse Project. As part of the Flinn Project, the team would like to obtain information about your diagnoses to assist in understanding the effects of clubhouse participation on clubhouse members.

I give the staff of the Flinn Clubhouse Project permission to contact the clubhouse staff to get information about my diagnoses.

If you have any questions or concerns regarding this project, please call the people who are in charge of this project, Dr. Esther Onaga at 517/355-0166 or Dr. Sandra Herman 517/335-0130.

If you have any questions and concerns about your rights as a participant of a study, please call Dr. David Wright, Chair, Michigan State University, University Committee on Research Involving Human Subjects (UCRIHS) 517/355-2180

\_\_\_\_\_

Participant Name (Print)

\_\_\_\_\_

Participant Signature

\_\_\_\_\_

date

## **APPENDIX G**

### **Clubhouse Participation**

**Appendix G**  
**Clubhouse Participation**

CP1. How long have you been coming to the clubhouse?

\_\_\_\_\_months \_\_\_\_\_years

CP2. On average, how often do you come to the clubhouse in a week?  
(How many days a week?)

\_\_\_\_\_ days a week

CP2a. If less than once a week ask, how often do you come to the club  
each month?

\_\_\_\_\_times per month

CP3. When you come to the clubhouse, how long do you usually stay?

\_\_\_\_\_ hours

## **APPENDIX H**

### **Social Network Interview\***

## Appendix H

### Social Network Interview\*

\*Scale was formatted to meet graduate school formatting requirements)

#### Directions:

1. Begin by asking probe question #1 at the bottom of the page. For each name that the respondent mentions, turn to the next page and write down their first name and first letter of their last name. Continue recording responses for this question until the respondent is finished and prompt the respondent by asking, "Is there anyone else...?"
2. Continue asking questions 2-4. When you have recorded all the names of the individuals for the remaining questions and the probe number for each one, then proceed to fill in the remaining columns (e.g., sex, know from club, etc.). For each name go across the row asking each of the questions for that one individual. Do this until the chart is completely filled in for each person.

*For this next section, I will be asking you questions about your friends and people who you are close to. I will be asking you to list some of the names of your friends; however, I will not ask you their full name, just their first name and the first letter of their last name. This way you can protect their identity. Do you have any questions?*

#### Probe questions:

1. *when you are concerned about a personal matter—for example, something you are worried about or you are concerned about someone you are close to—who do you talk with?*

<PROMPT for each question>

2. *who do you spend your time with, that is – who do you hang out with?*
3. *who would you ask if you needed to borrow some money?*
4. *is there anyone else important in your life who you have not mentioned? <Probe>*

	What is the first name & first letter of the last name?		Relation to this person? 1=family/spouse 2=friend 3=neighbor 4=professional 5=club staff 6=club member 7=co-worker 8=guardian 9=group home member 10=school friend	What type of things do you & ___ do together?	How often do you have contact with ___? 1=yearly or less 2=few times a year 3=monthly 4=weekly 5=daily	How important is ___ to you? 1=not at all 2=a little bit 3=moderately 4=quite a bit 5=extremely	How satisfied are you with your contact with ___? 1=not at all 2=a little bit 3=moderately 4=quite a bit 5=extremely	How much support does ___ give you? 1=none 2=a little bit 3=moderately 4=quite a bit 5=extremely	How much support do you give to ___? 1=none 2=a little bit 3=moderately 4=quite a bit 5=extremely
S	N	sn_a	sn_b	sn_c	sn_d	sn_e	sn_f	sn_g	sn_h
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									

## APPENDIX I

### Recovery Assessment Scale

## Appendix I

### Recovery Assessment Scale

#### RECOVERY ASSESSMENT SCALE (REC)

[Give Participant Card #4]

***Introduction:*** I am going to read you a list of statements that describe how people sometimes feel about themselves and their lives. For each statement that I read, I want you to tell me which option on this card describes the extent to which you agree or disagree with each statement.

<i>Item</i>	<i>Question</i>	<i>Strongly Disagree</i>	<i>Disagree</i>	<i>Not Sure</i>	<i>Agree</i>	<i>Strongly Agree</i>	<i>Don't Know</i>
REC1.	I have a desire to succeed.	1	2	3	4	5	9
REC2.	I have my own plan for how to stay or become well.	1	2	3	4	5	9
REC3.	I have goals in life that I want to reach.	1	2	3	4	5	9
REC4.	I believe I can meet my current personal goals.	1	2	3	4	5	9
REC5.	I have a purpose in life.	1	2	3	4	5	9
REC6.	Even when I don't care about myself, other people do.	1	2	3	4	5	9
REC7.	I understand how to control the symptoms of my mental illness.	1	2	3	4	5	9
REC8.	I can handle it if I get sick again.	1	2	3	4	5	9
REC9.	I can identify what triggers the symptoms of my mental illness.	1	2	3	4	5	9
REC10.	I can help myself become better.	1	2	3	4	5	9
REC11.	Fear doesn't stop me from living the way I want to.	1	2	3	4	5	9
REC12.	I know that there are mental health services that do help me.	1	2	3	4	5	9
REC13.	There are things that I can do that help me deal with unwanted symptoms.	1	2	3	4	5	9
REC14.	I can handle what happens in my life.	1	2	3	4	5	9
REC15.	I like myself.	1	2	3	4	5	9
REC16.	If people really knew me, they would like me.	1	2	3	4	5	9



<b>Item</b>	<b>Question</b>	<b>Strongly Disagree</b>	<b>Disagree</b>	<b>Not Sure</b>	<b>Agree</b>	<b>Strongly Agree</b>	<b>Don't Know</b>
REC17.	I am a better person than before my experience with mental illness.	1	2	3	4	5	9
REC18.	Although my symptoms may get worse, I know I can handle it.	1	2	3	4	5	9
REC19.	If I keep trying, I will continue to get better.	1	2	3	4	5	9
REC20.	I have an idea of who I want to become.	1	2	3	4	5	9
REC21.	Things happen for a reason.	1	2	3	4	5	9
REC22.	Something good will eventually happen.	1	2	3	4	5	9
REC23.	I am the person most responsible for my own improvement.	1	2	3	4	5	9
REC24.	I'm hopeful about my future.	1	2	3	4	5	9
REC25.	I continue to have new interests.	1	2	3	4	5	9
REC26.	It is important to have fun.	1	2	3	4	5	9
REC27.	Coping with my mental illness is no longer the main focus of my life.	1	2	3	4	5	9
REC28.	My symptoms interfere less and less with my life.	1	2	3	4	5	9
REC29.	My symptoms seem to be a problem for shorter periods of time each time they occur.	1	2	3	4	5	9
REC30.	I know when to ask for help.	1	2	3	4	5	9
REC31.	I am willing to ask for help.	1	2	3	4	5	9
REC32.	I ask for help, when I need it.	1	2	3	4	5	9
REC33.	Being able to work is important to me.	1	2	3	4	5	9
REC34.	I know what helps me get better.	1	2	3	4	5	9
REC35.	I can learn from my mistakes.	1	2	3	4	5	9
REC36.	I can handle stress.	1	2	3	4	5	9
REC37.	I have people I can count on.	1	2	3	4	5	9
REC38.	I can identify the early warning signs of becoming sick.	1	2	3	4	5	9

<b><i>Item</i></b>	<b><i>Question</i></b>	<b><i>Strongly Disagree</i></b>	<b><i>Disagree</i></b>	<b><i>Not Sure</i></b>	<b><i>Agree</i></b>	<b><i>Strongly Agree</i></b>	<b><i>Don't Know</i></b>
REC39.	Even when I don't believe in myself, other people do.	1	2	3	4	5	9
REC40.	It is important to have a variety of friends.	1	2	3	4	5	9
REC41.	It is important to have healthy habits.	1	2	3	4	5	9

## APPENDIX J

### Clubhouse Sense of Community

## Appendix J

### Clubhouse Sense of Community

#### **Sense of Community in Clubhouses (SOC)**

excerpts from J.C. Buckner, 1988 – SOC Scale (items 1-13) & Clubhouse concept mapping results (items 14-20)

**[Give Participant Card #4]**

***Introduction:*** Now I would like to ask some questions about the clubhouse. For each item that I read, please tell me if you strongly disagree, disagree, agree, or strongly agree.

Item	Question	Strongly Disagree	Disagree	Not Sure	Agree	Strongly Agree	Don't Know
SOC1	I feel like I belong to this clubhouse.	1	2	3	4	5	9
SOC2	The friendships and associations I have with other people in my clubhouse mean a lot to me.	1	2	3	4	5	9
SOC3	If the people in my clubhouse were planning something, I'd think of it as something "we" were doing rather than "they" were doing.	1	2	3	4	5	9
SOC4	If I needed advice about something, I could go to someone in the clubhouse.	1	2	3	4	5	9
SOC5	I think I agree with most people in my clubhouse about what is important in life.	1	2	3	4	5	9
SOC6	I feel loyal to the members in my clubhouse.	1	2	3	4	5	9
SOC7	I feel loyal to the staff in my clubhouse.	1	2	3	4	5	9

Item	Question	Strongly Disagree	Disagree	Not Sure	Agree	Strongly Agree	Don't Know
SOC8	I would be willing to work together with others on something to improve my clubhouse.	1	2	3	4	5	9
SOC9	I plan to remain a member of the clubhouse for a number of years.	1	2	3	4	5	9
SOC10	I like to think of myself as similar to the people who are part of this clubhouse.	1	2	3	4	5	9
SOC11	A feeling of fellowship runs deep between me and staff in this clubhouse.	1	2	3	4	5	9
SOC12	A feeling of fellowship runs deep between me and members in this clubhouse.	1	2	3	4	5	9
SOC13	Being part of this clubhouse gives me a sense of community.	1	2	3	4	5	9
SOC14	Being part of this clubhouse helps me to deal with my mental illness.	1	2	3	4	5	9
SOC15	Belonging to this clubhouse helps me have hope for the future.	1	2	3	4	5	9
SOC16	Being a member of this clubhouse helps reduce stigma that I feel in the greater community.	1	2	3	4	5	9
SOC17	Being a member of this clubhouse gives me a place to go.	1	2	3	4	5	9

Item	Question	Strongly Disagree	Disagree	Not Sure	Agree	Strongly Agree	Don't Know
SOC18	Being a member helps me learn new skills.	1	2	3	4	5	9
SOC19	Being a member helps me get a chance to find paid work.	1	2	3	4	5	9
SOC20	Being a member gives me something meaningful to do.	1	2	3	4	5	9

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