VALIDATING THE SELF-DETERMINATION THEORY AS A WORK MOTIVATION MODEL FOR CLUBHOUSE MEMBERS WITH SEVERE AND PERSISTENT MENTAL ILLNESS

by

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DEDICATION

I dedicate this dissertation to the Hawaii Clubhouse Coalition and its members striving to live up to their full potential everyday and who gave me so much “aloha” during my data collection.

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ABSTRACT

Many vocational service providers perceive persons with severe and persistent mental illness (SPMI) to be low on work motivation, yet motivation has been considered to be the most important factor that contribute to a successful employment outcome. Moreover, there is a general lack of understanding in the field of psychiatric vocational rehabilitation about the social and psychological processes that interact to drive volitional behavior.

Self-determination theory (SDT) is a useful framework from which to discern the host of social factors and the subsequent cognitive processes that influence motivation and is the central motivational framework utilized in this study from which an expanded work motivation model was developed which includes: (1) demographic covariates and disabilities related factors (e.g., age, gender, ethnicity, educational attainment, functional disability, secondary health conditions); (2) contextual factors (e.g., cultural orientation, perceived workplace stigma), and (3) the central SDT constructs (e.g., autonomy support, relatedness, vocational self efficacy, autonomous motivation). The contributions of each of the personal, contextual, and SDT factors on the outcome variables (e.g., perceived benefits of vocational program, vocational engagement, stages of change in employment readiness), were examined through a hierarchical regression analysis. The study found that overall, the expanded work motivation model based on SDT accounted for over 51% of the variance in perceived benefits of vocational program, 57% of the variance in vocational engagement, and 43% of the variance in stages of change related to employment readiness for persons with SPMI who are participating in the Clubhouse psychosocial rehabilitation program. This study contributes new knowledge about the utility of SDT to examine work motivation factors for persons with SPMI who are traditionally considered "amotivated" to work. Implications for vocational rehabilitation counseling practice to consider

SDT-based vocational interventions among the Clubhouse members and the important consideration to cultural orientation (e.g., interdependent self-construal, independent self-construal) for ethnically diverse Clubhouse populations, are indicated. However the lack of members actually working for pay and the high number of members receiving both cash and non-cash public support benefits (e.g., SSI, SSDI), are inherent limitations of this study and should be considered for future research.

CHAPTER ONE

Introduction

There is a common misconception among the general public that persons with severe and persistent mental illness are “unmotivated” to participate in and contribute to the overall workforce. This perception persists among service providers in various psychosocial rehabilitation programs and state-federal vocational rehabilitation programs, which provide the primary sources of vocational support for persons with severe and persistent mental illness (SPMI) (Braitman, Counts, Davenport, Zurlinden, & et al, 1995). This problem may be largely attributed to the lack of understanding about the mechanisms that contribute to volitional behavior. Consequently, the service providers themselves may be unknowingly thwarting motivation through their interaction with their consumers.

This study examines the factors that contribute to low or high work motivation for persons with SPMI. An expanded work motivation model is proposed and examined based on the tenants of Self Determination Theory (SDT; Deci & Ryan, 1985). The study is introduced in this chapter by providing a statement of the problem, the theoretical framework, the purpose of this study, and the significance of the study for the field of psychiatric vocational rehabilitation.

Statement of the Problem

The contributions of employment to physical and psychological wellbeing for people with and without disabilities have been well established (Bishop, Chapin, & Miller, 2008). The benefits of employment extend beyond earned wages, as employment also provides psychosocial benefits such as time structure and social status (Dooley, 2003). In contrast, the social costs and mental health effects of unemployment and underemployment are linked to higher incidence of alcohol use, depression and anxiety disorders, violence, lower self-esteem, and lower quality of

life for people with and without disabilities (Dooley, 2003; Dutta, Gervey, Chan, Chou, & Ditchman, 2008).

For persons with SPMI, the positive psychosocial impact of employment includes reintegration into the community, social participation, and the fulfillment of important work roles for working-age adults (Gregitis, Glacken, Julian, & Underwood, 2010). Work is instrumental in alleviating poverty and reduces the reliance on entitlement programs; employment also reduces the costs of care-related needs for persons with SPMI (Cook, 2003). Such persons gain direct work benefits through thinking less about mental health problems and instead focusing on work activities; indirect effects include decreased hospitalization stays and therapeutic gains from mental health services (Cook, 2003; McQuilken et al., 2003). Other definitive effects include an increase in overall self-confidence, self-dignity, and self-respect with gainful employment.

Despite the benefits of work for all individuals, the unemployment rate for persons with disabilities remains high and is even more pronounced for those with SPMI. In fact, the U.S. Department of Labor Office of Disability Employment Policy (ODEP) estimates that the unemployment rate for persons with disabilities is 12.3% compared to 7.9% for persons without disabilities (ODEP, 2013*).* Persons with SPMI have the highest unemployment rate of any disability group, and many are left out of the workforce, unemployed, or underemployed (Cook, 2003; Larson, 2008). The proportion of working age adults with SPMI who are out of the labor force altogether (49.6%) is twice the rate of the general population (24.5%). In fact, the work participation rate of persons with persistent mental illness is consistently about 25% lower than for people with other disabilities (Trupin, Sebesta, Yelin, & LaPlante, 1997). The unemployment statistics for working-age adults with severe and persistent mental illness remain upwards of 85%, according to recent findings from the National Institute on Disability and Rehabilitation

Research (2003), and the rates have remained unchanged since the mid-1980s (Baron & Salzer, 2002). In addition, the competitive employment outcome for consumers served by the state-federal vocational rehabilitation (VR) services are much higher for persons with severe physical disabilities compared to persons with SPMI (Andrew, 1992). Most importantly, persons with SPMI report that they want to work and can work productively in competitive jobs, and they can be integrated into the community with appropriate supports . In fact, the Employment Intervention Demonstration Project (EIDP), a multisite clinical trials study on employment models for persons with severe mental illness, found that their participants earned over $3.5 million and worked more than 850,000 hours during a two-year period (Cook, 2007).

The untapped earning potential of persons with SPMI, along with the social and personal benefits of employment, are clear. However, the staggering unemployment rate continues to challenge vocational rehabilitation and, more specifically, the specialization of psychiatric vocational rehabilitation. There is a lack of resources for psychiatric vocational services; environmental barriers (e.g., workplace stigma, work disincentives) and personal factors (e.g., education level, disability-related factors) contribute to a complex return-to-work effort for persons with mental illness (Baron & Salzer, 2002). In spite of these multiple employment barriers, there are persons with SPMI who are successfully employed at competitive jobs and in integrated settings (Cook & Razzano, 2000; Crowther, Marshall, Bond, & Huxley, 2001; Rogers et al., 2001). The motivational process of gainfully employed persons with SPMI offers vocational rehabilitation insight into the conditions that facilitate work motivation, particularly the role that service providers play in keeping individuals engaged throughout the rehabilitation process.

Despite numerous employment-related benefits and persons' desires to work, perception about the lack of work motivation and low service engagement for persons with SPMI by mental health case managers, employers, and vocational rehabilitation counselors is rampant (Braitman, Counts, Davenport, Zurlinden, & et al, 1995; Gaines, 1975; Kasser, Davey, & Ryan, 1992). This misconception is problematic when considering that perceived non-engagement in vocational services by service providers is a strong predictor of consumer work outcome (Anthony & Jansen, 1984). In addition, work motivation is considered by vocational rehabilitation counselors to be the most important factor leading to an employment outcome, more important than work habits, work history, emotional stability, occupational skills, work tolerance, extent of family support, personal and social history, significance of disability, educational level, intellectual capacity, type of disability, socioeconomic status, and gender (Hayward & Schmidt-Davis, 2005). For persons with SPMI, the additional perceived avolitional (i.e., amotivational) symptoms associated with the disability contribute to the overall perception of low motivation by service providers . The perception of providers is important, considering their authority to release funding and their direct role in delivering vocational services to consumers. Motivation obviously plays a significant role in the participation and success of consumers in receiving vocational services, and the job search process requires substantial persistence because of barriers and setbacks that often occur (Cook, Leff, Blyler, & et al, 2005; Larson, 2008; Manthey, Jackson, & Evans-Brown, 2011; Wagner & McMahon, 2004). Yet the socio-cognitive motivational process of persons engaging in the job search process is not well understood in the extant vocational rehabilitation literature. More profoundly, if consumers are not fully engaged in the vocational rehabilitation process, we must consider ways in which service providers themselves may be hindering consumer motivation without their explicit knowledge (Wagner &

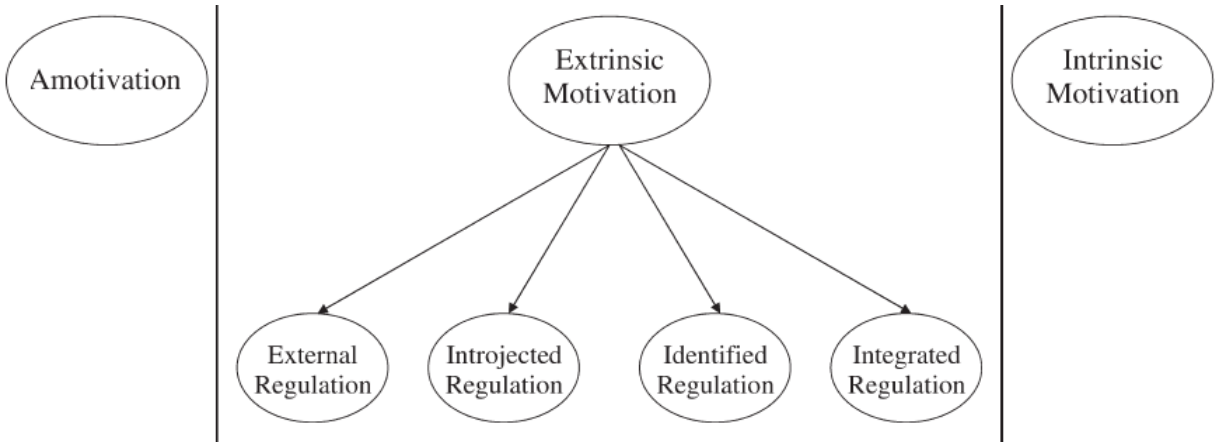
McMahon, 2004). A theoretical framework that not only defines motivation but can also inform motivational vocational interventions for persons with SPMI is necessary for a better understanding of this important employment factor.

The Theoretical Framework

Allied health (Williams et al., 2005), psychology (Deci & Ryan, 1987), sports medicine (Hagger & Chatzisarantis, 2007), and education (Jang, Reeve, Ryan, & Kim, 2009) professionals and scholars have successfully adapted Self Determination Theory (SDT; Deci & Ryan, 1985) to facilitate volitional behavior. SDT is a useful framework from which to discern the host of social factors and the subsequent cognitive processes that influence motivation. The theory links client choice and autonomy as the vehicles to improve motivation and offers utility in providing empowered, self-determined vocational services. Incorporating theory to potentially drive self-determined services is timely, considering the current movement in mental health to enhance treatment adherence with self-determined supports (Larson, 2011) and the continuing state-federal vocational rehabilitation program's emphasis on informed choice. Therefore, SDT is the central motivational framework from which a comprehensive work motivation model has been expanded for this study.

Central to Self Determination Theory (SDT) is the quality of support received from authority figures or other important support systems (Deci & Ryan, 1987). The way that supports are offered can be perceived either as supporting individual choice or as controlling and contingent on the values of others, ultimately determining the quality of the motivation toward the goal-oriented task (Deci & Ryan, 2000). In addition, key factors such as relatedness to others and perceived competence make up the building blocks of self-determined motivation.

SDT conceptualizes varying qualities of motivation that lie along a continuum from amotivation (total lack of motivation) to extrinsic motivation (e.g., external regulation, introjected regulation, identified regulation) to intrinsic motivation (see Figure 1.1). Autonomy support and the integration of extrinsic values to the individual's goal progressively improve motivational quality and move individuals along the motivational continuum. Activities such as work are behaviors initially driven by contingent rewards and encouragement from others. However, whether these external influences are controlling or non-controlling can determine a person's strength of motivation toward work (Fernet, Guay, & Senécal, 2004). According to SDT, more autonomously motivated individuals are theorized to be able to sustain setbacks or difficulties related to a goal, whereas individuals influenced by controlled motivation may be more prone to giving up, especially if contingent reward is removed. This study looks at the main building blocks (e.g., autonomy support, relatedness, competence) that drive motivation according to SDT and their influence on the level of engagement (among other outcomes) in vocational activities for persons with SPMI.



No Motivation	Controlled Motivation	Moderately Controlled Motivation	Moderately Autonomous Motivation	Autonomous Motivation	Inherent Autonomous Motivation
Lack of intentional regulation	Contingent on rewards or punishment	Ego-involved, based on performance and recognition	In line with personal goals and values, instrumental information	Coherence among goals, personal values	Pure enjoyment and inherent interest in task

Figure 1.1: *Self-Determined Motivation Continuum Adapted from Ryan & Deci (2000).*

(*Note:* To apply SDT continuum to work, the relative strength of autonomous versus controlled motivation is important and does not have to move along continuum in one direction. Can remain externally motivated for work related goals.

Statement of Purpose

In order to examine the mechanisms that drive or thwart work motivation and to address perceptions about the lack of motivation for persons with SPMI, this study examines work motivation by expanding the SDT model (Figure 1.2). The expanded model combines personal factors (e.g., functional disability, education level) and environmental factors (e.g., cultural orientation, perceived workplace stigma) with SDT constructs (e.g., autonomy support, relatedness, self efficacy, self-determined motivation) to predict various outcomes related to vocational service engagement. The expanded work motivation model is theory-driven and accounts for the psychosocial factors that are commonly faced by persons with SPMI. The model

is examined within the context of the Clubhouse vocational program model, a widely accessible psychosocial rehabilitation program model designed for persons with severe and persistent mental illness. The study aims to answer the following research questions regarding the motivation of Clubhouse members with return-to-work goals:

Research Question 1: Do SDT work motivation constructs (i.e., demographic covariates; functional disability; autonomy support; vocational self-efficacy; relatedness; self regulated motivation; and person-environment contextual factors) predict Clubhouse members' level of engagement in vocational activities? For this research question, it was hypothesized that all contributing *SDT constructs* account for a significant amount of variance in *engagement in vocational activities.*

Research Question 2: Do SDT work motivation constructs (i.e., demographic covariates; functional disability; autonomy support; vocational self-efficacy; relatedness; self regulated motivation; and person-environment contextual factors) predict Clubhouse members' perceived benefits of vocational program participation? For this research question, it was hypothesized that all contributing *SDT constructs* account for a significant amount of variance in *positive decisional balance for work participation.*

Research Question 3: Do SDT work motivation constructs (i.e., demographic covariates; functional disability; autonomy support; vocational self-efficacy; relatedness; self regulated motivation; and person-environment contextual factors) predict Clubhouse members' stages of change for work participation? For this research question, it was hypothesized that all contributing *SDT constructs* account for a significant amount of variance in *stages of change for work participation.*

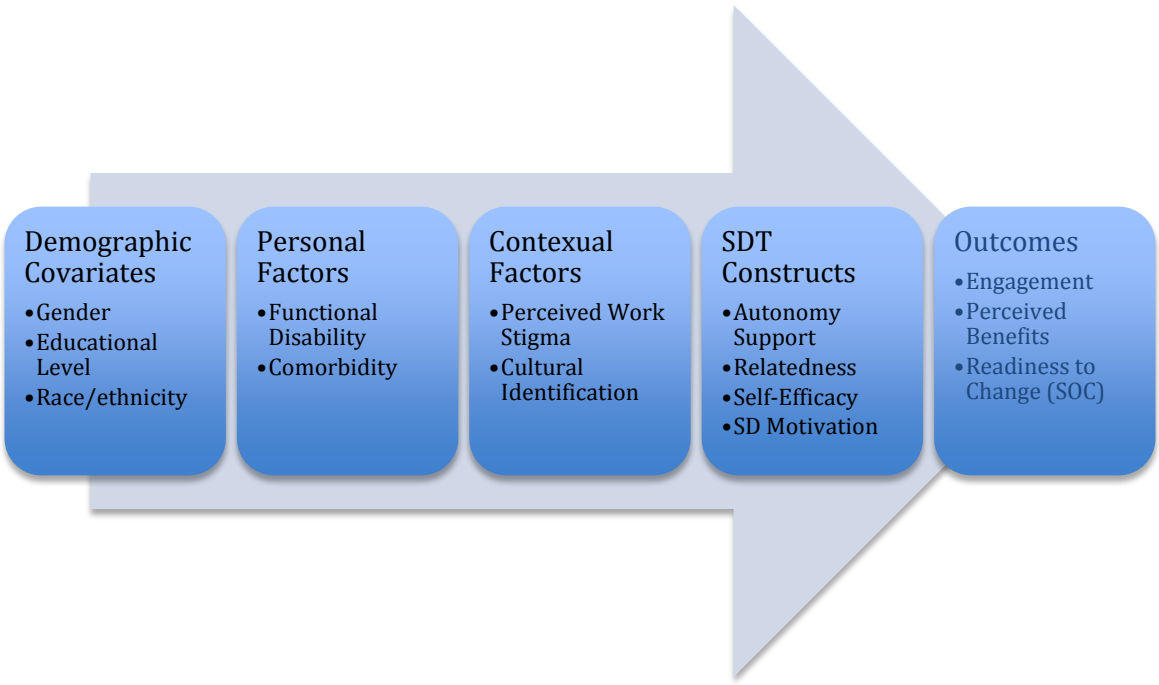


Figure 1.2: Expanded Work Motivation Model

Significance of This Study

Unemployment and underemployment of persons with SPMI continue to be unresolved problems challenging professionals in psychiatric vocational rehabilitation despite the prevalence of evidence-based supported employment models (Bond et al., 2008). Besides the direct benefits of gainful employment, such as increased income and social interaction, there are indirect benefits such as higher quality of life, decreased hospital stays, and increased self efficacy (Gregitis et al., 2010). Numerous policy-related barriers (e.g., Social Security Work Incentive rules), social stigma, and the lack of work opportunities with good pay and benefits, all contribute to the persistent unemployment problem (Baron & Salzer, 2002). Although these policy- and advocacy-level needs are important and will continue to plague the unemployment numbers for persons with SPMI, employment outcomes can be improved through factors within the control of front-line rehabilitation counselors and vocational service providers. In other words, this study is most interested in the factors that can influence vocational counseling

intervention techniques. The intent of this study is to tease out the work motivation factors that can inform the vocational counseling process and offer a new conceptual framework through which counselors can understand the motivational processes for persons with SPMI.

Employment involves a complex set of variables interacting with personal and environmental factors that can either thwart or facilitate motivation and the continued engagement in vocational activities. The socio-cognitive factors that comprise motivation are not well understood in vocational rehabilitation counseling, but they can offer important information for counselors on how to best provide supports for persons with SPMI who are experiencing an array of work-related barriers. There are several reasons for developing a work motivation model to facilitate psychiatric vocational rehabilitation.

First, although motivation plays a significant role in the participation and success of consumers in psychosocial vocational rehabilitation programs, there is a paucity of empirical research on work motivation of persons with disabilities in the extant vocational rehabilitation and psychiatric rehabilitation literature. Consumer motivation was a topical rehabilitation counseling research area in the 1960s and 1970s (Cook, 2005; Gaines, 1975; Lane & Barry, 1970; Wagner & McMahon, 2004), but little motivation research has been conducted in recent years. With the emergence of the evidence-based practice movement, researchers in rehabilitation counseling are encouraged to conduct theory-driven research that can be used to inform and improve the effectiveness of vocational rehabilitation service delivery practices (Chan, Tarvydas, Blalock, Strauser, & Atkins, 2009). This study offers a unique contribution to the literature base because of the lack of current work motivation research, research that can inform counseling interventions (e.g., motivational interviewing).

Second, there is a growing sentiment among researchers regarding the utility of SDT as a research framework from which to think about work motivation (Gagné & Deci, 2005). Although SDT research has predicted work engagement and motivation for the general work population, SDT research on vocational rehabilitation efforts for people with the most significant disabilities is non-existent (Deci, Connell, & Ryan, 1989; Gagné & Deci, 2005). This study is the first of its kind to use the SDT framework to look at the unique work-related variables that affect persons with psychiatric vocational disabilities.

The third reason for a work motivation model stems from the aforementioned common misconception of "low motivation" of consumers of vocational rehabilitation services by the providers of mental health and vocational services. The perceptions of service providers are important because their interactions with consumers can unknowingly lead to biased access to vocational services for persons with SPMI. By increasing understanding of the actual ingredients of work motivation and by examining the motivational processes that lead to vocational engagement, this study can offer explanations and dispel common assumptions about the lack of work motivation of persons with severe and persistent mental illness.

CHAPTER TWO

Literature Review

This chapter reviews the literature pertaining to the research setting, conceptual framework, and variables of interest in this study. The review is divided into five major sections: (1) motivation research in vocational rehabilitation; (2) psychiatric vocational rehabilitation and the Clubhouse model; (3) rationale for a work motivation model in psychiatric vocational rehabilitation; (4) Self Determination Theory (SDT) as a conceptual framework; and (5) the personal and contextual variables that impact vocational engagement and work motivation. These five major sections of this review offer a logical progression into the design of the expanded work motivation model for persons with severe and persistent mental illness (SPMI) and the rationale behind this study, which are all addressed in a sixth major section of this chapter.

Motivation Research in Vocational Rehabilitation

The "Unmotivated" Consumer

Consumer motivation was a topical research area in vocational rehabilitation in the 1960s and early 1970s (Cook, 2005; Gaines, 1975; Lane & Barry, 1970; Wagner & McMahon, 2004). It became a major clinical and research issue when rehabilitation counselors frequently identified their consumers' lack of motivation as a major barrier to employment outcomes. For example, in one study 44% of rehabilitation counselors reported "lack of client motivation" as the central problem in counseling persons with disabilities (Thoreson, Smits, Butler &Wright, 1968). It was evident during this time that there was lack of consensus on what constituted "motivation," but consumers were frequently labeled as unmotivated when they (a) refused to follow prescribed tasks; (b) tried a task but gave up quickly; (c) kept trying but failed to learn; and (d) were not

insightful and did not accept professional definitions and solutions (Safilios-Rothschild, 1970). Thoreson et al. (1968) suggested that motivation was a concern when consumers had unrealistic goals, when consumers received financial aid that acted as a disincentive to rehabilitation, and when not enough jobs were available to consumers. In addition, motivation research during this era revealed that rehabilitation counselors mislabeled consumers as unmotivated when their goals did not match the goals that counselors had in mind for them (Gaines, 1975; Lane & Barry, 1970). As a response to these findings, researchers began to conceptualize rehabilitation counselors' role in motivating vocational rehabilitation consumers as "not designed to force or even seduce people into making decisions that would take away their free choice" (Lane & Barry, 1970, p. 7). It was the first attempt to incorporate autonomy-supportive methods that could facilitate decision-making in the vocational rehabilitation counseling process (Wagner & McMahon, 2004).

Influence of Contextual Variables and Motivation

Subsequent research identified sources of motivation, including contextual variables that led to uncertainty and low expectancies about outcome, suggesting that some unmotivated consumers may have been apprehensive about the risks involved in entering new employment territory (Deitchman & McHargue, 1973). Wright (1980) noted that consumers weighed the perceived costs and benefits related to the goal and often preferred the security of the status quo; this was especially true when persons with disabilities lacked confidence (e.g., self-efficacy) in their ability to execute the related tasks. By the end of the 1980s, key elements that activated change in rehabilitation consumers were identified and included consumers' perceived value in the rehabilitation outcome (e.g., perceived costs and benefits), their perceived self-confidence in executing the task, and their consideration of environmental factors that supported or inhibited

the change process (Roessler, 1980, 1989). Despite these early developments, there is currently a lack of theory-driven motivational research in the rehabilitation counseling literature that systematically investigates the relationship between consumers' motivation and their engagement in the rehabilitation process and that studies psychosocial mechanisms to explain the consumer motivation-engagement relationship. Motivation obviously plays a significant role in the participation and success of consumers receiving vocational rehabilitation services, but the research on motivation for persons with disabilities has not progressed in over 20 years (Cook, 2005; Larson, 2008; Manthey, Jackson, & Evans-Brown, 2011; Wagner & McMahon, 2004).

Work motivation research and SPMI. Work motivation research for persons with disabilities is sparse and outdated, but work motivation research for persons with SPMI is almost nonexistent. Yet persons with SPMI have the highest rates of unemployment among all disability groups and face similar, if not even more, biased perceptions from their service providers about their level of work motivation. One study comparing the employment barriers between unemployed and employed people with SPMI receiving case management services found that "lack of motivation" (i.e., "client does not follow through with links to employment and/or work-related goals") was the most frequently endorsed employment barrier for both groups (33.1%) and, more significantly, for the unemployed (43.1%) group (Braitman et al., 1995). Moreover, the perspective of service providers about the motivation of persons with SPMI is considered the best predictor of future employment outcomes (Anthony & Jansen, 1984).

Motivation and psychiatric symptoms. Persons with SPMI face additional motivational stigma related to their illness, especially for persons diagnosed with schizophrenia. For example, researchers in the neurosciences have attempted to explain the perceived "amotivational" disposition of persons with schizophrenia through the role that dopamine has on incentive

motivation and the dopamine disruption in persons with schizophrenia (Barch, 2005). In addition, one researcher has concluded that persons with schizophrenia lack motivation to parent their own children, which adds to the ungrounded fears about the general lack of motivation for adults with mental illness to fulfill expected adult role functions (Thomas & Kalucy, 2003). Moreover, the medical model and professionals view "avolition or apathy" (diminished ability to initiate or follow through on plans) as one of the negative symptoms of schizophrenia, and the presence of this symptom meets one of the criteria for the diagnosis of schizophrenia according to the Diagnostic Statistical Manual (DSM-IV-TR; Mueser & McGurk, 2004). The DSM diagnostic criteria may be inadvertently perpetuating stigma and perceived lack of motivation for persons with severe and persistent mental illness. However, psychosocial models of disability and consumer-driven psychosocial rehabilitation programs are placing less emphasis on the actual diagnosis and symptoms of mental illness and greater focus on the functional limitations that impact the ability of persons with severe mental illness to participate fully in community life.

The recovery movement and the introduction of psychiatric vocational rehabilitation programs has focused more on the strengths and functional capacities of persons with mental illness and will be the approach taken with this research (Corrigan et al., 2007). Psychiatric vocational services and the supported vocational model of interest to study work motivation, the Clubhouse model, will be discussed in-depth in the following section. The unique approach of the Clubhouse in engaging persons with mental illness in various employment opportunities without judgment on an individual's level of motivation or qualification for employment services is one of many reasons why the Clubhouse was chosen as the research setting for this study.

Psychiatric Vocational Rehabilitation and the Clubhouse Model

Historically, the symptoms of SPMI posed the greatest difficulties with even the most basic work-related tasks (Rutman, 1994). However, significant improvements in the effectiveness of medication and psychotherapy have steered the focus away from the actual symptoms of mental illness as the main culprit in persistent unemployment (Baron & Salzer, 2002). Consequently, improved mental health treatments have led to mandates to deinstitutionalize persons with mental illness, but few vocational rehabilitation programs were ready to address the vocational needs of persons with SPMI who were discharged to community mental health centers (Baron, 2000).

Some innovative vocational programs have become available in the past 20 years, many with an emphasis on supported employment and rapid job engagement (Baron & Salzer, 2002). These vocational programs became an important component of psychosocial rehabilitation programs because employment was recognized as an integral part of the recovery process from mental illness (Corrigan et al., 2007; Rogers, 1995). Although psychiatric symptoms continue to be present for persons with mental illness, psychosocial interventions that account for the cyclical nature of the illness along with interventions that address cognitive deficits, lack of interpersonal skills, and lack of inhibitions that commonly impact vocational functioning, facilitate improvement in employment outcomes (Corrigan et al., 2007). Moreover, research evidence from a large multisite study on employment models for persons with SPMI, the Employment Intervention Demonstration Project (EIDP), shows that less time spent in clinical services and more time spent on vocational services is associated with better employment outcomes, even after controlling for other factors (e.g., work history, functional impairment, disability income; Cook, 2007). In addition, the EIDP study found that employment outcomes

for persons participating in supported employment programs improved over time and that improvement happened in a 24-month period. Therefore, the quality of supported employment programs and sustained engagement in vocational activities should be priorities to improve employment outcomes for persons with SPMI. Currently, there is an array of supported employment services available through state-federal vocational rehabilitation agencies, community mental health centers, and psychosocial rehabilitation programs designed to address the vocational impediments experienced by persons with SPMI (Corrigan, Meuser, Bond, Drake, & Solomon, 2008). A description of supported employment programs and differences among the programs are highlighted.

Supported Employment Services

Definition of supported employment. Supported employment (SE) programs were originally developed for persons with developmental disabilities, but they became widely advocated for persons with severe and persistent mental illness and are now the current standard practice in most community mental health programs (Drake, McHugo, Becker, Anthony, & Clark, 1996). The term "supported employment" refers both to the type of employment status and to the type of employment program found in actual practice (Bond, 2004). As an employment status, SE refers to the definition described by the Rehabilitation Act of 1998: competitive work in integrated work setting consistent with the strengths, resources, priorities, concerns, abilities, capabilities, interests, and informed choice of the individuals for those with the most significant disabilities for whom competitive employment has not traditionally occurred; or for whom competitive employment has been interrupted or intermittent as a result of a significant disability" (Bond, 2004). SE in actual practice refers to the execution of this type of

employment program to assist persons with the most severe disabilities, including persons with severe and persistent mental illness, to obtain and maintain employment.

Supported employment funding sources. Although adequate funding remains a major obstacle for employment services, three main funding sources are available for psychiatric vocational services: (1) the state-federal vocational rehabilitation system; (2) the federal Medicaid system; (3) and the state and local appropriations for mental health services (Fraser et al., 2008). The state-federal vocational rehabilitation program is the largest funding source for all vocational rehabilitation programs, and supplemental funds as grants are issued for supported employment programs to individual states. However, the state-federal vocational rehabilitation program is largely an underfunding agency, producing less than 5% of funding needed to provide vocational services for persons with the most severe vocational disabilities (Wehman & Moon, 1988). Traditionally, funding for vocational services is difficult for persons with SPMI due to one main eligibility requirement for vocational rehabilitation services: because of the limited funding of vocational rehabilitation programs coupled with the requirement that counselors produce competitive employment outcomes, persons with SPMI (perceived as the hardest to rehabilitate) are less successful in attaining approval for vocational rehabilitation services as compared to persons with physical disabilities (Marshak, Bostick, & Turton, 1990). The sources of vocational funding from Medicaid services are even more difficult because the Medicaid reimbursement system necessitates the designation of vocational interventions as a medical necessity, and employment-specific services are difficult to justify as a medical intervention (Fraser et al., 2008). The third main funding source, the mental health system, has incorporated vocational services as a part of case management services or psychosocial rehabilitation

programs. The funding for these programs, however, is vulnerable to funding fluctuations and changing priorities given to vocational service for persons with SPMI.

Supported employment models. A variety of SE models are currently available and practiced in community mental health and psychosocial rehabilitation settings, including but not limited to the Individual Placement and Support (IPS) model, the Program for Assertive Community Treatment (PACT), and the Clubhouse model.

Individual Placement and Support model. The IPS model changed the vocational services from a "train-then-place" to a "place-then-train" model when traditional vocational models (e.g., state-federal vocational rehabilitation) provided little evidence in of utility or significance for persons with SPMI. The traditional programs delayed actual real work experiences in lieu of extensive prevocational skill development and counseling services (Bond 1992; Bond, Drake, Becker, & Mueser, 1999). IPS models differ from traditional train-then-place models because they do not rely on extensive assessment, prolonged counseling and training, sheltered experiences, or professional judgments about when persons with disabilities are ready for competitive employment (Corrigan et al., 2008). The place-then-train, sometimes referred to as the "choose-get-keep," vocational models focus on the consumers' immediate desire and need for employment, rapidly placing individuals in competitive employment and providing on-the-job training or supports as the individual works in competitive employment. Advocates of accelerated entry into competitive employment programs for persons with SPMI find that better vocational outcomes can be documented, including the attainment of competitive employment (especially full-time employment), longer time spent in employment, and better employment earnings compared to supported employment programs with a more gradual approach to vocational rehabilitation, such as the Clubhouse approach (Bond et al., 2004).

Program of Assertive Community Treatment. One popular SE program is based on the Madison PACT program, which delivers SE as a fully incorporated service within their community mental health clinical program. Practitioners within PACT are designated as vocational specialists who devote part of their time to employment and psychosocial rehabilitation, and part of their time to mental health treatment (Bond, 2004; Russert & Frey, 1991). The practice of incorporating clinical services within vocational services has been praised and criticized in the field of psychiatric vocational rehabilitation; integration is seen by supporters as a seamless, wraparound service (Bond et al., 2004) while opponents find that clinical services should be kept separate from psychosocial rehabilitation programs (Beard, 1994).

The Clubhouse model. The Clubhouse vocational model provides multiple pathways to employment, including transitional employment, supported employment, and rapid placement into independent employment, as well as a variety of prevocational skills, work adjustment programs, and agency-run business opportunities. Although SE is an important and central component of the Clubhouse vocational model, it has often been excluded from studies comparing evidence-based SE programs for persons with SPMI; researchers cite the transitional employment program as providing "protected jobs" that taint the adherence to SE principles (Bond, Drake, & Becker, 2008). However, a randomized controlled trial study comparing PACT with the Clubhouse model found that the PACT model (64%) and Clubhouse model (47%) produced statistically similar employment rates, although the Clubhouse members worked significantly longer and had higher earnings (Macias et al., 2006).

Supported employment principles. A variety of SE programs are available, all with some level of demonstrated effectiveness in providing vocational services and with slight

differences in philosophical underpinnings. The evidence-based SE movement has strived for standardization and clearly articulated guidelines for research and practice that are backed by empirical research. Although there are some variations to the SE model for persons with SPMI (e.g., IPS, PACT, Clubhouse), the core principles of SE were influenced by the critical work of Robert Drake and Deborah Becker in the development of the IPS model (Becker & Drake, 1993, 2003; Bond, 2004). Furthermore, the IPS model has been regarded as less of an SE model and more as the standardization of SE principles for persons with mental illness that can be scientifically studied, clearly defined, and implemented in the community (Bond et al., 2004). The key principles of SE are: (a) a focus on competitive employment; (b) eligibility based on consumer choice and readiness; (c) rapid job search; (d) integration of mental health and employment services; (e) attention to consumer preference in the job search; (f) time unlimited, individualized job supports; and (g) benefits counseling services (Becker & Bond, 2002; Corrigan et al., 2008). Research evidence supports the efficacy of most SE programs available for persons with SPMI with high fidelity to the SE principles and with sustained engagement in available vocational services (Bond, Drake, & Becker, 1997; Cook, 2007; Corrigan et al., 2007).

Supported employment principles in the Clubhouse model. The focus of this work motivation study is on the Clubhouse model of psychiatric vocational rehabilitation. The Clubhouse model deviates on only one aforementioned core SE variable: the Clubhouses are largely not integrated with mental health services due to their adherence to their own Clubhouse principles (Appendix A). Clubhouses place a strong emphasis on addressing the psychosocial issues of persons with SPMI, and “treatment” is intentionally separated to provide a safe, consumer-driven rehabilitation agenda. The Clubhouses also provide a diversified placement approach; eligibility is not required for vocational services, and the model’s ability to engage or

disengage in vocational services allows the researcher in this heuristic study to examine process rather than outcomes (e.g., employment). The next section provides comprehensive background information on the Clubhouse.

The Clubhouse Model

The Clubhouse is a psychosocial rehabilitation model established out of the community integration needs of persons with chronic mental illness at a time when individuals were newly released from institutional care. The empowerment-based model provided an alternative to the medical model approach to recovery from psychiatric illness, and the Clubhouse became the alternative rehabilitation option for persons who had become disillusioned with the paternalistic mental health system (Gregitis et al., 2010). Clubhouses promote social participation and work productivity, with the recognition that opportunities in these areas increase the quality of life for persons with SPMI. In fact, Clubhouse principles align with recovery values, which include: (a) individual, interpersonal, and environmental opportunities; and (b) the importance of relationships, including the role of supporting and receiving support from others (Schiff, Coleman, & Miner, 2008). Clubhouses have been recognized by the federal Substance Abuse and Mental Health Services Administration (SAMHSA) as an evidence-based psychosocial practice model (Biegel, Pernice-Duca, Chang, & D'Angelo, 2012). Much of the Clubhouse standard of operation and support is provided by the International Center for Clubhouse Development (ICCD). Membership to the Clubhouse is strictly voluntary and can be self referred, or referred by a mental health service agency. The membership criteria is left intentionally open to anyone living with a mental illness and does not discriminate by diagnostic groups. However, historically, the Clubhouse members have had severe and persistent mental illness and meet the criteria including: 1. A DSM IV-TR diagnosis of having a psychiatric

disorder; 2. Receiving SSI and/or SSDI due to a mental illness; 3. Extended impairment in functioning due to a mental illness; and 4. Reliance on psychiatric treatment, psychosocial rehabilitation, or mental health case management or related supports (Casstevens, 2011).

The International Center for Clubhouse Development. The ICCD is a nonprofit, nongovernmental organization established in 1994 "to provide start up, development, and strengthening of ICCD Clubhouses" (ICCD, 2013). The ICCD oversees standards, training and consultation, certification, research, and dissemination of research findings to the greater Clubhouse community. Although certification by the ICCD is not mandatory, certification demonstrates that Clubhouses are in compliance with Clubhouse standards and ensures fidelity to the evidence-based Clubhouse psychosocial rehabilitation model (Casstevens, 2011).

Several organizational functions make up the ICCD: (a) the Board of Directors; (b) an office team; (c) a consultation and accreditation team (i.e., Faculty for Clubhouse Development); (d) a training team (i.e., Training Base Clubhouses); (e) a Clubhouse Advisory Council; (f) Clubhouse Europe (formerly the European Partnership for Clubhouse Development); and (g) Program for Clubhouse Research (with its own Research Advisory Council). Currently, more than 300 ICCD Clubhouse programs operate in 27 countries worldwide; they are located in urban and rural settings as well as in industrialized and developing countries (Casstevens, 2011).

Clubhouse structure. Clubhouses take a unique departure from other psychosocial program or community support programs in their service provisions, operations, and philosophy in providing psychosocial rehabilitation. Clubhouses have adopted an egalitarian approach to service and program participation in which professional staff and members engage in nonhierarchical partnerships in daily programming and policy development (Townsend, Birch, Langeley & Langille, 2000). The Clubhouses achieve their rehabilitation goals through their

concerted efforts to provide constructive activities and meaningful relationships designed to address issues of social isolation and broader community integration needs of persons with persistent mental illness (Beard, 1992). The Clubhouse standards describe the staff role as "generalist," or one who is active in all components of the program; Clubhouses are left intentionally understaffed to encourage member participation; and both members and staff make up the Clubhouse member's social network (Pernice-Duca, Saxe, & Johnson, 2010). The goals of the Clubhouse include solving many of the problems facing members in daily life, such as issues related to their disability, medical and psychiatric treatment, issues of poverty, inadequate housing, lack of financial and social resources, and unemployment (Dougherty, 1994). The nature of the task, the organization's goals, and the structure of the Clubhouse create a network of easily accessible opportunities for addressing members' social, vocational, educational, and housing needs.

The Clubhouse and employment. Employment is considered a fundamental right of Clubhouse membership (McKay, Johnsen, & Stein, 2005). Consequently, the Clubhouse provides a range of vocational assistance, including career development, rapid job search, job development, on-the-job training, and ongoing job support services. The unique components of the Clubhouse model that contribute to overall vocational rehabilitation efforts are achieved through work-focused activities (i.e., Work-Ordered Day) and integrated work experiences provided through their transitional employment program.

The Work-Ordered Day program. The key to Clubhouse-based employment is the ongoing social support and experiential learning gained from the Work-Ordered Day program (Schonebaum & Boyd, 2012). The long-term loss of the working role for most persons with SPMI has led to significant disruptions to daily structure and habits that are essential for

employment. Regular participation in the Clubhouse and the Work-Ordered Day serves to reestablish this structure and to aid in a smooth transition to work roles (Gregitis et al., 2010). Members volunteer for the daily functions and duties of the Clubhouse and contribute directly to the overall operations. Clubhouse duties include but not limited to (a) intake and orientation of new members; (b) clerical work and preparation of newsletters; (c) horticulture duties; (d) preparation of educational resources; (e) social event planning; and (f) kitchen duties as communal meals are served and prepared daily by the members. Moreover, the Clubhouses have specific work units (e.g., Clerical units, Kitchen, Snack bar, Member Services, Outreach unit, and Employment and Supported Employment units) that focus on specific operations of the Clubhouse; the configuration of the units vary by Clubhouse. In addition to participating in the work units, members operate a thrift store and snack bar that allows engagement in entrepreneurship, because the stores generate a small income that is recycled back into the operation of these nonprofits nested within the Clubhouse.

The Work-Ordered Day typically operates from 9 am to 5 pm, 5 days per week, and is modeled after a task-orientated work schedule with the social programs restricted to evenings and weekends (Schonebaum & Boyd, 2012). Although participation in Clubhouse activities is voluntary, inactivity is discouraged and members encourage each other to establish a foundation of better work habits (Masso, Avi-Itzhak, & Obler, 2001). The Work-Ordered Day allows members to develop the attributes required for successful employment by fortifying their support system and workplace skills in an environment that parallels the typical work setting (Schonebaum & Boyd, 2012). Although there is limited research on the efficacy of the Work-Ordered Day, one study found that higher rates of participation in a Work-Ordered Day were related to longer employment duration per job, even when controlling for prior work history and

symptom severity (Schonebaum & Boyd, 2012). In addition to the Work-Ordered Day, there are opportunities for paid employment outside of the Clubhouse.

Integrated work experience. Inherent in the Clubhouse model is the belief that work has a profound effect on life by providing individuals with a sense of who they are, a chance to explore their talents and capabilities, and an opportunity to build self-esteem (Masso et al., 2001). A range of flexible vocational supports is available through the Clubhouse model's three-pronged approach: transitional employment (TE), supported employment (SE), and independent employment (IE). The continuum of employment supports allows for the cyclical nature of psychiatric illness and the varying degree of supports needed at a given time. Clubhouses offer a wide range of involvement in vocational activities, but the most prominent feature of the Clubhouse vocational program is their TE services (Marcias, Kinney, & Rodican, 1995).

Transitional employment services. TE services are time-limited (i.e., 6 to 9 months), integrated, supported work opportunities that allow persons with persistent mental illness to gain needed work experiences in the community. The program offers members who may be uncertain about work, but are interested in work, the chance to try out work without making a long-term commitment to a particular job (McKay et al., 2005). Although not completely unique to the Clubhouse, this is the vocational approach that is most associated with the Clubhouse vocational model. The part-time jobs are developed by the Clubhouse, and an agreement with the employer includes onsite training and support and covers any absence of the employee directly by the Clubhouse staff or a member. Clubhouse placement managers (rather than the employers) determine who will fill the TE positions, essentially making the Clubhouse responsible for, or "owner" of, the positions. With the Clubhouse in control of placement, members are able to participate in community-based employment while transitioning to more independent,

competitive employment opportunities. True to the Clubhouse philosophy, members are not required to participate in TE, nor are they penalized for moving from a less supported position into one that requires additional supports (McKay et al., 2005).

Supported employment services. Another employment opportunity available to members is the Clubhouse's SE service. Similar to SE programs provided through other vocational programs, the Clubhouse SE program is not time limited, and jobs are not "owned" by the Clubhouse like they are in the TE program (Schiff et al., 2008). SE programs have a competitive job attainment process (e.g., job application, interview), and no absence coverage is provided. Other employment supports, such as on-the-job training, job coaching, and long-term follow-up, are provided by the Clubhouse. Jobs may be full- or part-time and pay competitive wages. The Clubhouse may have a relationship with the employer, although in SE programs the employer selects the employee.

Independent employment services. Members can choose to directly participate in an SE program or to graduate from a TE program into more permanent, competitive employment opportunities without losing the support of the Clubhouse. IE services are distinguished from SE services by the lack of a relationship between the employer and the Clubhouse and the absence of onsite supports. IE positions may be full- or part-time and "belong" to the members employed in them. Only long-term supports are provided to the members, and members are expected to undergo the competitive interview and selection process to secure IE positions.

Advantages of integrated work experience. All of the community-based employment opportunities (TE, SE, and IE) meet the federal definition of competitive employment, and positions earn at least a minimum wage (McKay, Johnsen, & Stein, 2005). The TE is the major employment component of the Clubhouse, with 47% of employed members participating in a

least one TE during a 4-year period (McKay et al., 2005). The flexibility to participate at any point along the Clubhouse employment continuum creates a supportive environment in which members move between levels of employment supports or try out different jobs rather than remaining unemployed (McKay et al., 2005). Interestingly, a study on the Massachusetts Clubhouse and their members' movement across various levels of vocational supports found that individuals move between employment supports and that, in fact, members are more likely to move toward more independent employment (McKay et al., 2005). Other studies have found that members who are initially not interested in work become employed after involvement with Clubhouse activities (Marcias et al., 2001). In comparison to other employment programs, which have exclusion criteria and restrict services to individuals actively expressing an interest in working, the flexible try-out model of the Clubhouse allows amotivated individuals to find an appreciation for the benefits of employment. It is within the Clubhouse context—which offers vocational service without contingencies (e.g., identified work goals)—that this study examines a model incorporating the full motivational spectrum (e.g., amotivation to intrinsic motivation).

Rationale for a Self-Determined Work Motivation Model

Several reasons exist for using Self Determination Theory (SDT) when developing a work motivation model for persons participating in psychiatric vocational rehabilitation. First, there is a gap in the vocational rehabilitation literature that examines the consumer's motivation to work. A motivational framework based on SDT looks at the internal process of individuals, and their vantage point is critical in determining the social factors that are contributing to motivational quality. A study that compared the perceived motivation and dependability between employees and supervisors in a sheltered psychiatric vocational rehabilitation setting found that the employees rated themselves higher on work readiness than did their vocational supervisors

(Kasser, Davey, & Ryan, 1992). Moreover, the employees' higher self-ratings of motivation and work readiness were related to greater work participation and work performance. An overreliance on counselors' or service providers' ratings can lead to lower ratings overall, as well as the possibility of missing the important internal processes (perceived autonomy, self-efficacy, and relatedness) that drive motivation (Kasser et al., 1992). The socio-cognitive factors that contribute to the consumer's motivation are much more useful and informative to vocational rehabilitation counselors who are developing direct interventions and policies to improve vocational services for persons with SPMI. However, there is currently limited information on how SDT can be applied to psychiatric vocational rehabilitation.

Second, a paradigm shift is occurring within the mental health system through its efforts to increase the participation of consumers with serious mental illness in evidence-based practices and to align services to the recovery model that calls for personal empowerment and self determination (Corrigan et al., 2012). The mental health system is making a concerted effort to move to a self-determination model in which the actual engagement in services is sought through collaboration in services, personal control, and shared decisions in treatment and program options. The marker of quality mental health services has fundamentally shifted from an outcome focus to a process orientation whereas, previously, strategies to increase compliance included inpatient and outpatient commitments, coercion, and loss of personal control over mental health care. An examination of work motivation and vocational engagement that uses SDT as a conceptual framework is in alignment with this major paradigm shift in the mental health system.

Third, a definitional consensus is lacking on the constructs of motivation in the extant vocational rehabilitation literature, despite its perceived importance. For example, "low

motivation" has been defined by consumer actions such as not following through with prescribed tasks, giving up quickly, failing to learn new tasks, or not accepting professional solutions (Safilios-Rothschild, 1970). Early rehabilitation counseling research revealed that counselors mislabeled consumers as "unmotivated" when their goals did not match the goals of the counselor (Gaines, 1975; Lane & Barry, 1970). There are different theories about motivation (Bandura, 1986; Miller, 1985, 2006), and motivation has been broadly defined as an expressed interest in change, as goals and intentions to change, as the commitment to change, as the behavior that needs to be sustained to achieve a goal, or as incentives for change (Di Clemente, Schlundt, & Gemmell, 2004; Miller & Rollnick, 2002). A motivational construct with a clear theoretical base, and with research evidence and valid measurements, can inform and enhance vocational interventions. SDT provides a well-defined framework that will be well received in the fields of vocational rehabilitation and psychosocial rehabilitation, where informed choice and personal empowerment are paramount to the theory. SDT (Deci & Ryan, 1985) is described in detail in the following section in order to provide a comprehensive understanding of its theoretical constructs and to highlight its relevance in an examination of work motivation for persons with psychiatric vocational disabilities.

Self-Determination Theory: A Theoretical Framework for Motivation

SDT provides a framework through which to identify the social forces of motivation and the subsequent cognitive evaluation process that engages people to pursue and stay engaged with the goal attainment process (Ryan & Deci, 2002). The SDT theory is grounded on the assumption that human beings have a tendency toward self-growth (e.g., to seek challenges, to make new discoveries, and to internalize experiences), that they actively integrate their knowledge into their personalities, and that intrinsic motivation defines optimal motivational

functioning. The major life pursuit of gainful employment, with competing motives simultaneously at play for persons with SPMI, can be understood from the multidimensional constructs that make up this theory. SDT is composed of the following four dimensions, or "mini-theories": (1) *organismic integration theory* explains the process of integrating extrinsic motivational activities toward intrinsic motives; (2) *cognitive evaluation theory* describes the effects of social contexts on intrinsic motivation; (3) *causal orientation theory* highlights individual differences in tendencies to regulate social environments; and (4) *basic needs theory* links the relationship between motivation and psychological functioning as well as emotional well-being (Ryan & Deci, 2002). The basic assumption inherent in SDT is that intrinsic motivation is preferred over extrinsic motivation. The following sections provide a description of the intrinsic assumption and the four mini-theories that comprise SDT.

Extrinsic Versus Intrinsic Motivation

Early investigation into the quality of motivation was influenced by Skinner's (1953) behavioral reinforcement theory, which defined preferred intrinsically motivated behaviors as engagement in behaviors in the absence of reinforcements. Empirical research that followed found that contingent rewards, such as monetary rewards (Deci, 1975), deadlines (Amabile, DeJong, & Lepper, 1976), and surveillance (Lepper & Greene, 1975), actually undermined intrinsic motivation. In contrast, the provision of choice (Zuckerman, Porac, Lathin, Smith, & Deci, 1978) enhanced intrinsic motivation, and a shift occurred in motivational research that emphasized perceived locus on causality and autonomy to strengthen intrinsic motivation (Tafordoi, Milne, & Smith, 1999). These findings propelled researchers to consider the importance of personal choice and inner experience and how they may contribute to the motivational process (Deci, 1975; Deci & Ryan, 2000). More specifically, SDT explained how

external motivators or forces converge with inner desire to change and serve as a useful way to move toward intrinsic motivation. In essence, intrinsic motivation represents a prototype of self-determined activity.

Organismic Integration Theory

Organismic Integration Theory (OIT; Deci & Ryan, 1985b; Ryan & Connell, 1989) assumes that humans are inclined to integrate and internalize their ongoing experiences based on the "nutriments," or the external social prompts, in the environment that encourage them to try a variety of activities (Ryan & Deci, 2002). The significant others, or salient reference group (e.g., other Clubhouse members), and the methods (e.g., controlling or autonomously supportive) that drive individuals to try uninteresting activities also affect the way people internalize the activity and transform the externally regulated behavior into self-regulated behavior (Schafer, 1968). The internalization process incrementally moves an individual along a continuum toward more self-integrated and self-determined behavior. In addition, socio-contextual nuances interact with personal factors to predict a person's movement along the continuum. The underlying mechanism that moves individuals toward full integration represents one of many significant contributions of SDT to an understanding of human motivational behavior.

A taxonomy of regulation types employed for externally motivated behavior, and the extent to which the behavior is emanating from the self, can define the quality of the motivation engaged in by the individual (Ryan & Deci, 2000). SDT expanded and differentiated the concept of perceived locus of causality, which describes intrinsic motivation as the amount of control perceived by the individual, whereas extrinsic motivation is defined as initiation and regulation that is external to the individual (DeCharms, 1968; Heider,1958).

SDT has differentiated several types of extrinsic motivation and has defined the process toward quality motivation through identification of five self-regulatory processes. The five types of self-regulation can be placed along the motivational spectrum from amotivation to intrinsic self-regulated motivation. *Amotivation*, the lack of motivation and intention to change and the nonregulation of behavior, is related to an individual's feeling of incompetence to perform an activity due to a perceived lack of desired outcome. *External motivation*, which most closely resembles the classic understanding of extrinsic motivation, is characterized by goal pursuits that are dependent on contingent rewards, where the external regulation is controlled, and sustained motivation is poor when the contingencies are withdrawn (Deci & Ryan, 1985). *Introjected motivation* is the partial internalization of external rewards, where the regulations involve the ego and have not been fully incorporated into the individual's self with the contingent consequences administered by others (Ryan & Deci, 2000). *Identified motivation* is the recognition of the value of the activity and is related to the individual's identity, but it is instrumental motivation (e.g., leading to better health or increased quality of life) rather than motivation that is spontaneous and a source of enjoyment or satisfaction. Regulation based on identification is associated with higher commitment and performance and represents the motivation that best sustains action toward employment goals. *Integrated motivation* is the complete form of internalization of extrinsic motivation; motives are integrated into the individual's self-concept, personal values, and identity.

These differences in motivational and regulation types are important aspects to consider when designing psychiatric vocational intervention services. For example, when a consumer's internalization process is forestalled or individual values remain external (e.g., partially internalized to form an introjected or identified motivation), concerns about the consumer

become salient issues worth exploring through vocational intervention or, for example, through the peer-staff relationship in the Clubhouse. Such relationships and additional sources of support in the consumer's life must be considered sources of motivation because they make up the socio-contextual variables that influence the consumer's location along the motivation continuum.

Cognitive Evaluation Theory

SDT accounts for the social conditions in which people develop and function that can either nurture or inhibit the volitional process largely as a function of social climate. Cognitive evaluation theory (CET) offers an explanation of how people internalize social cues and how motivational climate contributes to motivation (Ryan & Deci, 2000). CET specifies two main cognitive change processes that occur and that determine the quality of motivation through the clues provided by the contextual climate, including perceived locus of causality (the extent to which a person perceives behavior initiation as his or her own) and perceptions of personal competence (the extent to which a person believes that he or she can execute a behavior). Deci and Ryan (1980) described perceived locus of causality as relating to a human need for autonomy, and when individuals are prompted by an external causality for a rewarding activity, it undermines and shifts the orientation of intrinsic motivation to externally regulated motivation. In contrast, when an individual is prompted by the environment to adopt a more internally perceived locus of control, enhancement toward intrinsic motivation is made possible (Deci & Ryan, 2002).

According to CET, positive feedback can predict and enhance intrinsic motivation if it meets the needs for perceived autonomy and perceived competence in relation to an activity (Fish, 1978; Ryan, 1982). Furthermore, CET specifies that individuals engage in *functional significance*, meaning that they often construe environmental input and feedback in relation to

their behavior as informational or controlling (Deci & Ryan, 2002). Informational communication and events support an individual's experience of competence and provide an effectance-relevant input, whereas controlling aspects of the social environment that are pressured toward specified outcomes thwart intrinsic motivation and move an individual to an external locus of causality. Even with perceived competence and self-efficacy being equal, the source of motivation (e.g., intrinsic versus extrinsic) is a better predictor of motivation (Ryan & Deci, 2007). Therefore, the perceived autonomy support received from Clubhouse staff were considered to be a significant predictor within the SDT model in this study.

Causal Orientation Theory

Humans can be proactive and fully engaged in goal pursuit, or they can be passive and estranged from major life pursuits (Deci & Ryan, 2000). Causal orientation theory (COT) adds another dimension to the understanding of motivational influences by factoring in how inner resources develop over time and how they affect orientation toward the social world (Deci & Ryan, 2002). In essence, understanding people's immediate social environments and developmental contexts allows researchers to examine people's ability to integrate social environmental clues and how motivation toward self-growth may have been nurtured or neglected (Ryan & Deci, 2000). Inner resources that have been cultivated through time make up the stable individual differences in a person's motivational orientation.

COT factors in those personality aspects that are integral to the integration of behavior and experience by differentiating among three motivational orientations: autonomous orientation, controlled orientation, and impersonal orientation. *Autonomous orientation* is defined by behavioral regulation that is based on interest and self-endorsed values and is characterized by the person's tendency toward integration and intrinsically motivated behaviors. *Controlled*

orientation refers to an orientation toward controls and directed behaviors. It is characterized by public self-consciousness and is most related to external and introjected regulation. *Impersonal orientations* are behaviors that lack intentional action and have been found to be related to self-derogation, low self-esteem, and depression (Deci & Ryan, 1985b).

Overall social context can catalyze within- and between-person differences in motivation toward growth, and individual motivational orientation is based on different early-life experiences. In other words, many different early experiences can lead to the same psychological and situational outcomes (Ryan & Deci, 2000). For example, a study that investigated the causal orientation of employees found that workers high in autonomous orientation perceive authority (e.g., management, supervisors) to be supportive and are attracted to a work environment that is supportive of their self-regulation (Baard et al., 2004).

Basic Needs Theory

Optimal motivational functioning is achieved when psychological needs that support healthy functioning are satisfied. According to SDT, these universal needs are identified as *autonomy* (experiencing choice and feeling like the initiator of one's own actions; deCharms, 1968; Deci, 1975); *competence* (succeeding at optimally challenging tasks and attaining desired outcomes; Skinner, 1995; White, 1959); and *relatedness* (a sense of mutual respect, caring, and reliance on others; Baumeister & Leary, 1995; Deci et al., 2001; Harlow, 1958). When the fulfillment of these needs is thwarted or the needs are left unfulfilled, dysfunction and negative motivational consequences may result (Deci & Ryan, 2002).

A multidimensional approach that includes multiple psychosocial constructs is needed to complete the SDT motivation model. For example, models that consider only one necessary antecedent to intrinsic motivation, such as self-efficacy theory (Bandura, 1989), may

overemphasize competence as a motivational factor and discount the significance of autonomy. SDT argues that self-efficacy (e.g., competence) without perceived autonomy will not foster motivation (Deci & Ryan, 2007). In addition, SDT considers the significance of environmental factors that are antagonistic or supportive of the person's innate tendency toward growth and integration. In fact, basic psychological needs act as mediators between social environmental variables and engagement in a motivational task (Deci & Ryan, 2000). These psychological nutriments derived from the environment will be described in detail later in this chapter, in a discussion of the environment's relationship to intrinsic motivation.

Autonomy. The influence of perceived locus of causality (deCharms, 1968; Heider, 1958) on motivational orientation has been empirically supported. A meta-analysis of 128 studies confirmed that a shift in the locus of causality (from internal to external drives) impacts whether individuals experience intrinsic or extrinsic motivation (Deci, Koestenr, & Ryan, 1999a). Deci and Ryan (1980) built upon this knowledge to include autonomy, a psychological need free from external control, as a driving force behind intrinsic motivation. It is important to note that autonomy is different from independence, because the latter refers to action without reference to or support from another person (Ryan, 1993; Ryan & Lynch, 1989). The social climate that supports autonomous need is the focus of much discussion in SDT research.

Autonomy support. According to SDT, self-regulation and the process of internalization is dependent on the individual's perception and interactions with the social climate. Perceived autonomy support is fostered through quality support provided by significant others (e.g., parent, counselor, teacher, Clubhouse staff) in a motivational context (Reeve, 2002; Reeve, Bolt & Cai, 1999). Autonomy-supportive persons acknowledge another person's thoughts, feelings, choice, and self-regulation of behavior with minimal use of pressure and

demand to control (Ryan & Deci, 2000). In contrast, a controlling interpersonal style pressures others to think, act, and feel in a way that is consistent with the needs and wants of the person doing the controlling. A laboratory experiment by Deci, Eghrari, Patrick, and Leone (1994) isolated three elements of autonomy support: (1) providing a meaningful rationale for behavior change; (2) acknowledging people's feelings and perspectives; and (3) exhibiting an interpersonal style that encourages choice and minimizes control. The study found that these autonomy-supportive elements predicted greater internalization and integration.

Autonomy support has largely been examined and validated in health promotion studies on medication adherence (Williams, Rodin, Ryan, Grolncik, & Deci, 1998), weight loss (Williams, Grow, Freedman, Ryan & Deci, 1996), alcohol treatment (Ryan, Plant, & O'Malley (1995), glucose control for persons with diabetes (Williams et al., 1998), and smoking cessation (Williams, Cox, Koudies, & Deci, 1998; Williams, Gagne, Ryan, & Deci, 2002). In addition, a study on employment context and autonomy found that an autonomy-supportive interpersonal climate created by management in an organization predicted satisfaction of three basic needs of their workers (Baard et al., 2004).

Competence. Competence, one of the psychological needs identified by SDT (Ryan & Deci, 2007), is defined as feeling effective in one's capabilities and having a sense of confidence. Competence is not an attained skill or capacity but, rather, refers to the perception of one's ability to meet challenges and enhance skills through engagement with activities. The concept is based on White's (1959) effectance motivation theory, which conceptualizes competence as an innate drive. Humans are driven to investigate and master the environment, with life experiences having an impact on the strength and quality of the individual's competence (McClelland,

1951;Veroff, 1965). Although people's development and socio-contextual experiences shape their competence motivation, their perceived competence for various tasks is highly malleable.

Research has found that positive feedback that is informational in nature and allows competencies to be met by the individual, are optimal factors that move individuals toward intrinsic motivation (Deci & Ryan, 1980, 1985b). The quality of the feedback makes a substantial difference; feedback that is rich in information about the performer's competence, rather than just feedback on outcome, is likely to foster and promote intrinsic motivation (Hein & Koka, 2007). The sources of competence and the delivery of feedback become important components of SDT theory that are used by vocational service providers who are employing motivational counseling techniques. Sources of competence are comprised of immediate support systems (e.g., parents, peers, teachers, service providers), self-comparison, speed and ease in learning new skills, amount of effort exerted, enjoyment of or attraction to the activity, performance and achievement of goals, and feelings associated with the outcome (Horn, Glenn, & Wentzell, 1993).

Relatedness. The primary reason individuals engage in externally motivated actions (even in the face of an uninteresting activity) can be attributed to the prompting of that behavior and modeling by significant others to whom they can relate (Ryan & Deci, 2000). Oftentimes these significant others exercise some level of authority as a role in the person's life or have some expertise on the subject (e.g., parents, teachers, and counselors), but these are not necessary prerequisites. For example, students who considered their teachers to be warm and caring experienced greater intrinsic motivation than did students who considered their teachers to be cold and distant (Ryan & Grolnick, 1986; Ryan, Stiller, & Lynch, 1994). A relational base may provide a sense of security to encourage the expression of innate growth tendencies (Deci &

Ryan 2000). Relatedness to one's social environment is particularly important to facilitate internalization when the individual's motivation is poorly integrated, as is the case for many members of the Clubhouse (Deci & Ryan, 2000). Overall, SDT research has found that autonomy and competence have the most influence on intrinsic motivation, but relatedness plays an integral part in the initiation and maintenance of motivation (Sarrazin, Vallerand, Guillet, Pelletier, & Cury, 2002). For the Clubhouse members of interest in this study, relatedness to other Clubhouse members and to Clubhouse staff is expected to contribute significantly to the overall work motivation disposition of its members.

The Expanded Work Motivation Model

SDT provides a framework that incorporates environmental nutriments and social cognitive orientations that elicit the motivational process. However, due to the complexity of issues that persons with SPMI face with vocational engagement, the model examined in this study has expanded the SDT model to incorporate current knowledge from vocational rehabilitation and psychiatric rehabilitation. This expanded model aims to account for the multiple factors and decision-making points leading up to the actual engagement in vocational activities. The inclusion of personal and environmental factors not accounted for by the SDT model to predict work motivation are included in this study and are discussed in the following sections.

Contributions of Personal and Environmental Factors

Rehabilitation researchers and scholars have consistently recognized the need to consider contextual and environmental factors in the development of effective vocational rehabilitation counseling practice. An expanded work motivation model for persons with SPMI must therefore include personal and environmental factors that impact work-related decisions. Personal factors

in this study include demographic factors, disability-related factors, and secondary health conditions. Environmental factors include perceived work stigma, perceived financial barriers to work, and cultural differences (e.g., collectivistic, individualistic). Also included throughout this section is a review of vocational rehabilitation counseling and psychiatric rehabilitation literature regarding these factors.

Personal Factors

In the SDT literature, the degree to which individuals experience need satisfaction in various social contexts is mediated by the individual characteristic and overall quality of their experience (Stajkovic & Luthans, 1998). Orientation toward self-determined goals is largely defined by the quality of the supports received from immediate others and authority figures involved in the goal-oriented task and will be described in detail later in this chapter. According to the rehabilitation literature, demographic characteristics (e.g., age, gender, race/ethnicity, educational level) and disability-related factors (e.g., types of disabilities, severity of the functional impairment), along with vocational services, have been shown to account for 33% of the variability in competitive employment and attest to the considerable weight that personal factors play in predicting vocational rehabilitation outcomes (Bolton, Bellini, & Brookings, 2000).

Demographic characteristics. Vocational rehabilitation counseling research has shown consistent relationships between demographic variables (e.g., age, gender, and race/ethnicity) and employment outcomes for consumers in the state-federal vocational rehabilitation services (Bolton et al., 2000; Dutta et al., 2008). For example, consumers competitively employed after receiving vocational rehabilitation services are younger than consumers who are noncompetitively employed, and there is some indication that return-to-work success decreases

with increasing age (Hayward & Schmidt-Davis, 2003; Selander, Marnetoft, Bergroth, & Ekholm, 2002). In general, more males than females have obtained competitive employment (53% versus 47%), although the gender differential dissipates with age as unemployment increases for both genders (Smith, 2007). In contrast, Xu and Martz (2010) have found that older age is a stronger predictor of employment at vocational rehabilitation case closure. The researchers in this study attributed the improved outcomes to greater maturity, more awareness of extrinsic and intrinsic rewards of work, and greater life and financial responsibilities.

More specifically, research on the impact of demographic characteristics on employment for persons with SPMI has shown that the labor force drop-out rate occurs at a younger age and to a greater degree than in the general population (Burke-Miller et al., 2006). The drop-out rate is also more amplified for non-whites with SPMI than for whites with SPMI. Although competitive employment rates were no different between genders, men with SPMI were more likely to work more hours than were women with SPMI.

***Racial disparity*.** Persons with disabilities who are from racial and ethnic minority groups have decreased odds of finding employment even after receiving vocational rehabilitation services (Hayward & Schmidt-Davis, 2003; Smith, 2007). For example, African American and Native American vocational rehabilitation consumers have a consistently lower chance of obtaining employment (Dutta et al., 2008). In addition, race/ethnicity has been found to contribute to differences in vocational rehabilitation service delivery; for example, a significantly higher percentage of European Americans received university training and assistive technology services, while a larger percentage of African Americans received supported employment and job readiness training (Romero-Ramirez, 2010). A study utilizing chi-squared automatic interaction detector (CHAID) analysis found that vocational rehabilitation consumers with spinal

cord injuries with the best employment outcome were women, were not receiving public assistance, were without transportation barriers, and had substantial counseling services, educational training, and job placement services (Marini, Lee, Chan, Chapin, & Romero, 2008). Clearly, there is an interaction among individual characteristics, vocational services delivery patterns, and employment outcomes for vocational rehabilitation consumers.

The psychiatric rehabilitation literature paints a similar picture about racial disparity: being white with a mental illness had a significantly more positive relationship with successful employment outcome as compared to membership to a racial/ethnic minority group (Burke-Miller et al., 2006). In addition, minority consumers with SPMI were also more likely to work more hours in a given month.

Educational achievement. For persons with SPMI, educational attainment is directly related to the onset and the struggle with mental illness (Kessler, Foster, Saunders, & Stang, 1995). Early onset of mental illness and diagnosis of schizophrenia are related to lower graduation rates from high school and even lower college graduation rates. One of the significant findings from the Employment Demonstration Intervention Project is the impact of education on employment. Persons with less than a high school education were 40% less likely to achieve an employment outcome. Moreover, the fastest growing occupations in the labor market are those that require at least a 2- to 4-year college degree or technical training; the lack of educational preparedness is a glaring vocational disadvantage for persons with SPMI (Cook & Burke, 2002).

Because of the impact of numerous demographic factors on competitive employment outcomes for persons with SPMI, the aforementioned demographic characteristics (age, gender, race/ethnicity, educational level) of participants were included as person-related factors in this

study's expanded work motivation model.

Functional impact of disability. Disability-related characteristics have a profound impact on successful employment outcomes for persons seeking vocational services. More specifically, certain types of disability, less assistance for personal care needs, and lower levels of functional limitations are predictors of successful employment outcomes (Smith, 2007). Furthermore, the delivery patterns of state-federal vocational rehabilitation services differ by disability type, and adults with SPMI are underserved in vocational rehabilitation (Twamley et al., 2003). Consumers of vocational rehabilitation services with sensory/communicative disabilities have significantly higher successful employment rates (75%) than do people with physical disabilities (56%) and those with mental impairments (55%; Duta et al., 2008). Persons who qualified for vocational rehabilitation services but left prior to provision of services were more limited by gross motor and personal care functions (Hayward & Schmidt-Davis, 2003).

For persons with SPMI, the work-related functional impairments most commonly related to their illness are psychiatric symptoms (e.g., depression, paranoia), interpersonal skill deficits, and cognitive impairments (e.g., diminished problem-solving ability, organizational skills; Baron & Salzer, 2002). Although the presence of psychiatric symptoms can distract individuals from job tasks, the frequency and intensity at which the individual experiences the symptoms better accounts for differences in employment outcome (Cook & Razzano, 2000). In fact, persons diagnosed with schizophrenia with the most distracting symptoms (e.g., hallucinations, paranoia, disorganized speech/behavior, thought disorders) consistently have the poorest employment outcomes (Marneros, Deister, & Rhodes, 1992). Moreover, psychiatric symptoms have some predictive value if measured concurrently with current work function, but are found to be poor predictors of future work performance (Bell, Lysaker, & Bryson, 2003).

Many researchers have focused on interpersonal skills as a contributing factor to poor employment rates because these skills are critical for job attainment (e.g., job interviewing) and job retention (e.g., maintaining relationships with supervisors, co-workers, customers) (Dauwalder & Hoffmann, 1992). In addition, a study on the unsatisfactory job termination factors for persons with SPMI found that interpersonal issues, among other issues (symptoms, dependability, medical issues, substance abuse), were related to termination from supported employment (Becker et al., 1998).

Cognitive deficits also account for a significant limitation in employment opportunities, and in one study, 79% of variance in improvement in work habits for persons with schizophrenia in a psychiatric rehabilitation setting was accounted for by cognitive variables (Bell & Bryson, 2001). Another study on employment-related variables for persons with bipolar disorder found a strong association between current employment status and performance on cognitive assessments, particularly performance on immediate verbal memory (Dickerson et al., 2004). In a comparison of the cognitive functioning and symptom severity of persons with mental illness, who were unemployed, who were working in supported employment, and who were independently employed, it was found that the unemployed persons had the worst cognitive functioning and symptom severity (both positive and negative symptoms). Persons in supported employment had more severe psychotic symptoms and working memory deficits than did independently employed persons, which indicates that symptom severity and cognitive impairments interfere with the ability to obtain independent work for persons with severe mental illness (McGurk & Mueser, 2003).

Overall, the vocational rehabilitation and psychiatric rehabilitation literature highlights the importance of functional impairment, particularly in the areas of interpersonal skills and

cognitive skills, as having an impact on employment. In the present study, it is predicted that functional impairment will be a significant contributor to overall work motivation, and this factor is thus included in the expanded model on work motivation.

Secondary health conditions. Secondary health conditions are the preventable physical, mental, and social disorders resulting directly or indirectly from the primary disabling condition and persons with disabilities are at a risk for secondary physical and mental health conditions (Kinne et al., 2004). In fact, the Behavior Risk Factor Surveillance Survey, a large-scale study on the prevalence of secondary health conditions, found that the rate of secondary health conditions among persons with disabilities was at 87% compared to 49% for people without disabilities (Kinne, Patrick, & Doyle, 2004). Persons with primarily physical impairments tend to experience, on average, 14 different secondary health conditions; they rate their overall health and independence as fair to poor due to these comorbid conditions (Max, Rice, & Trupin, 1996).

Secondary health conditions can lead to increased sleep disturbance, pain, medication side effects, fatigue, depression, spasticity, urinary tract infections, obesity, and substance abuse (Lynch & Chiu, 2009); these factors can all have a tremendous impact on work. National surveys on the impact of comorbidity on SPMI have found that psychiatric conditions reduce rates of employment for persons with physical conditions. Individuals with comorbid mental and physical disorders are shown to consistently have lower rates of employment as compared to persons with only a physical disorder (McAlpine & Warner, 2002). In addition to the health and social impacts, there is tremendous economic impact; it has been estimated that persons with disabilities make up approximately 20% of the U.S. population but account for 47% of total medical expenditures (Max, Rice, & Trupin, 1996).

In one study, 60% of persons with SPMI were found to have a co-occurring disability or

medical condition, and 25% had two or more health-related conditions that resulted in lower earnings and significantly lowered work participation (Cook, 2007). A study on the secondary health conditions of Clubhouse members found that hypertension was the most prevalent medical disorder, followed by hyperlipidemia, diabetes, lung disease (including asthma and COPD), seizure disorders, hypothyroidism, irritable bowel syndrome, glaucoma, osteoporosis, injuries due to previous trauma, migraines, post-myocardial infarctions, cataracts, renal insufficiency, Crohn's disease, and multiple sclerosis (Tratnack, 2009). Among persons with persistent mental illness, 50% to 90% have a physical condition that requires medical treatment, and 35% to 78% have undiagnosed medical disorders. Moreover, persons with mental illness are at greater risk of premature death from co-morbid health conditions as compared to the general population, and the risk of diabetes, metabolic syndromes, and side effects from medication treatment is greater for persons with schizophrenia (Pelletier, Nguyen, Bradley, Johnsen, & McKay, 2005). Clearly, persons with severe and persistent mental illness are vulnerable to secondary health conditions, and their co-morbid physical health conditions impact their ability to sustain work-related activities (Cook, 2007). These secondary health factors will account for one of the personal, disability-related contributing factors in this study's overall expanded SDT model.

Environmental Factors

Implementation of occupational goals requires considerable sustained effort and interacts with perceptions of external constraints and influences that operate outside of SDT constructs (Corbiere et al., 2011). Differences among social contexts are likely to influence the strength of the socio-cognitive predictors (Ajzen, 1991) and environmental barriers (e.g., perceived workplace stigma, perceived work disincentives) that can tip the decisional balance related to work decision of persons with disabilities.

Despite the passage of the Americans with Disabilities Act, the employment rate for persons with disabilities in the United States has remained largely unchanged for 20 years, standing at 30% (Chan et al., 2008). The labor force participation rate for persons with SPMI has remained virtually unchanged since the mid 1980s, with only about 25% classified as either working full time or looking for work (Baron & Salzer, 2002; Trupin, Sebasta, Yelin & LaPlante, 1997). Consider that an individual with high task-specific self-efficacy and a positive attitude toward work still may not wish to perform a particular task. SDT or self-efficacy models alone will not sufficiently explain why, and environmental constraints must be considered. Perceived environmental barriers and influences, particularly issues related to workplace stigma, working while on Supplemental Security Income or Social Security Disability Income benefits, and the influence of the cultural framework on work motivation are all considered in this study's expanded work motivation model and are described in more detail in the following sections.

Perceived workplace stigma. Employers often assume that workers with disabilities have relatively poor skills, which increases the demands placed on managers (Amir, Strauser, & Chan, 2009; McAlpine & Warner, 2002). Consequently, even with the passage of the Americans with Disabilities Act, a large discrepancy exists between employers' reported willingness to hire persons with disabilities and their actual hiring practices (Hernandez & Keys, 2000). The perception of workplace hostility and stigma is a salient issue for persons with disabilities, as it undermines their confidence and leads to a poorer showing at job interviews (Stuart, 2006). Workplace discrimination is heightened for persons with SPMI because they experience the greatest stigma rankings, the lowest employability rankings, and the largest wage differential to productivity rankings when compared to persons with physical disabilities (Baldwin & Johnson, 1994). In fact, a study on employers' perception of persons with disabilities found that while

about 16% of employers indicated that they would be uncomfortable hiring someone with a physical impairment, 44% said they would be uncomfortable hiring someone who was in treatment for depression, and a majority indicated that they would be uncomfortable hiring someone with a history of substance abuse (69%), a person with previous psychiatric hospitalization (52%), or someone taking antipsychotic medication (67%; Scheid, 2005).

It is not surprising that persons with mental illness identify employment discrimination as one of the most stigmatizing experiences; compared to persons with physical disabilities, persons with mental illness are expected to experience twice the amount of employment-related stigma (Gaebel, Bauman, & Zaske, 2005). Moreover, one in three persons with SPMI, upon disclosure of their disability or history, were turned down for job offers.

Much of the stigma about persons with mental illness is related to the belief that their symptomology and functional limitations make them less capable in the workforce (Baldwin & Marcus, 2006; Diksa & Rogers, 1996). Some employers perceive persons with mental illness to be aggressive, unpredictable, dangerous, unreasonable, unreliable, and unintelligent, and as a result, employers are less confident about their work skills, quality of work, and job tenure (Gaebel et al., 2005). Although employer discrimination is pervasive, one study found that persons with schizophrenia returning to the workforce anticipated discriminatory treatment by their employers more frequently than the actual experience of discrimination and prejudice (Angermeyer, Beck, Dietrich, & Holzinger, 2004). The perceived workplace stigma from the Clubhouse member's perspective will be considered in this study's work motivation model because personal perspectives on employer attitudes will have a direct effect on the socio-cognitive process that influences work motivation.

Perceived work disincentives. The extant rehabilitation counseling literature indicates

that poor rehabilitation outcome is related to whether consumers are beneficiaries of Supplemental Security Income (SSI) and/or Social Security Disability Income (SSDI; Hayward & Schmidt-Davis, 2002, 2003; Rogers, Crystal & Bishop, 2005). Findings consistently report that cash and medical benefits reduce the odds of employment outcome for all individuals with sensory, physical, and mental impairments (Dutta et al., 2008). In fact, there is a large disparity among beneficiaries who receive SSI and SSDI who want to work (44%) compared to beneficiaries who actually work at a level that ends SSI (0.5%) or SSDI (3.7%) benefits (Stapleton, O' Day, Livermore, & Imparato, 2005).

There are substantial work barriers for Social Security beneficiaries and recipients of other benefit programs (e.g., housing, food stamps), which impact work motivation. First, consumers who receive disability and related social benefits are persons with the most significant disabilities and who lack access to other social and economic resources (McAlpine & Warner, 2002). The security of having their basic needs met coupled with the uncertain, fluctuating nature and functional impact of living with a disability poses substantial difficulties in making the leap to employment.

Second, the path to these programs is often difficult, and many of these people have repeatedly tried to work and have had to rely on family financial support for extended periods of time (Estroff & Patrick, 1997; Estroff, Zimmer, & Lachicotta, 1997). For persons with SPMI, it is estimated that 14% have applied for disability programs themselves, while in 36% of cases the family initiated the application, and in 43% of the cases, mental health workers initiated the application for benefits (McAlpine & Warner, 2002). It is not surprising that families are reluctant to encourage a family member with a psychiatric disability to seek out employment for fear that it may compromise the safety nets they have worked to establish. This is particularly

true about the security of medical benefits.

Third, the precipitous loss of benefits, the "cash cliff" or the complete loss of SSDI benefits after reaching Substantial Gainful Activity (SGA) levels, the lack of information about benefits counseling, and the complexity of work incentive rules have all contributed to the low rate of termination from the Social Security Administration (SSA) rolls (Delin, Hartman, Sell, & Brown-Reiter, 2010). Additionally, Medicare or Medicaid program eligibility has traditionally been tied to the beneficiary's continued receipt of SSI or SSDI benefits.

Finally, very little incentive to go off benefits exists when the earning potential for persons with disabilities is low. For example, in a sample of 50 persons with severe mental illness living in the community, Polak & Warner (1996) reported that the average monthly income (cash as well as noncash income such as food stamps and rent subsidies) was only about 9.6% lower for persons who were unemployed compared to persons who were working. Another study found that the earnings of SSDI beneficiaries tend to be low paying, part-time, and lacking benefits such as paid vacation, sick leave, or health insurance (Cook, 2007). Even for the very few consumers who obtained full-time jobs with some medical benefits, their salaries were only marginally better than not working at all and receiving benefits (Botterbusch & Miller, 1999).

Clearly, one of the first major decisions facing consumers of vocational services is to assess the feasibility of ceasing their benefits and instead applying SSA work incentives to projected earnings and work-related costs. One study found that 22% of unemployed persons with a psychiatric disability cited fear of losing SSI or SSDI as a barrier to work (McAlpine & Warner, 2002). For persons with SPMI and for persons living at or below federal poverty levels, the impact of work on noncash benefits or microeconomies (e.g., food stamps, subsidized housing vouchers, child care) is a major financial decision (Cook & Grey, 2005). These

consumers are actively evaluating their scarce financial resources versus competing obligations to participate in the workforce. Therefore, it is expected that these complex financial decisions play into the work motivation cognitive thought process for persons with SPMI. Fortunately, benefits counseling services—through education and discussion about the ambivalence, fears, and misconceptions of disability benefits and work—can motivate consumers to utilize work incentive programs. Bond, Xie, and Drake (2007) demonstrated that SE services for persons with SPMI that include benefits counseling can improve employment outcome.

This study will consider the impact that perceived work disincentives have on vocational engagement and will inquire about the numerous financial and noncash benefits that members of the Clubhouse are receiving as well as whether benefits counseling services have been offered to Clubhouse members.

Cultural identity. The SDT model asserts that the three basic psychological needs (competence, autonomy, relatedness) are universal and that the satisfaction of these needs leads to similar outcomes across cultures (Deci et al., 2001). However, not all researchers agree about the generalizability of human needs across cultures (Heine, Lehman, Markus, & Kitayama, 1999), and some have criticized theories of motivation as taking a Western ideology and applying it to understand a psychological process (Kao & Ng, 1997). In an attempt to counter these claims, Deci and his associates (2001) conducted a study to compare work need satisfaction between Bulgarian and American workers. The researchers found that psychological need constructs were meaningful in both countries, although the level of actual support for need satisfaction was greater for the American workers.

Autonomy in different cultures. Among the three basic psychological needs, the need for autonomy has been largely disputed as an American-centric variable measured within SDT.

Chirov, Ryan, Kim, and Kaplan (2003) responded to this criticism. They differentiated the SDT concept of autonomy (acting from one's authentic interests) from commonly confused concepts of individualism and independence (not relying on others for support or help), and found that autonomy was functionally important for men and women across cultures (e.g., Turkey, South Korea, Russia, and the United States) and was related to well-being. In addition, considerable within-culture and between-culture variance was found in the integration of autonomy support. In fact, there are considerable differences in how individuals within cultures internalized culturally dominant practices (Chirkov et al., 2003). Further studies are warranted that examine how cultural identity contributes to the integration of autonomy support and how these differences can be explained by the meaning that is derived from personal and cultural contexts (Kashima et al., 2004).

Independent-interdependent self-construals. In an effort to investigate the cultural variance that may contribute to motivational behavior, this study will examine independent and interdependent self-construal variables. Independent self-construal is defined by the priority given to personal goals over in-group goals (i.e., individualism), while interdependent self-construal is defined by the subordination of personal goals for the sake of the in-group goals (i.e., collectivism; Triandis, 1988). These self-construal constructs have been shown to affect cognition, emotion, and motivation for both Western and non-Western cultures relative to context (Markus & Kitayama, 1991). Bicultural research has shown that individuals not only can have self-identity but can also switch between collectivistic and individualistic modes depending on salient cues in the environment and on intercultural sensitivity that is provoked (Bhawuk & Brislin, 1992). Cultural identity is no longer viewed from a dichotomous independent or collectivistic perspective but rather is conceptualized as the degree of independent-to-

interdependent self-construal that is mobilized and is context/domain-specific (Markus & Kitayama, 1991). Self-construal, in fact, may moderate the relationship between group norms and behavior intentions and can be conceptualized as an individual difference variable that contributes to motivational behavior (Rentzelas, 2009).

In order to fully understand the motivational factors that contribute to consumer engagement in the Clubhouse vocational process, this study will include self-construal as a environmental factor. It is expected that normative beliefs, or the immediate social and familial beliefs related to work engagement, will have an effect on self-construal and on overall motivational orientation of Clubhouse members. This variable will be particularly interesting, because the study looks at the work motivational behavior of Clubhouse members in an ethnically diverse setting of Hawaii Clubhouses (discussed in Chapter 3).

Integrated SDT Variables, Outcome Variables, and the Causal Sequence

SDT is central to this study's proposed work motivation model, and this study proposes an integrated SDT model that accounts for the motivational variables most relevant to Clubhouse consumers. This study outlines a motivational sequence that is based on the *Four Stage Causal Sequence* proposed for a Hierarchical Intrinsic and Extrinsic Motivational Model (Vallerand, 1997). It has been postulated that a complete analysis of a motivational process should consider three constructs in sequence to understand consequences and overall motivational impact (Vallerand & Ratelle, 2002). The following sections introduce these three constructs, or expanded SDT variables, as well as the outcome variables of interest in this study: (1) social contextual variables (i.e., autonomy support); (2) psychological mediators (i.e., competence, self-efficacy, relatedness); (3) quality of the motivation (intrinsic, integrated, identified, introjected, external, or amotivational); and (4) motivational consequences, or the outcome variables

(readiness to change, vocational engagement, perceived benefits of employment).

Social Contextual SDT Variables

SDT accounts for individual differences in motivation orientation but also predicts within-person variation in motivation, largely as a function of social climate and the autonomy supports available (Gagné & Blanchard, 2007). Even with perceived competence and relatedness being equal, autonomy support is considered a better predictor of motivation. It is from this perspective that autonomy support is included as a central construct of the integrated SDT model and is the first predictor to be considered from an SDT model (Vallerand, 1997). Sources of social support come from a person's immediate social contexts, including the experts and persons of authority or influence in the person's life, and immediate others such as spouse, family, and friends whose feedback engages the person to pursue or sustain goal-orientated behavior. In this study, the autonomy support received from Clubhouse staff is considered.

Integrated SDT Variables, or Psychological Mediators

In this section, the psychological mediators that contribute to self-determined motivation, following autonomy support, are discussed as they apply to persons with SPMI. Although Maslow (1954) considers human needs to be hierarchical, in contrast, SDT does not postulate a particular order for the needs for competency or relatedness; rather, it is assumed that these needs must be simultaneously met for optimal motivational functioning.

Competency measured as self-efficacy. The need for competence, according to SDT, stems from Vroom's (1964) Expectancy-Value theory and focuses on the affective experience of executing a task effectively (Broeck, Vansteenkiste, Witte, Soenens, & Lens, 2010). Competence is the inherent desire to feel effective in interacting with one's own environment that drives motivational behavior (Deci & Ryan, 2000). Self-efficacy, based on Bandura's

(1997) Social Learning Theory, is conceptualized as the acquired cognitions and confidence in executing a goal-orientated task, based on a reciprocal interaction among behavior, perceptions, and environmental conditions (Larson, 2008). Self-efficacy has a future orientation and is often paired with the concept of outcome expectancies (expected consequences of a behavior) with respect to one's capability to accomplish future tasks. Furthermore, self-efficacy includes social learning, the role of mentors, and the opportunities that may or not have been available for persons with disabilities to account for the decisions made prior to executing a vocational task.

In many cases, persons with disabilities have encountered prohibitive developmental experiences that contribute to low work-related self-efficacy, such as nonworking role models, perceived job discrimination, disruption in education, and negative opinions of professions (Larson, 2008). For persons with SPMI, the effect of self-stigma and the enormity of the task to overcome work-related barriers contribute to an overall lack of confidence in meeting vocational goals (Corbière, Mercier, & Lesage, 2004). Moreover, the longer that individuals with SPMI have been unemployed, the greater the perceived barriers to employment and the erosion of work-related self-efficacy. However, improving one's vocational self-efficacy can facilitate the overcoming of barriers to employment and can result in concrete action steps toward job obtainment (Corbière et al., 2004). A meta-analytic review of job searches and self-evaluative variables that contribute to employment concluded that persons with higher job search self-efficacy were more likely to engage in job search behaviors (Kanfer, Wanberg, & Kantrowitz, 2001).

Self-efficacy that is task-specific increases explanatory and predictive power (Chou, Chan, & Tsang, 2004); therefore, vocational self-efficacy (rather than general self-efficacy) was used for the competency construct from SDT in the present study. Vocational self-efficacy is the

perceived confidence in one's ability to complete and follow through with any work-related tasks, often tasks involved in vocational engagement and preparation related to the job search process. Although there are slight conceptual differences between competence, as defined by SDT, and self-efficacy, as defined by Bandura (and the extant vocational rehabilitation literature), the differences are not expected to be significant at the empirical level (Broeck et al., 2010).

Relatedness. The need for relatedness is described as the inherent propensity to feel connected to others, to be a member of a group, and to experience a sense of close relationship with one another (Baumeister & Leary, 1995). Relatedness is satisfied when individuals experience communion and have meaningful relationships with others. To fulfill the SDT construct of relatedness, this study relied on the social milieu (i.e., the Clubhouse and its members) to conceptualize and measure this construct as a contributing factor to motivation (Deci & Ryan, 2000). This rationale is based on the principles and focus of the Clubhouse as a place where persons with severe and persistent mental illness can find acceptance and meaningful relationships (Beard, 1992). Since the autonomy support needs will be considered in the overall work model based on the member's perception of Clubhouse staff's vocational support, the construct of relatedness will be considered in the peer support received from other Clubhouse members. It is expected that if members feel a relatedness with other members during the vocational process (along with the other factors), they may be more engaged in vocational activities and, therefore, more self-determined in their motivation to work.

Quality of Motivation

SDT posits that behavioral engagement is likely to occur and endure if it is autonomously motivated (Williams, Grow, Freedman, Ryan, & Deci, 1996). Motivation varies depending on

the degree to which goals are pursued for autonomous reasons or the degree to which they are guided by controlled reasons. The continuum of behavioral regulation ranges from non-self-determined external regulated behavior to self-determined regulated behavior (Mullan & Markland, 1997). Externally motivated behaviors are undertaken for reasons other than interest in the activity (e.g., monetary reward and encouragement from others) and are considered the catalyst of behavior engagement that over time will lead to intrinsic interest and then to longer-term behavior adherence (Mullan & Markland, 1997). Self-determined, intrinsically motivated behavior has been associated with persistence in behavior, cognitive flexibility, creativity, and individual well-being and adjustment (Deci & Ryan, 1987; Sheldon, Ryan, Deci, & Kasser, 2004).

The motivational process of Clubhouse members and potential quality of engagement in work-related activities can be assessed by identifying the motivational types that fall along the following self-determined motivational spectrum: amotivation, extrinsic motivation (external regulation, introjected regulation, identified regulation, integrated regulation), and intrinsic motivation. Identifying the motivational types (the self-regulation of motivation; Deci & Ryan, 2000), and the consumer's placement along the motivational continuum can be helpful in planning the most appropriate motivational interventions (e.g., motivational interviewing). SDT's motivation continuum also allows researchers to not conceptualize motivation as a dichotomous extrinsic and intrinsic motivational type, but to instead conceptualize individuals to be both extrinsically and intrinsically motivated toward a behavior, although movement toward self-determined behavior is preferred for sustained engagement. Motivational type is an important mediator that will predict the stages of behavior change, level of vocational engagement, and perceived benefits to vocational program (outcome expectancy) of interest in

this study.

Motivational Consequences or Outcome Variables

According to the motivational sequence outlined by Vallerand (1997), the quality of motivation can be used to predict the cognitive, behavioral, and affective consequences related to the goal-directed behavior, and the motivational consequences are decreasingly positive as the consumer moves along the spectrum from self-determined (intrinsic motivation) to externally controlled motivation (Vallerand & Ratelle, 2002). Employment as an outcome variable was carefully considered for this study but was not included for the following reasons: (a) the study focuses on the motivational process and vocational activities provided in a psychosocial rehabilitation program whose primary goal may or may not be employment; (b) the study aligns with the mental health movement that is interested in self determination as a process rather than focusing on the end goal; (c) this study is a preliminary exploration of SDT constructs in a psychiatric rehabilitation setting, and employment as an outcome can be explored in a latter time; (d) the Clubhouse of interest in this study lost substantial personnel and funding related to vocational placement, which could unfairly bias employment-related results. In this study, motivational outcomes of interest are the readiness to make behavioral changes, the levels of engagement in vocational services, and the perceived positive benefits toward employment.

Readiness to change. Readiness to change can be conceptualized through a stage-like structure provided by the transtheoretical model (Prochaska & DiClemente, 1983, Prochaska, Diclemente, & Norcorss, 1992), more commonly known as the stages of change (SOC) model. The SOC model has been used widely in the health promotion literature (e.g., substance abuse, smoking cessation, exercise adoption, diet change), in psychotherapy, and in vocational rehabilitation research to differentiate various cognitive and behavioral processes that occur in

the intentional change process to reach the target behavior (Gervey, 2010; Rosen, 2000). Five stages differentiate readiness to change: (1) precontemplation (no intention to change behavior); (2) contemplation (awareness of a need to change but no commitment to change action); (3) preparation (intention to change in the next month); (4) action (overt behavioral changes); and (5) maintenance (prevention of a relapse into previous behavior or a consolidation of gains from previous action (Prochaska, DiClemente, & Norcross, 1992). Individuals are moved toward the target behavior or stage-specific motivational tasks are accomplished when appropriate support is provided and when specific self-efficacy toward a task is present. Oftentimes, individuals need to recycle back through the stages multiple times to accomplish a task (DiClemente, 2003, 2005).

The SDT framework offers concrete socio-cognitive nutriments needed to sustain volitional behavior and adhere to treatment and intervention programs provided (DiClemente, Ferentz, & Velasquex, 2004). The expanded SOC model incorporates self-efficacy and outcome expectancy as contributing to the progression through the stages (Prochaska et al., 1992) and has been incorporated as a predictor variable (i.e., self-efficacy) and as outcome variables (i.e., perceived benefits of employment) in the complete motivational model.

Self-efficacy specifically has been studied in the SOC literature, and increasing self-efficacy was related to stage movement in the SOC model (Chou, Chan, & Tsang, 2004). Lower levels of self-efficacy were found in people who were in the precontemplation and contemplation stages than in people at the later stages, such as the maintenance stage (DiClemente, Prochaska, & Gibertini, 1985). Task-related self-efficacy has been shown to be related to the SOC model but does not clearly delineate between all the stages in the model (Chou et al., 2004). A discriminant analysis on exercise behavior found that more self-determined behavior

distinguished those in the action and maintenance stages of behavior from those in the precontemplation and preparation stages. In essence, it was found that behavioral regulation increased and varied across the higher stages of change (Mullan & Markland, 1997).

The literature is mixed about the utility of the SOC model for persons with psychiatric illness. Some opponents of the use of the SOC model with this population cite that individuals with persistent illness may be more driven by external considerations or reinforcers and that their behaviors are less intention driven compared to the general population (Bellack & DiCeemnte, 1999). The cognitive impairment and negative symptoms associated with persons with schizophrenia were assumed to interfere with their ability to exert the thought processes needed to validly complete a readiness to change instrument (Carey et al., 2001). However, a study on the readiness of persons with SPMI to change their substance use found that brief motivational interviewing interventions that were stage-matched led to increased involvement in the treatment and more favorable perceptions of the intervention (Carey, Carey, Maisto, & Purnine, 2002). Although readiness to change increased between pretreatment and posttreatment measurements, the treatment effects were not maintained 3 months post intervention, which spoke to the need for other interventions to maintain motivation.

Gervey (2010) found utility in the three-factor structure (precontemplation, contemplation, and action) of the University of Rhode Island Change Assessment (URICA) for Vocational Counseling in a sample of mental health consumers. He also found that these three factors discriminated among individuals with varying levels of interest and involvement in vocational rehabilitation services. A variation of the URICA will be used to measure the stages of change through the vocational process and to examine the Clubhouse members' motivational process.

The relative utility and popularity of the SOC model in clinical practice and the stage matched intervention warrants continued research on the social cognitive predictors that differentiate stage attainment. This present study examined the effects of the integrated SDT model to predict discrete stage identification within the SOC model. The SOC model can be used as additional information to move consumers toward more self-determined change processes and interventions tailored to better account for consumers' readiness to change.

Engagement. The current evolution in mental health and related fields (e.g., allied health, organizational psychology) has moved away from compliance and outcome based treatment measurements to focus on the process of individual collaboration and engagement in services or organizations (Corrigan et al., 2011). This shift is due partly to a renewed emphasis on individual empowerment and self-determined mental health service delivery, and partly to outcome measurement's lack of utility in guiding interventions needed at the process level. For example, an individual involved in a community-based substance treatment program cannot be considered successful in treatment because of session attendance and physical participation in treatment services. However, an examination of the cognitive indicators of treatment engagement not only is a more accurate gauge of successful treatment, but also provides more utility to planning intervention services that can increase relevance and engagement for the individual consumers at the process level (Hiller, Knight, Leukefeld, & Simpson, 2002). In addition, there is a compelling relationship between engagement and successful service delivery. For example, low treatment engagement in the psychosocial and psychological treatment settings has been related to treatment dropout, which adversely affects psychosocial outcomes and reduces the cost-effectiveness of therapeutic interventions (Tetley, Jinks, Huband, & Howells, 2011).

In the medical rehabilitation literature, research has demonstrated that the level of patients' participation in medical rehabilitation is directly related to levels of improvement in overall functioning and to more domain-specific cognitive and psychological functioning (Fiedler, Granger, & Russell, 2000; Kortte et al., 2007; Lequerica et al., 2006). In the organizational psychology literature, engagement has been related to higher productivity, sales, and employee retention (Macey & Schneider, 2008). Moreover, research in substance abuse treatment has linked higher motivation to recover from addiction with improved perceptions of personal progress and intention to remain in treatment, even after statistically controlling for factors (e.g., employment history, drug use problems, arrest history) that could confound this relationship (Hiller et al., 2002).

Despite the current interest on the process of engagement in services and organizations, there is a lack of agreement in the extant literature as to how to define or measure engagement. For example, psychotherapy research aimed to address low therapeutic engagement with a more outcome based approach by measuring engagement through attendance in requisite sessions, completion of treatment in expected timeframe, completion of expected tasks, contributions in therapy sessions, working alliances with the therapist, and supportive or helpful behavior among consumers in group therapy settings (Tetley et al., 2011). In an effort to consider a conceptual framework and better define an employee's work engagement, Macey & Schneider (2008) viewed engagement from a three-pronged framework consisting of a disposition state (trait), psychological antecedents (state), and proactive behavior displayed in a work setting.

Although Macy & Schneider conceptualized engagement and motivation as distinct but related concepts, employee engagement was argued to be better articulated by grounding the concepts of engagement in SDT in order to better understand the process variable and to design

needed interventions to increase employee engagement in work (Meyer & Gagné, 2008). For example, SDT can guide the measurement of engagement relevant variables, such as need satisfaction and motivational states in a variety of work contexts, and may offer a multidimensional conceptual framework from which to explore the various facets of engagement outlined by Macey and Schneider. Meyer & Gagné (2008) offer a useful conceptual framework for understanding engagement but propose to measure engagement using SDT construct variables, which muddies the constructs of SDT and engagement. The framework for this study looks at SDT and engagement as separate constructs but proposes that SDT (among other variables) can predict engagement, and looks to medical rehabilitation literature to provide a viable measurement of this construct.

Engagement in rehabilitation therapy is defined as a deliberate effort and commitment to working toward the goals of rehabilitation therapy and is conceptualized as a continuum, ranging from enthusiasm and interest (high engagement) to apathy (low engagement), with higher levels of engagement associated with increased involvement and participation in rehabilitation activities (Matthews et al., 2002). In addition, like in the conceptual underpinning of this study (the SDT model), engagement in the medical rehabilitation literature is associated with perceived self-efficacy, outcome expectancy, and task difficulties related to the rehabilitation plan (Lequerica et al., 2006). Therefore, the more the patient is required to do and the more complex the tasks, the less likely it is that the patient will adhere to the treatment plan (Meichenbaum & Turk, 1987). The present study has not used the SDT conceptual framework and has borrowed from the medical rehabilitation literature to measure engagement (discussed in Chapter 3), as a separate and distinct construct from motivation, to determine whether Clubhouse members' motivational quality can predict the level of engagement in vocational activities.

Perceived benefits to vocational program. Outcome expectations are the probable and imagined outcomes of one's actions that motivate behavior (Bandura, 1997), and the interaction between self-efficacy and outcome expectancy influences volitional behavior. For example, the importance of outcome expectancy was highlighted in a meta-analysis on work self-efficacy and work performance (Donnay & Borgen, 1999). The meta-analysis revealed that work self-efficacy and performance are strongly related but are mediated by the complexity of the task and situation-specific variables, such as perceived benefits to vocational program related to a work situation. Although an individual may have a particularly high self-efficacy related to work performance, that self-efficacy is contingent on that individual's evaluation of the task, the environment, and other contextual factors that make up expectations about the outcome of the behavior. It is no surprise, then, that outcome expectations are also theorized to influence intentions (Lent et al., 1994) and were thus incorporated in the motivational framework examined in this study. The perceived benefits of employment, despite the numerous barriers that are apparent for persons with SPMI, constituted the outcome expectancy construct of interest in this study. The study assumes that Clubhouse members who are motivated to work may have a more positive outcome regarding work and that the perceived benefits to work may tip the decisional balance and contribute to an overall motivational disposition to work and to actively engage in vocational activities.

CHAPTER THREE

Method

This chapter provides details on how the research was conducted and includes a discussion of the research design, study procedures, participant characteristics, sampling plan, psychometric properties of the survey instruments, and statistical analysis utilized to study work motivation.

Research Design

A quantitative descriptive research design utilizing hierarchical regression and correlation analysis was employed for this study to investigate to what extent the variables in the expanded Self Determination Theory (SDT) model predict engagement in vocational services, perceived benefits for work participation, and stages of change for work (Heppner, Wampold, & Kivlighan, 2008). Specifically, hierarchical regression analysis was chosen to determine the unique contributions of each of the predictor variables (i.e., demographic covariates; functional disability; autonomy support; autonomy, vocational self-efficacy and relatedness; and person-environment contextual factors) on the three outcome variables.

Study Procedures

The required Human Subjects Protection Training for the University of Wisconsin-Madison Institutional Review Board (IRB) was completed and the study was approved by the IRB for Social & Behavioral Sciences (see Appendix A). Following IRB approval, the Hawaii State Clubhouse Coordinator from the Department of Health Adult Mental Health Division assisted the investigator with the distribution of a recruitment flyer (see Appendix B) and announced the study to the respective Clubhouse managers. A data collection and site visit schedule was collaboratively formulated and approved by the Clubhouse Coordinator and

managers (see Appendix C). A letter of research support was obtained from the Clubhouse Coordinator, and the University of Wisconsin-Madison IRB application was reviewed by the internal IRB committee set up by the Department of Health Adult Mental Health Division and was approved (see Appendix D) As an additional recruitment effort, the investigator gave a 30-minute oral presentation about the study to interested community members and service providers in attendance at the 29th Annual Pacific Rim International Conference on Disability and Diversity held in Honolulu (see Appendix E).

Participants were recruited from a total of eight Hawaii Clubhouses, located on the islands of Oahu, Kauai, Maui, and the Big Island of Hawaii. To be eligible for membership into the Hawaii Clubhouse, a psychiatric diagnosis is required so this criterion was not explicitly included in the recruitment effort, but other participation inclusion guidelines were indicated as follows: (a) between 18 and 65 years of age; (b) a member of the Clubhouse; (c) ability to make decisions independently; (d) able to read at the sixth grade reading level or above; (e) having contemplated employment and/or actively looking for employment.

Data collection was conducted through a direct dissemination of the hard copy of the survey instruments at the respective Clubhouse sites by the investigator. The investigator adhered to the following procedures during data collection: (a) every site visit was prescheduled and announced; (b) the investigator introduced the study (see script in Appendix E), reviewed the informed consent form, answered any questions related to the study, and informed potential participants about the gift card incentives offered for the estimated 30 to 45 minutes required to complete the survey; (c) volunteers were recruited immediately following the meeting and research packets were distributed in a private conference room; (d) the investigator, who sat outside the conference room, was readily available to answer any questions, clarify any

confusing survey items, or provide any accommodations as needed; (e) the participants were instructed to place the completed survey packets into a manila envelope provided and drop the sealed envelope into an enclosed box; (f) a gift card was disseminated to participants who left the conference room and had completed the survey. This procedure protected the confidentiality of the Clubhouse responses to the greatest extent possible because individual responses to survey instruments could not be traced back to any specific member.

Neither the Clubhouse staff, the managers, nor the Coordinator was involved directly in active recruitment of participants, asking questions, or collecting data, although they were informed about the study. All participants were briefed about the voluntary nature of the study, their rights to terminate the study at any time, and the investigator's strict adherence to the confidentiality of their responses, and all concerns and questions were clearly addressed prior to and during the data collection. To ensure confidentiality of the responses, the investigator did not check the survey packets for completion prior to gift card distribution. As an extra measure to ensure confidentiality, signatures were not obtained on the consent forms, but the informed consent process was conducted as a group with copies of the informed consent form and study information provided with every survey packet (see Appendix F).

Sample

Participants

A total of 140 Clubhouse members attempted to complete the survey packets. Of those surveys, 4 (2.9%) did not meet inclusion criteria and 12 (8.6%) provided incomplete data. The final count included 124 (88.6%) participants. The majority of responses (54%) were obtained from Clubhouses on the island of Oahu, with 27 of those 67 responses (19.2%) being collected from an urban area (i.e., the city of Honolulu). The remainder of the responses (45.9%) were

collected from neighboring islands (i.e., Maui, Kauai, the Big Island), which have rural area designations.

Sample Characteristics

Descriptive data for the participants are presented in Table 3.1. Participants ranged in age from 18 to 65 years (M = 46.52, SD = 9.28); 56 (45.2%) participants were male and 67 (54.0%) were female. Most of the Hawaii Clubhouse participants identified themselves as European American (25.8%), Asian American (29%), or Native American/Pacific Islander (23.4%), and a small number of participants identified themselves as African American (0.8%) or Hispanic (7.0%). Similar to the mixed race ethnicity that is indicative of the larger demographics of the state of Hawaii, 20 participants (16.1%) created their own mixed race category by identifying themselves with multiple ethnicities simultaneously, particularly the Hawaiian, Asian, and European American categories. The questions on marital status revealed that the majority of Clubhouse members were single (64.8%), some were divorced (18.9%) or married (8.2%), and a few were either widowed (3.3%), separated (2.5%), or cohabitating (2.5%). The highest educational achievement of the participants was as follows: 7.3% completed elementary education (grades 1 to 8), 17.7% had completed secondary education (grades 9 to 12) with no diploma, 6.5% had a special education certificate of completion or diploma, 33.1% had a high school diploma, 6.5% had an associate degree or vocational certificate, and 10.5% had a bachelor's degree.

Public supports received. The Clubhouse members were given a list of public benefits (medical, cash, and noncash) and were asked to identify all the benefits they were currently receiving. In regard to health insurance coverage, a majority (46.8%) received Medicaid insurance, followed by Medicare (26.6%), or other public health insurance such as state-funded

health insurance (21.0%). A few participants received either private insurance (2.4%), employer-based insurance (0.8%), or insurance from a spouse (0.8%), and two participants (1.6%) did not have any health insurance. A surprising majority of the Clubhouse members received SSI (49.2%) and/or SSDI (60.5%) cash benefits. Fewer participants received other types of cash benefits such as general assistance (1.6%), workers' compensation (0.8%), or veterans' disability benefits (0.8%), and only one participant (0.8%) did not receive any public cash benefits. Other noncash benefits received by Clubhouse members were identified as Section 8 housing vouchers (17.7%) and food stamps (45.2%). A question about benefits counseling services revealed that most (67.5%) had not received this service, and only 32.5% had received some form of benefits counseling.

Vocational services received. Vocational services received by the Clubhouse members were identified as (a) Division of Vocational Rehabilitation (DVR) services (21%); (b) Transitional Employment (TE) and Supported Employment (SE) services at the Clubhouse (15.3%); (c) Peer Specialist Training (4%); (d) Aquaponics vocational training (4%; supported self-employment program with DVR, the University of Hawaii Center for Disability Studies, and the Maui Clubhouse); and (e) Steadfast Supported Employment (3.2%). In addition, just for descriptive purposes, participants were asked to identify with an employment process category similar to the four categories described by McQuilken et al. in 2003. The McQuilken et al. study had found the following categories helpful in depicting the differences in the work process among their participants with SPMI. The frequency with which this study's participants identified with the work process categories are (a) I am working for pay (14.2%); (b) I am looking for work (37.5%); (c) I want to work but am not working (32.5%); and (d) I do not want to work (16.7%). For comparison, the breakdown from the McQuilken et al. study (N = 140) is

as follows: (a) I am working for pay (16%); (b) I am looking for work (20%); (c) I want to work but am not working (26%); and (d) I do not want to work (38%).

Table 3.1
Participant Demographics (*N* = 123) and Secondary Health Characteristics (*N* = 124)

Demographic Covariates	*n* (%)	*Mean* (*SD*)
Age		46.52 (9.28)
Gender		
Men	56 (45.2%)	
Women	67 (54.0%)	
Race		
European American	32 (25.8%)	
African American	1 (0.8%)	
Hispanic	4 (7.0%)	
Asian American	36 (29%)	
Native Hawaiian/other Pacific Islander	29 (23.4%)	
Other/combined	20 (16.1%)	
Marital Status		
Single	79 (64.8%)	
Married	10 (8.2%)	
Divorced/separated/widowed	23 (18.9%)	
Separated	3 (2.5%)	
Cohabitating	3 (2.5%)	
Widowed	4 (3.3%)	
Education		
Elementary education (grades 1-8)	9 (7.3%)	
Secondary education, no diploma (grades 9-12)	22 (17.7%)	
Special education, certificate/diploma	8 (6.5%)	
High school graduate or equivalent	41 (33.1%)	
Associate degree or vocational certificate	8 (6.5%)	
Bachelor’s degree	13 (10.5%)	
Health Insurance		
No insurance	2 (1.6%)	
Medicare	33 (26.6%)	
Medicaid	58 (46.8%)	
Other public insurance (e.g., State of Hawaii)	26 (21.0%)	
Employer-based insurance	1 (0.8%)	
Spouse’s insurance	1 (0.8%)	
Private insurance	3 (2.4%)	
Public Support		
Not receiving any public support	1 (0.8%)	
Social Security Disability Insurance	75 (60.5%)	
Supplemental Security Income	61 (49.2%)	
Veterans’ Disability Benefits	1 (0.8%)	
Workers’ Compensation	1 (0.8%)	
General Assistance	2 (1.6%)	
Section 8 housing	22 (17.7%)	
Food stamps	56 (45.2%)	

Demographic Covariates	*n* (%)	*Mean* (*SD*)
Vocational Services		
Division of Vocational Rehabilitation	26 (21.0%)	
Peer Specialist Training	5 (4.0%)	
Aquaponics training	5 (4.0%)	
TE and SE at Clubhouse	19 (15.3%)	
Steadfast Supported Employment	4 (3.2%)	
Job Search Status		
I am working for pay	17 (14.2%)	
I am looking for work	45 (37.5%)	
I want to work but not looking	39 (32.5%)	
I do not want to work	20 (16.7%)	

Secondary Health Characteristics (*N* = 124)	*n* (%)
Alcohol/drug use	22 (17.7%)
High blood pressure	51 (41.1%)
Chronic pain	28 (22.6%)
Depression	68 (54.8%)
Diabetes	39 (31.5%)
Fatigue	39 (31.5%)
Medication side effects	57 (46.0%)
Memory problems	55 (44.4%)
Sleep problems	54 (43.5%)
Weight problems	66 (53.2%)
Respiratory disease	19 (15.3%)
Cardiovascular disease	15 (12.1%)
Oral/dental health issues	24 (19.4%)
Osteoporosis	11 (8.9%)
High cholesterol	38 (30.6%)
Cancer	4 (3.2%)

Secondary Health Conditions

Clubhouse participants identified health-related conditions that currently pertained to them from a given list of 15 medical and psychological health conditions and symptoms (see Table 3.1). The most frequently endorsed health-related concern was, not surprisingly, depression (54.8%), followed by weight problems (53.2%), medication side effects (46.3%), memory problems (44.7%), sleep problems (43.9%), high blood pressure (41.5%), diabetes (31.7%), fatigue (31.7%), high cholesterol (30.9%), chronic pain (22.8%), oral/dental health issues (19.5%), alcohol/drug use (17.9%), respiratory disease (e.g., asthma, COPD; 15.4%), cardiovascular disease (12.2%), osteoporosis (8.9%), and cancer (3.3%). Participants were also given an opportunity to fill in a health condition that was not provided on the checklist. Participants indicated problems with eyesight, rheumatoid arthritis, pinched nerve, bipolar disorder, severe back pain, head injury, thyroid disorder (e.g., Graves disease, hyperthyroidism), gastrointestinal issues, scoliosis, headaches/migraines, tinnitus, kidney disease, post-traumatic stress disorder, carpal tunnel syndrome, and arthritis as other health issues that they live with on a daily basis.

Measures

Measures and Instrumentation

The demographics questionnaire was developed to obtain information about socio-demographics, current work situation, public cash and noncash benefits received, and vocational resources utilized by the Clubhouse members (see Appendix F). In addition to this basic demographic questionnaire, the study also compiled multiple instruments to operationalize the theoretical constructs related to work motivation into definable and quantifiable variables. Survey instruments were selected and slightly modified to accurately reflect the experience of

the Clubhouse members of interest in this study. Some instruments were modified or developed for brevity. The instruments designed to test to out the following variables are discussed in following sections: personal variables (functional disability, comorbidity); environmental variables (perceived work stigma, self-construal); the integrated self-determination construct variables (autonomy support, vocational self-efficacy, relatedness, self-determined motivation); and the outcome variables (vocational engagement, perceived benefits to vocational program, readiness to change). Key indicators of the quality of the measurements (e.g., reliability and validity) of the measures are provided.

Instrumentation for Personal Factors

General disability factor. The World Health Organization Disability Assessment Schedule (WHODAS) 2.0 is designed to measure the general disability factor impacting individual functioning according to the World Health Organization's (WHO) International Classification of Functioning (ICF; WHO, 2009). This instrument, designed to detect overall functional impact for persons with mental illness in major daily life domains, aligns with the psychosocial framework of this study and the Clubhouse philosophy.

The WHODAS 2.0 assesses any difficulties due to health conditions—including diseases, illnesses, or injuries; mental or emotional problems; or problems related to alcohol or drug use—that prevent an individual from carrying out tasks in six major life domains: (1) cognition; (2) mobility; (3) self-care; (4) getting along; (5) life activities (household and work); and (6) participation (Andrews, Kemp, Sunderland, Von Korff, & Ustun, 2009). The WHODAS 2.0 replaces the WHODAS II to include functional assessment across all diseases including mental, neurological, and addiction-related diseases. In addition, the WHODAS 2.0 is brief and easier to

administer, is applicable to clinical and general population settings, and provides a standardized overall functioning score that is applicable across cultures (WHO, 2013).

The psychometric properties of WHODAS 2.0 (the 36-item version) have been studied internationally (16 countries) and across disability types (e.g., general disabilities, drug and alcohol use, mental and emotional health, physical disabilities). The test-retest reliability at the item level (.69 -.89), at the domain level (.96), and overall level (.98) attests to the overall reliability of the WHODAS 2.0. The scale is demonstrated to have good internal consistency for the mental health disability subgroup, with a Cronbach's alpha of .98 for the overall score, and good internal consistency estimates at the domain levels: (1) cognition (.94); (2) mobility (.93); (3) self-care (.92); (4) getting along (.94); (5) life activities/household (.92), and life activities/work (.94); and (6) participation (.93; Üstün et al., 2010). Confirmatory factor analysis supported the factor structure of the items, the domains, and the general disability factor. Face validity was found to be .64 when a panel of experts determined that the instrument measures disability as defined by the ICF. The scores on the 12-item version of the WHODAS 2.0 is recognized as a brief, reliable, and valid measure of global disability to use in human subjects research (Andrews et al., 2009).

For this study, the self-administered 12-item version of the WHODAS 2.0 was utilized to assess the level of difficulty a participant may have had in the past 30 days in the six major life domains identified in the instrument (e.g. "How much difficulty have you had in the past 30 days in performing the following activities?"). Response items assessed functioning in the following 6 major life domains: (1) cognition (i.e., "Learning a new task, for example, learning how to get to a new place"); (2) mobility (i.e., "Walking for long distance such as a mile or equivalent?"); (3) self-care (i.e., "Washing your whole body?"); (4) getting along (i.e., "Maintaining a

friendship?"); (5) life activities/household and life activities/work (i.e., "Taking care of household responsibilities?"); and (6) participation (i.e., "Your day-to-day work activities?"). The respondents rated each item on a 5-point Likert-type scale (1 = none, 2 = mild, 3 = moderate, 4 = severe, 5 = extreme or cannot do), and the scores were summed to indicate general functioning across the major life domains. Higher scores were indicative of greater functional limitations, and the single global disability factor was entered as a predictor variable in the overall work motivation model. The Cronbach's alpha reliability estimate for the scores of participants in this study was .84.

Secondary health condition. A secondary health condition checklist can determine the limitations and impact caused by any secondary health condition on persons with disabilities (Lynch & Chiu, 2009). Persons with SPMI experience a myriad of secondary health conditions that impact vocational engagement, but a brief instrument to determine how much the respondent was impacted by these conditions was not available. For example, the popular Secondary Condition Surveillance Instrument (SCSI) identifies 43 predetermined health conditions and is validated on persons with physical disabilities (Nosek et al., 2006; Ravesloot, Seekins, & Walsh, 1997). The investigator found that the length of the instrument, the lack of items pertaining to mental health related comorbidity, and the multistep rating system (e.g., calculating activity limitation based on hours per week that the condition limited activity level) made the instrument too cumbersome for the respondents in this study. Therefore, the investigator reviewed the literature on common secondary health conditions impacting individuals with SPMI (see Chapter 2) and consulted with experts in the field in order to compile a brief and simplified secondary health condition checklist for persons with severe and persistent mental illness.

Health conditions in the 16-item Secondary Health Condition Checklist for Clubhouse Members included—in addition to the primary psychiatric disability—both physical and additional mental health symptoms. Contained on the checklist are the following conditions: (1) alcohol/drug use; (2) high blood pressure; (3) chronic pain; (4) depression; (5) diabetes; (6) fatigue; (7) medication side effects; (8) memory problems; (9) sleep problems; (10) weight problems; (11) respiratory disease (e.g., asthma, COPD); (12) cardiovascular disease; (13) oral/dental health issues; (14) osteoporosis; (15) high cholesterol; and (16) cancer. Participants had the option of writing in a comorbid condition that was not identified in the checklist. Some of the conditions self-identified by the respondents were problems with eyesight, rheumatoid arthritis, pinched nerve, low back pain, head injury, thyroid disorders, kidney disease, tinnitus, and gastrointestinal issues. The number of secondary health conditions that the participants identified from the predetermined checklist was summed, with a higher score indicating a more severe impact of secondary health conditions on vocational and daily functioning.

Self-construal. The Self Construal Scale (SCS) measures an individual's cultural identification along a continuum from independent to interdependent self-construal, which is largely influenced by socio-cultural environment. The SCS (Singelis, 1994) was validated in Hawaii and presents the best instrument to capture the cultural identification of the Hawaii Clubhouse members in this study. The scale has a total of 24 items with the first 12 items representing thoughts, feelings, and actions related to interdependent self-construal (e.g., "It is important for me to maintain harmony within my group") and the last 12 items representing independent self-construal (e.g., "I am comfortable being singled out for praise or rewards"). A confirmatory factor analysis conducted with a sample of University of Hawaii students found a good fit for the 2-factor (interdependent, independent) SCS model. Cronbach's alpha reliability

estimates for independent and interdependent self-construal sub-subscales was reported at .70 and .74, respectively (Singelis, 1994). Construct validity was investigated by comparing the responses of Asian Americans and Caucasian Americans, and the differences were consistent with Markus and Kitayama's (1991) concept that Asians are more interdependent (M = 4.94) compared to North Americans (M = 4.47). The interdependent scale items were found to be sensitive to changes in situational factors (e.g., job seeking tasks) and consistent with the literature that Asian Americans tend to attribute more influences to situations (M = 4.73) than do Caucasian Americans (M= 4.35).

The SCS measures the varying situations that influence independent or interdependent cognitions about the self and its influence on work motivation for Clubhouse members living in an ethnically diverse state such as Hawaii. The interdependent and independent subscales are summed separately, with a higher score on each subscale indicating a higher affinity to these variables. In this study, the Cronbach's alpha reliability estimate for the interdependent subscale was .84 and .81 for the independent subscale.

Instrumentation for Environmental Factors

The Perceived Workplace Stigma Scale (PWSS) was adapted from the Employer Stigma Scale (ESS) developed by Chan and Gervey (2010) to assess human resources managers and hiring managers' negative attitudes and stereotypes toward people from underserved populations. The PWSS is composed of 10 items to measure self-stigmatization by persons with disabilities in the workplace (e.g., "In my experience, my co-workers are not very comfortable working with persons with disabilities," and "In my experience, employers tend to assume persons with disabilities will have trouble getting along with others on the job"). Each item is rated on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree), and responses are

summed over the 10 items to produce a PWSS total score that ranges from 10 to 50. A higher score indicates higher workplace related self-stigma, which can impact work motivation. The Cronbach's alpha for the sample in this study was at .895, providing support for the utility of this measure.

Instrumentation for Integrated Self-Determination Variables

Perceived autonomy support. Numerous instruments have been developed to assess the autonomy support provided by physicians and other health care providers (e.g., Health Care Climate Questionnaire), instructors (e.g., Learning Climate Questionnaire), immediate work supervisors/managers (e.g., Work Climate Questionnaire), and sports coaches/trainers (e.g., Sports Climate Questionnaire). By inquiring about the social climate related to the target goal, these instruments measure the extent to which individuals perceive that persons of some authority are autonomy supportive (Leone, 2011). The internal consistency estimates for the climate questionnaires across domains have been reported at above .90 (Leone, 2011). The Health Care Climate Questionnaire (HCCQ; Williams et al., 1996) has been used to study weight loss and smoking cessation, with Cronbach's alphas of .92 and .96, respectively (Williams et al., 2005; Williams et al., 1996).

Other motivational climate questionnaires have been modified from the HCCQ with slight changes in wording to reflect changes in the authority figure of interest. For example, the item, "I feel my physician has provided me choices and options" from the HCCQ was changed to "I feel that my instructor provides me choices and options" in the Learning Climate Questionnaire. Therefore, the Health Care Climate Questionnaire (HCCQ) was adapted to measure the perceived support received by the Clubhouse staff member to assess whether the type of vocational support received was controlling or autonomy supportive. Other motivational

climate questionnaires have been modified from the HCCQ with a slight change in wording to reflect changes in wording of authority figure of interest. For example in item, "I feel my physician has provided me choices" and options from the HCCQ were changed to "I feel that my instructor provides me choices and options" in the Learning Climate Questionnaire. To assess the motivational climate and the degree of perceived autonomy support received from the Clubhouse staff, the investigator modified the questionnaire and substituted the words "Clubhouse staff" (e.g., "The Clubhouse staff tries to understand how I see things before suggesting a new way to do things") in the 15-item Clubhouse Climate questionnaire. Although the HCCQ uses a 7-point Likert scale, this instrument was modified to a 5-point rating scale (1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree). The investigator made this modification, after consulting with other experts, to simplify the instrument for the respondents with SPMI and to keep this measurement consistent with the 5-point Likert-type scales used throughout this study. No difference in the reliability of scores is anticipated by moving from a 7- to a 5-point rating scale. A higher score on the new Clubhouse Climate Questionnaire indicates a higher degree of perceived autonomy support received from the Clubhouse staff. The Cronbach's alpha for the Clubhouse Climate Questionnaire instrument for the sample in this study was .92.

Relatedness. The relatedness construct was measured using a subscale from the Work-Related Basic Needs Satisfaction scale (W-BNS; Broeck et al., 2010). The psychometric property of the scale was validated on the general working population in Belgium. Although the W-BNS is composed of subscales that measure all three basic psychological needs (autonomy support, competence, relatedness) as defined by Deci & Ryan (2000), the three subscales measure three different constructs. The investigator contacted Anja Van den Broeck directly and was given permission to use only the relatedness subscale of the W-BNS.

The study in Belgium conducted by the developers of the scale reported the reliability of the relatedness subscale from the W-BNS at .82 (Broeck et al., 2010). Satisfaction of relatedness needs measured from the relatedness subscale was found to be positively associated with job satisfaction, life satisfaction, and work engagement ("vigor" in this study). In addition, the same study further attested to the validity of the instrument because relatedness was most strongly associated with social support resources at work. Participants in the study were asked to "Rate your current relationship with other Clubhouse members around your vocational goals" and rated the items based on a 5-point Likert-type scale (1 = totally disagree, 2 = somewhat disagree, 3 = neutral, 4 = somewhat agree, 5 = completely agree). Sample items form a total of six items include, "I don't really feel connected with the other members at the Clubhouse" and "At the Clubhouse I feel part of a group that is working on vocational goals". The Cronbach's alpha for the relatedness measurement for the sample in this study was .71.

Self-determined motivation. A modified version of the Behavioral Regulation in Exercise Questionnaire-2 (BREQ-2; Markland & Tobin, 2004), the Behavioral Regulation in Vocational Rehabilitation Questionnaire (BRVRQ), was used to determine how participants have self regulated their psychological needs and other social factors into their motivational disposition. Mullan, Markland, and Ingledew (1997) developed the behavioral regulation in exercise context, which was later modified by Markland and Tobin (2004) to include amotivation (no behavioral intention or motivation) into the instrument to create the BREQ-2. The concept of amotivation was important to include in this study because Clubhouse members may not be interested in or motivated to work; the Clubhouse is not strictly a vocational program and does not require vocational participation. The BREQ-2 has been validated and found to have good factorial validity and good reliability for all of the following subscales (Cronbach's alpha in

parentheses): intrinsic (.86), identified (.73), introjected (.80), external (.79), and amotivation (.83; Markland & Tobin, 2004).

The BRVRQ was used in the present study to measure the type of behavioral regulation employed by Clubhouse members in order to find out how self-determined their motivational disposition was toward work. The investigator modified the BRVRQ from the BREQ-2 by changing the domain-specific wording from "exercise" to "work"; no other changes were made so as to keep the integrity of the construct measured. The respondents were asked to rate the degree to which the items were true to them based on a 5-point Likert-type scale (1 = not true, 2 = somewhat true for me, 3 = neutral, 4 = true, 5 = very true for me) to the statement, "To what extent are the following statements true to you?" Five subscales were used in this study and 5 scores were entered into the regression model. Survey items for the subscales are: (1) amotivation (i.e., "I think working is a waste of time"); (2) external motivation (i.e.,"I take part in work because my friends/family/partner say I should"); (3) introjected motivation (i.e., "I feel guilty when I don't work"); (4) identified motivation (i.e., "I value the benefits of work"; (5) intrinsic motivation (i.e., "I get pleasure and satisfaction from participating in work"). A total of 19 items produced a range of motivational profiles for the summed Clubhouse responses. The Cronbach's alpha estimates for the subscales that were found with the sample in the present study were as follows: amotivation (.82); external motivation (.80); introjected motivation (.69); identified motivation (.76); and intrinsic motivation (.86).

Competency/vocational self-efficacy. The Vocational Self-Efficacy Scale (VSES) was adapted from the Life Skills Inventory (LSI) developed by Chan, Rubin, Lee, and Pruett (2003). The LSI was designed to operationalize life skills considered essential for assertive community living and work. After consultation with professionals, the investigator removed from the LSI

those items not applicable to capturing the vocational self-efficacy construct of Clubhouse members, such as items related to measuring community living (e.g., “Obtain medical care when needed” and “Plan recreational activities”). The adapted VSES uses the same rating scale found in the original LSI (1 = strongly disagree, 2 = disagree, 3 = agree, 4 = strongly agree), and the survey was reduced from 24 items to 15 items. The VSES asked participants to rate their level of confidence in performing 15 actions related to work (i.e., “I know how to prepare for a job that is of interest to me”). For the sample in this study, the Cronbach’s alpha was .94.

Instrumentation for Outcome Variables

Readiness to change. The University of Rhode Island Change Assessment for Vocational Counseling (URICA-VC), was modified by Gervey (2010) from the original URICA scale (Mannock, Levesque, & Prochaska, 2002) to measure the readiness of persons with SPMI enrolled in vocational rehabilitation programs. A factor analysis of the URICA-VC indicated a marginal fit for a one factor model (Gervey, 2010), but will be used in this study as the instrument was developed to test the same construct on the same population of interest in this study. The URICA-VC was found to be related to the Stages of Change (SOC) (readiness) and participation in vocational activities during a 6 month follow up period, but did not predict program drop-out or job placement during follow-up period based on whether persons were in the Precontemplation, Contemplation, Preparaton, and Action Stages of Change.

Participants in this study were asked to rate on a 5-point Likert-type scale (0 = strongly disagree, 2 = disagree, 3 = unsure, 4 = agree, 5 = strongly agree) a series of statements that reflect level of agreement with how they are feeling or acting currently in relation to their vocational goals (e.g., “I am considering my career interest and vocational goals”). The scores on the 12-item survey were summed, with higher scores indicating the greater readiness for

employment and are related to the action stage of SOC. Lower scores indicate that persons were either in precontemplation or contemplation or earlier stages of the SOC. This study calculated a summed -score and did not differentiate between the various stages related to SOC. The Cronbach's alpha reliability estimate for scores from the sample in the present study was .78.

Engagement. The Engagement in Vocational Rehabilitation Activities Scale (EVRAS; Chan, 2012) was adapted from the Rehabilitation Therapy Engagement Scale (RTES; Lequerica et al., 2006) to measure level of vocational engagement of Clubhouse members. The RTES is based on the factor analysis research conducted by Mathews et al. (2002), which viewed engagement along a continuum ranging from high interest (high engagement) to apathy (low engagement). The conceptualization of engagement by the authors of the RTES is similar to the concept in this study because both consider the importance of self-efficacy and patient expectancies for outcome, meaning that the more that patients are required to do in a medical rehabilitation setting and the more complex the tasks, the less engaged the patients are expected to be with the prescribed treatment (Lequerica & Kortte, 2010). Higher levels of engagement and higher scores on the RTES are associated with increased involvement and participation in rehabilitation activities (Lequerica et al., 2006). The psychometric properties of the RTES were reported as sound; the internal consistency reliability was high, with coefficient alpha values of .97 for physical therapy settings and .99 for occupational therapy settings. The ratings on the RTES from physical therapists and occupational therapists in two different settings were found to be stable and highly correlated between the occupational therapists and physical therapists. The psychometrics of this instrument were tested on individuals with acquired brain injury but may be applicable to persons with severe and persistent mental illness due to similar neurobehavioral symptoms.

The EVRAS consists of 9 items; participants were asked to indicate their level of agreement on a 5-point Likert scale (1= strongly disagree, 2 = disagree, 3 = unsure, 4 = agree, 5 = strongly agree) to statements that reflect level of involvement with vocational activities offered at the Clubhouse or through other vocational programs (e.g., "I show up to appointments related to my vocational program"). The scores on the 9-item survey were summed, with the highest scores indicating the highest level of engagement in vocational services. The Cronbach's alpha for scores from the present sample on this instrument was .86.

Perceived benefits of vocational program. The Positive Vocational Expectancy Survey (PVES) was used to measure the expected benefits from completing the vocational program offered through the Clubhouse. It has been found that persons are more committed to vocational program and work, when they view high incentives to work rather than low barriers to work (Larson, 2011). Focusing on the positive aspects of their vocational rehabilitation as the reasons for work would seem more useful in overcoming employment related barriers; therefore, this study focused on measuring the beneficial outcomes perceived as a result of their participation in a vocational rehabilitation program.. The PVES require that participants rate their level of agreement with 8 statements that completed the sentence, "Completing my vocational rehabilitation program will likely allow me to"; one example of an item reflecting a positive outcome was, "Have a job with good pay and benefits." The participants were asked to rate each item by using a 5-point Likert scale (1 = strongly disagree, 2 = disagree, 3 = unsure, 4 = agree, 5 = strongly agree). The eight items for this survey instrument were selected after searching the psychiatric vocational literature and is largely based on Larson et al. (2007) Employment Questionnaire, which has been used in several studies for persons with SPMI to study various employment variables (Larson, 2008). Only the items related to a positive

employment related outcome were extracted from the Employment Questionnaire and costs related to employment were excluded. The Cronbach's alpha for the PVES with the sample in this study was 0.79.

Table 3.2
Study Measures and Reliability Estimates for the Sample in this Study (*N* = 124)

Construct	**# of Items**	**Instrument**	**Response Range**	**Cronbach's alpha**
Predictor Variables				
General disability factor	12 items	World Health Organization Disability Assessment Schedule (WHODAS) 2.0 • Cognition • Mobility • Self-care • Getting along • Life activities • Participation	1-5	.838
Secondary health condition	16 items	Secondary Health Condition Checklist for Clubhouse Members	------	------
Self-construal (collectivism, individualism)	24 items	Self Construal Scale (SCS) • Interdependent (12) • Independent (12)	1-5	
Perceived workplace stigma	10 items	Perceived Workplace Stigma Scale (PWSS)	1-5	.895
Autonomy support	15 items	Clubhouse Climate Questionnaire	1-5	.924
Relatedness	6 items	Relatedness subscale of the Work-Related Basic Needs Satisfaction scale (W-BNS)		.706
Vocational self-efficacy	15 items	Vocational Self-Efficacy Scale (VSES)	0-4	.939
Self-determined motivation	19 items	Behavioral Regulation of Clubhouse Members Questionnaire • Amotivation (4) • External motivation (4) • Introjected motivation (3) • Identified motivation (4) • Intrinsic motivation (4)	1-5	 .817 .795 .686 .761 .855
Outcome Variables				
Readiness to change	12 items	University of Rhode Island Change Assessment for Vocational Counseling (URICA-VC)	0-5	.788
Engagement	9 items	Engagement in Vocational Rehabilitation Activities Scale (EVRAS)	0-4	.858
Perceived benefits	4 items	Positive Vocational Expectancy Survey	1-5	.787

Data Analysis

Scores on all measures were computed as the mean item responses in order to facilitate understanding and interpretation of the meaning of scores. To test the research hypotheses, the Statistical Package for the Social Sciences (SPSS; version 18.0) was used to perform all data analyses, including descriptive statistics, preliminary screening, and multiple regression analyses.

Descriptive statistics were computed with all the predictors, or independent variables (IVs), and criterion variables, or dependent variables (DVs), to examine the shape of the distribution (e.g., normal, skewed, kurtosis). Frequencies, percentages, means, and standard deviations were calculated to summarize participant demographic characteristics and identify secondary health conditions.

Sample Size

An a priori power analysis was conducted for the total R^2 value for a multiple regression analysis with 17 predictor variables, power = .80, and alpha = .05. G*POWER (Faul, Erdfelder, Lang, & Buchner, 2007), a software tool for general power analysis, and the analysis yielded a sample size of 146 for a medium effect size (f^2 = .15; Cohen, 1988). The 17 predictors consisted of 4 demographic characteristics (age, gender, ethnicity [white or nonwhite], and educational level [high school graduate or non-graduate]), 5 person-environment characteristics (disability factors, secondary health conditions, 2 self-construals [collectivism and individualism], and perceived stigma), and 8 SDT constructs (autonomy support, vocational self-efficacy, relatedness, and 5 self-determined motivational variables [amotivation, external, introjected, identified, and intrinsic]).

Hierarchical Regression

Hierarchical regression analysis (HRA) is particularly beneficial when, as in this study, there is more than one IV measuring a construct (Hoyt, Imel, & Chan, 2008). HRA shows the incremental variance accounted for by each predictor set to determine the unique contributions and each predictor variable to the variance in the outcome variable. The change in R^2 (ΔR^2) shows the combined contributions of the set of IVs in the same construct in explaining variance in the outcome variable, while sr^2 indicates the unique variance shared by the specific IV. Therefore, HRA as used in this study determines the unique contribution of each SDT work motivation construct on engagement in vocational activities, the positive outcome expectancy, and readiness to seek employment. Each set of IVs was entered into the regression model in an order based on the theoretical expectations of the SDT framework to influence self-determination outcomes, and was assessed in terms of what it adds to the equation at its own point of entry (Tabachnick, Fidell, & Osterlind, 2001). The significance was set at $p < .05$. The hierarchical regression model includes the following a priori specifications:

In Step 1, a set of demographic covariates was entered in the model: gender, race/ethnicity, education level, secondary health conditions, and functional disability.

In Step 2, the person-environment predictors were entered into the analysis: self-construal, perceived workplace stigma. In this step, the effect of person-environment variables on engagement in vocational rehabilitation activities, perceived benefits to vocational program, and SOC work participation were determined, after controlling for the effect of demographic covariates and functional disability.

In Step 3, the predictors entered into the analysis were the SDT factors related to autonomy support. In this step, the effect of autonomy support on engagement in vocational

rehabilitation activities, decisional balance, and SOC work participation were determined, after controlling for the effects of demographic covariates, functional disability, and person-environment factors.

In Step 4, the central SDT predictors were entered into the analysis: autonomy (motivation), competency (vocational self-efficacy), and relatedness (working alliance). In this step, the effect of SDT on engagement in vocational rehabilitation activities, decisional balance, and SOC work participation were determined, after controlling for the effect of demographic covariates, functional disability, person-environment factors, and autonomous support.

CHAPTER FOUR

Results

The purpose of the present study was to evaluate Deci and Ryan's (1991) self-determination theory (SDT) as a work motivation model for persons with SPMI. Hierarchical regression analysis (HRA) was used to determine the amount of variance in perceived benefits of employment, engagement in vocational activities, and employment readiness (stages of change for employment) that could be accounted for by sets of predictors representing demographic covariates, contextual factors, and SDT predictors. The specific research questions posed for the study were:

Research Question 1: Do the demographic covariates (gender, race/ethnicity, education level, secondary health conditions, and functional disability), contextual factors (perceived workplace stigma, interdependent self-construal, independent self-construal), and SDT constructs (autonomy support, motivation, competency, and relatedness) predict *perceived benefits of vocational program* for persons with SPMI?

Research Question 2: Do the demographic covariates (gender, race/ethnicity, education level, secondary health conditions, and functional disability), contextual factors (perceived workplace stigma, interdependent self-construal, independent self-construal), and SDT constructs (i.e., autonomy support, motivation, competency, and relatedness) predict *engagement in vocational rehabilitation activities* for persons with SPMI?

Research Question 3: Do the demographic covariates, contextual factors, and SDT constructs (i.e., autonomy support, motivation, competency, and relatedness) predict *employment readiness* (*stages of change)* for persons with SPMI?

This chapter describes the results of the statistical analyses used to evaluate the primary research questions.

Preliminary Data Screening and Analysis

Data for all predictor and criterion variables were screened using SPSS 18.0 for accuracy of data entry, multivariate outliers, and normality. Frequency distributions were used to identify cases in which data had been entered in error. The presence of multicollinearity was assessed by examining the variance inflation factors (VIF) and none of the VIF values exceeded 5.00 for any variables in the analyses (range, 1.23 to 2.52). Histograms, scatter plots of the residuals, and skewness and kurtosis statistics were used to assess normality and linearity; the assumptions for multiple regression were found to be met.

Missing Data

Most of the measures in this study had less than 5% missing values. A simple imputation method using regression was selected for handling missing data. The imputation method computes estimations based on the values of other related item variables in the same measure to replace missing data. This method is preferred over case deletion, since it will not decrease the sample size (i.e., statistical power loss) or affect the sample representativeness. According to Fox-Wasylyshyn and El-Masri (2005), simple imputation and multiple imputation methods will yield similar results when the missing data are less than 5%.

Hierarchical Regression Analysis

Research Question No. 1

For research question 1, perceived benefits of vocational program was the dependent variable with five sets of SDT related variables entered as predictors in sequential steps: (1) demographic covariates (gender [male as the reference group], race [white as the reference

group], age, educational attainment [high school graduates vs. non-graduates], secondary health conditions, and functional disabilities; (2) contextual variables (perceived workplace stigma and independent-interdependent self-construal); (3) autonomy support; and (4) motivation (type based on SDT continuum), competency (vocational self-efficacy) and relatedness. The correlation matrix and the means and standard deviations for all variables are presented in Table 4.1.

The correlations among the dependent variable and the predictor variables ranged from small to medium. Pearson product-moment correlation coefficients in the 30s and 40s range were found predominantly among SDT variables in the correlational matrix. Hierarchical regression analysis was used to examine the relative contributions of the four sets of SDT variables as predictors of perceived benefits of employment. The results of the analysis, including values of change in R^2 (ΔR^2), along with unstandardized regression coefficients (*B*), standard errors (*SE B*), and standardized coefficients (β) for the predictor variables at each step and in the final mode are presented in Table 4.2.

In the first step of the regression analysis, demographic covariates (i.e., gender, age, race, educational attainment, secondary health conditions, and functional disability) were entered as predictors. The demographic covariates did not account for a significant amount of variance in perceived benefits of vocational program, $R = .24$, $R^2 = .06$, $F\ (6, 117) = 1.21$, *n.s.*.

Table 4.1 Correlations, Means, and Standard Deviations Matrix for Variables Used in Hierarchical Regression Analysis

Var.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	1.00	.60**	.60**	-.07*	-.12	-.05	.02	-.04	-.17	-.28	.54	.26	.26	-.01	.16	.12*	.45**	.57*	.49	.32
2		1.00	.61**	.02	-.09	.02	.19	.07	-.21	-.21	.50	.16	.38	-.20	.01	.01*	.28**	.50*	.50	.44
3			1.00	-.12	-.08	-.05	.06	.06	-.21	-.18	.24	.33	.15	-.19	.08	.12*	.33**	.52*	.40	.33
4				1.00	.04	.06	-.17*	.11	.18*	.05	-.10	-.08	.16*	-.11	-.08	-.08	-.14	-.01	-.16*	-.09
5					1.00	.09	-.02	-.20**	-.20**	-.06	-.11	-08	-.10	.05	-.10	-.04	-.03	.04	.01	-.12
6						1.00	-.02	.13	-.06	.05	-.08	.06	.07	-.31**	-.21**	-.11	.05	.08	.10	-.05
7							1.00	-.07	-.08	.02	.13	.08	.01	-.06	.03	.16*	.24**	.15*	.09	.10
8								1.00	.42**	.16	.02	-.02	.18*	-.07	.03	.02	.03	-.01	-.03	.04
9									1.00	.35**	-.18*	-.18*	.06	.01	.06	.08	-.05	.18*	-.21*	-.21**
10										1.00	-.00	-.17*	-.01	.11	.05	.20**	-.04	-.20**	-.36**	-.13
11											1.00	.17*	.13	.07	.15*	.09	.28**	.29**	.30**	.18*
12												1.00	.11	.05	.20	.23**	.32**	.33**	.20**	.11
13													1.00	-.14	-.07	.06	.28**	.33**	.28**	.35**
14														1.00	.45**	.17*	.05	-.15*	-.07	-.25**
15															1.00	.32**	.32**	.14*	.06	-.19*
16																1.00	.46**	.25**	.01	.07
17																	1.00	.70**	.33**	.13
18																		1.00	.48**	.26**
19																			1.00	.26**
20																				1.00
Mean	3.80	3.80	3.29	46.52	.45	.26	.67	4.80	25.80	26.34	48.97	36.56	58.25	3.85	5.40	5.12	9.10	8.83	30.84	21.93
SD	.68	.68	.69	9.28	.50	.44	.47	2.37	8.27	8.65	9.08	6.99	10.93	3.93	4.22	3.18	3.89	4.52	14.27	4.63

Note. 1=Perceived Benefits, 2= Engagement, 3= SOC-employment readiness 4=Age, 5=Male, 6=White, 7=HS graduates, 8=Secondary condition, 9=Functional disability, 10=Perceived stigma, 11=Collectivism, 12=Individualism, 13=Autonomy support, 14=Amotivation, 15=External motivation, 16=Introjected motivation, 17=Identified motivation, 18=Intrinsic motivation, 19=Vocational self-efficacy, 20=Relatedness, $^{*}p \leq .05$; $^{**}p \leq .01$.

Table 4.2

Hierarchical Regression Analysis for Prediction of Perceived Benefits of Vocational Program (*N*=124)

			At Entry Into Model			Final Model		
Variable	R^2	ΔR^2	B	*SE* B	β	B	*SE* B	β
Step 1	.06	.06						
Age			-.00	. 01	-.03	.00	.01	.01
Male			-.21	-.13	-.15	-.13	.09	-.09
White			-.07	. 14	-.05	-.01	.11	-.00
High School Graduates			-.01	.13	-.01	-.17	.10	-.12
Secondary Health			.01	.03	.03	-.02	.02	-.08
Condition								
Functional Disability			-.02	. 01	.08*	. 01	.01	.07
Step 2	.40	.35***						
Perceived Stigma			-.02	.01	-.27**	-.01	.01	-.17*
Collectivism			.04	.01	.52***	.03	.01	.37***
Individualism			.02	.01	.14	.00	.01	.03
Step 3	.43	.38**						
Autonomy Support			.02	.01	.19**	.00	.01	.01
Step 4	.58	.51***						
Amotivation			.01	.01	.04	.01	.01	.04
External Motivation			.01	.01	.04	.01	.01	.04
Introjected Motivation			-.01	.02	-.02	-.00	.02	-.02
Identified Motivation			.02	.02	.10	.02	.02	.10
Intrinsic Motivation			.05	.02	.30**	.04	.02	.30**
Vocational Self-Efficacy			.00	.00	.13	.00	.00	.13
Relatedness			.02	.01	.14	.02	.01	.14

Note. F (17, 106) = 8.46, $p < .001$ for the full model; F (6, 117) = 1.21, $p = .31$, for Step 1; ΔF (3, 114) = 21.27, $p < .001$ for Step 2; ΔF(1, 113) = 6.31, $p < .01$ for Step 3; ΔF(7,106) = 5.26, $p < .001$ for Step 4.

*$p < .05$, **$p < .01$, *** $p < .001$

Person x environment (contextual) variables (i.e., perceived workplace stigma and independent-interdependent self-construal) were entered in the second step of the regression analysis. These variables accounted for a significant amount of variance in perceived benefits of employment scores beyond that explained by the demographic covariates entered in the first step, $R = .63$, $R^2 = .40$, $\Delta R^2 = .35$, $F\ (3, 114) = 21.27$, $p < .001$. Perceived workplace stigma contributed significantly to the change in variance in perceived benefits of vocational program scores, with $\beta = -.27$, $t(123) = -3.41$, $p < .01$, indicating that each standard deviation unit change on perceived workplace stigma was predicted to correspond to a –0.27 standard deviation unit change on perceived benefits scores. This was a significant inverse relationship, with higher level of perceived workplace stigma associated with lower level of perceived benefits of vocational program. Collectivism was found to contribute positively to the change in variance in perceived benefits of employment scores, with $\beta = .52$, $t(123) = 6.67$, $p < .001$, indicating that increased collectivism scores were associated with greater perceived benefits of vocational program. Individualism was not a significant contributor to the change in variance in perceived benefit scores, with $\beta = .14$, $t(123) = 1.90$, $p = .06$, *n.s.* It is highly likely that the effect of individualism on perceived benefits, was significantly mediated by other predictors in the model (e.g., perceived stigma and collectivism).

Autonomy support was entered in the third step of the regression analysis. It accounted for a significant amount of variance in perceived benefits of employment scores beyond that explained by the demographic covariates and contextual variables entered in the first and second steps, $R = .65$, $R^2 = .43$, $\Delta R^2 = .03$, $F\ (10, 113) = 8.46$, $p < .001$. Autonomy was also found to contribute significantly to the change in variance in perceived benefits scores, with $\beta = .19$, $t\ (123) = 2.51$, $p < .01$, indicating that increased autonomy support was associated with greater

perceived benefits of vocational program. Perceived workplace stigma remained a significant predictor of perceived benefits, β = -.26, t(123) = -3.41, p < .001. Collectivism also remained significant as a predictor of perceived benefits of vocational program, β = .49, t(123) = 6.48, p < .001 in the third step with autonomy support added to the model.

In the final step, self-determined motivation (motivation), competence (vocational self-efficacy), and relatedness variables were entered into the regression analysis. The addition of these SDT variables accounted for a significant amount of additional variance in perceived scores beyond that explained by the demographic covariates, contextual variables and the SDT autonomy support variable entered in previous steps, R = .76, R^2 = .57, ΔR^2 = .15, F (17, 106) = 8.46, p < .001. Intrinsic motivation was found to contribute significantly to the change in variance in perceived benefits of vocational program scores, with β = .30, t(123) = 2.87, p < .01, indicating that increased intrinsic motivation was associated with greater perceived benefits of vocational program. Although the correlation between identified motivation and perceived benefits (r = .45, p < .001) were statistically significant, identified motivation was not a significant contributor to the change in variance in perceived benefit scores; it is highly likely that the effect of individualism on perceived benefits was significantly mediated by other predictors in the model (e.g., perceived stigma, collectivism, and intrinsic motivation). Amotivation (β = .04, t(106) = 0.56, p = .58, *n.s.*), external motivation (β = .04, t (106) = 0.51, p = .61, *n.s.*), introjected motivation (β = -.02, t(106) =- .21, p = .84, *n.s.*), vocational self-efficacy (β = .13, t(106) =- 1.61, p = .11, *n.s.*), and relatedness (β = .14, t(106) =1.85, p = .07, *n.s.*), were not found to be significant contributors to the change in variance in levels of perceived benefits of vocational program.

In the final model, in addition to intrinsic motivation, perceived workplace stigma remained a significant contributor to the variance in perceived workplace stigma, β = -.17, $t(102)$ = -2.24, $p < .05$. Collectivism also remained a significant predictor of perceived benefits, β = .37, $t(102) = 5.18$, $p < .001$. The final regression model accounted for 51% of the variance in perceived benefits of employment. According to Cohen's standards for the behavioral sciences research, this is considered a large effect size (Cohen, 1988; 1992). Controlling for all other factors, perceived stigma, collectivism, and intrinsic motivation were found to be significant predictors of perceived benefits of vocational program in persons with SPMI. Collectivism and intrinsic motivation were positively associated with perceived benefits of employment and perceived workplace stigma was negatively related to perceived benefits of employment.

Research Question No. 2

For research question 2, engagement in vocational activities was the criterion variable with five sets of SDT related variables entered as predictors in sequential steps: (1) demographic covariates (gender [male as the reference group], race [white as the reference group], age, educational attainment [high school graduates vs. non-graduates], secondary health conditions, and functional disabilities; (2) contextual variables (perceived workplace stigma and independent-interdependent self-construal); (3) autonomy support; and (4) motivation (type based on SDT continuum), competency (vocational self-efficacy) and relatedness. The correlation matrix and the means and standard deviations for all variables are presented in Table 4.1.

Similar to the results for research question 1, the correlations amongst the criterion variable and the predictor variables were small to medium, and Pearson correlation coefficients were in the medium range (.31 to .69) among the SDT variables. The results of the hierarchical

regression analysis used to examine the relative contribution of the four sets of SDT variables as predictors of engagement in vocational activities for persons with SPMI, is provided in Table 4.3.

In the first step of the regression analysis, demographic covariates (i.e., gender, age, race, educational attainment, secondary health condition, and functional disability) were entered as predictor variables. The contributions of demographic covariates accounted for a moderate, but significant amount of variance in engagement, $R = .35$, $R^2 = .12$, $\Delta R^2 = .12$, F (6, 117) = 2.67, $p < .05$. The standardized partial regression coefficient for high school graduate was significant, $\beta = .19$, $t(123) = 2.14$, $p < .05$, indicating that higher level of educational attainment was related to engagement in vocational activities. The standardized partial regression coefficient for functional disability $\beta = -.31$, $t(123) = -3.10$, $p < .01$, was inversely related with engagement in vocational activities, indicating that the more severe the functional disability, the less likely that the participant will engage in vocational activities. Age, race, and secondary health conditions were not significant contributors to variance in engagement.

In step two, the person x environment (contextual) variables (i.e., perceived workplace stigma, independent-interdependent self construal), were entered into the regression analysis. These variables accounted for a significant amount of variance in the engagement criterion variable beyond that explained by the demographic covariate set entered in the first step of the analysis, $R = .58$, $R^2 = .34$, $\Delta R^2 = .22$, F (3, 114) = 12.64, $p < .001$. Perceived workplace stigma contributed significantly to the change in variance in engagement in vocational activities scores, with $\beta = -.19$, $t(123) = -2.33$, $p < .01$, indicating that each standard deviation unit change on perceived workplace stigma was predicted to correspond to a -0.19 standard deviation unit change on engagement score. Collectivism was found to contribute positively to the change in

variance in engagement in vocational activities scores, with β = .46, t(123) = 5.70, p < .001, indicating that increased collectivism scores were associated with greater engagement in vocational activities score. Individualism was significantly correlated with engagement (Pearson r = .16, p < .05); however it was not a significant predictor of engagement in in the regression model.

Autonomy support was entered in the third step of the regression analysis. It accounted for a significant amount of variance in engagement in vocational activities beyond that explained by demographic covariates and contextual variables entered in the first and second steps, R = .66, R^2 = .42, ΔR^2 = .08, F (1, 113) = 16.58, p < .001. Autonomy support was also found to contribute significantly to the change in engagement scores with β = .31, t(123) = 4.07, p < .001, indicating that increased autonomy support is associated with greater engagement in vocational activities. Perceived workplace stigma remained a significant predictor of engagement, β = -.18, t(123) = -2.37, p < .05. Collectivism also remained as a significant predictor of engagement, β = .46, t(123) = 5.70, p < .001.

Table 4.3

Hierarchical Regression Analysis for Prediction of Engagement in Vocational Activities (*N* = 124)

			At Entry Into Model			Final Model		
Variable	R^2	ΔR^2	B	*SE* B	*β*	B	*SE* B	*β*
Step 1	.12	.12*						
Age			.01	.01	. 10	.01	.01	.08
Male			-.15	.12	-.11	-.04	.09	-.03
White			-.03	.14	-.02	-.02	.11	-.02
High School Graduates			.28	.13	.19*	-.17	.10	.11
Secondary Health			.05	.03	.18	-.01	.02	.04
Condition								
Functional Disability			-.03	.01	-.31**	-.00	.01	-.05
Step 2	.34	.22***						
Perceived Stigma			-.02	.01	-.19*	-.00	.01	-.04
Collectivism			.04	.01	.46***	.03	.01	.32***
Individualism			.00	.01	.02	.00	.01	-.03
Step 3	.42							
		.08***						
Autonomy Support			.02	.01	.31***	.01	.01	.14
Step 4	.56	.14***						
Amotivation			-.01	.01	-.08	.01	-.01	-.08
External Motivation			.01	.01	.07	.01	.01	.07
Introjected Motivation			-.01	.02	-.06	-.01	.02	-.06
Identified Motivation			-.03	.02	-.14	.03	.02	-.14
Intrinsic Motivation			.04	.02	.28**	.04	.02	.28**
Vocational Self-Efficacy			.01	.00	.20*	.01	. 00	.20*
Relatedness			.03	.01	.20*	.03	.01	.20*

Note. F (17, 123) = 8.0, $p < .001$ for the full model; F (6, 117) = 2.67, $p < .05$, for Step 1; ΔF(3, 114) = 12.64, $p < .001$ for Step 2;
ΔF(1, 113) = 16.58, $p < .001$ for Step 3; ΔF(7,106) = 4.72, $p < .001$ for Step 4.

*$p < .05$, **$p < .01$, *** $p < .001$

In the final step, autonomy (motivation), competence (vocational self-efficacy), and relatedness variables were entered into the regression analysis. The addition of these SDT variables accounted for a significant amount of additional variance in engagement scores beyond that explained by the demographic covariates, contextual variables and the SDT autonomy variable entered in the previous steps, $R = .75$, $R^2 = .56$, $\Delta R^2 = .14$, $F\ (7, 106) = 4.72$, $p < .001$. Intrinsic motivation was found to contribute significantly to the change in variance in engagement scores with $\beta = .28$, $t(123) = 2.67$, $p < .01$, indicating that higher scores on intrinsic motivation (self-determined motivation) were associated with greater engagement. Vocational self-efficacy (competence) and relatedness were also found to be contribute significantly to the change in variance in engagement scores with $\beta = .20$, $t(123) = 2.37$, $p < .05$ and $\beta = .20$, $t(123) = 2.50$, $p < .01$, respectively. This indicates the higher self-efficacy and relatedness scores were associated with higher vocational engagement. Amotivation ($\beta = -.08$, $t(123) = -1.04$ $p = .30$, *n.s.*), external motivation ($\beta = .07$, $t\ (123) = 0.88$ $p = .38$, *n.s.*), and introjected motivation ($\beta = -.058$, $t(123) = -.73$ $p = .47$, *n.s.*), were not found to be significant contributors to the change in variance in levels of vocational engagement.

In the final model, in addition to intrinsic motivation, vocational self efficacy, and relatedness, collectivism ($\beta = .33$, $t(123) = 4.57$, $p < .001$) remained as a significant contributor to the variance in vocational engagement. The final regression model accounted for 57% of the variance in vocational engagement and is considered a large effect size (Cohen, 1988; 1992). Controlling for all other factors, collectivism, intrinsic motivation, vocational self-efficacy, and relatedness were found to be significant predictors and positively associated with vocational engagement.

Research Question No. 3

For research question 3, employment readiness (stages of change) was the criterion variable with five sets of SDT related variables entered as predictors in sequential steps: (1) demographic covariates (gender [male as the reference group], race [white as the reference group], age, educational attainment [high school graduates vs. non-graduates], secondary health conditions, and functional disabilities; (2) contextual variables (perceived workplace stigma and independent-interdependent self-construal); (3) autonomy support; and (4) motivation, competency (vocational self-efficacy) and relatedness. The correlation matrix and the means and standard deviations for all variables are presented in Table 4.1.

Similar to research questions 1 & 2, the correlations among the dependent variable and the predictor variables were small to medium, and Pearson correlation coefficients were in the medium range (-.19 to .52) among the SDT variables. The results of the hierarchical regression analysis used to examine the relative contribution of the four sets of SDT variables as predictors of employment readiness (SOC), is provided in Table 4.3.

In the first step of the regression analysis, demographic covariates (i.e., gender, age, race, educational attainment, secondary health condition, and functional disability) were entered as predictor variables. The demographic covariates did not account for a significant amount of variance in readiness for employment dependent variable, $R = 3.04$, $R^2 = .09$, $\Delta R^2 = .09$, F (6, 117) = 1.99, p=.07, *n.s.*.

Table 4.4

Hierarchical Regression Analyses for Prediction of Readiness for Employment (N = 124)

			At Entry Into Model			Final Model		
Variable	R^2	ΔR^2	B	*SE* B	β	B	*SE* B	β
Step 1	.10	.10						
Age			-.01	.01	-.08	-.00	.01	-.06
Male			-.12	.13	-.09	-.11	.10	-.08
White			-.12	.14	-.08	-.23	.13	-.15
High School Graduates			.05	.13	.03	-.09	.11	-.06
Secondary Health			.06	.03	.19	-.02	.02	-.11
Condition								
Functional Disability			-.02	.01	-.30**	-.01	.01	-.12
Step 2	.20	.11**						
Perceived Stigma			-.01	.01	-.01	.01	.01	.06
Collectivism			.01	.01	.14	.00	.01	.01
Individualism			.03	.01	.27**	.02	.01	.19*
Step 3	.21	.01						
Autonomy Support			.01	.01	.10	-.00	.01	-.12
Step 4	.43	.22***						
Amotivation			-.03	.02	-.18*	-.03	.02	-.12*
External Motivation			.01	.02	.06	.01	.01	.06
Introjected Motivation			-.00	.02	-.02	-.00	.02	-.02
Identified Motivation			-.01	.02	-.04	-.01	.02	-.04
Intrinsic Motivation			.06	.02	.39**	.06	.02	.39**
Vocational Self-Efficacy			.01	.01	.12	.01	.01	.12
Relatedness			. 02	.01	.13	.02	.01	.13

Note. F (17, 106) = 4.6, $p < .001$ for the full model; F (6, 117) = 1.99, p = .07, for Step 1; ΔF(3, 114) = 5.14, $p < .01$ for Step 2;
ΔF(1, 113) =1.22, p=.27, for Step 3; ΔF(7,106) = 5.73, $p < .001$ for Step 4.

*$p < .05$, **$p < .01$, *** $p < .001$

Person x environment (contextual variables) (i.e., perceived workplace stigma and independent-interdependent self-construal) were entered into the second step of the regression analysis. These variables accounted for a significant amount of variance in employment readiness (stages of change) scores beyond that explained by the demographic covariates entered in the first step, $R = .45$, $R^2 = .20$, $\Delta R^2 = .11$, F (9, 114) = 5.18, $p < .01$. Individualism (independence) was found to contribute significantly to the change in variance in employment readiness scores, with $\beta = .27$, t[123] = 3.06, $p < .01$, indicating that for each standard deviation unit change, individualism was predicted to correspond to a .27 unit change in employment readiness scores. Although the correlation between employment readiness and perceived workplace stigma was significant (Pearson $r = -.18$, $p < .05$), perceived workplace stigma was not a significant contributor to the change in variance in employment readiness (SOC) scores, $\beta = -.10$, t[123] = -1.1, $p = .30$, *n.s.*. Collectivism (interdependence), which also had a significant relationship with employment readiness (Pearson $r = .24$, $p < .01$), was not a significant contributor to the change in variance in employment readiness scores, $\beta = .14$, t[123] = 1.55, $p = .12$, *n.s.*. It is likely that the effect of perceived workplace stigma and collectivism on employment readiness was significantly mediated by other predictors in the model or perceived workplace stigma may mediate the relationship between collectivism and employment readiness.

Autonomy support was entered in the third step of the regression analysis. It did not accounted for a significant amount of variance in employment readiness scores beyond that explained by the demographic covariates and contextual variables entered in the first and second steps, $R = .46$, $R^2 = .21$, $\Delta R^2 = .01$, F (10, 113) = 1.22, p= .27, *n.s.*

In the final step, autonomous motivation, competence (vocational self-efficacy), and relatedness variables were entered into the regression analysis. The addition of these SDT

variables accounted for significant amount of additional variance in employment readiness scores beyond that explained by the demographic covariates, contextual variables, and the SDT autonomy support variable entered in the previous steps, $R = .65$, $R^2 = .43$, $\Delta R^2 = .22$, F (17, 106) = 4.63, p <.001. Amotivation had a statistically significant inverse relationship to employment readiness, $\beta = -.18$, $t[106] = -1.97$, $p < .05$, indicating that a standard deviation change on amotivation score was predicted to correspond to a -.18 standard deviation unit change in employment readiness score. In addition, intrinsic motivation contributed significantly to a change in variance in employment readiness scores with, $\beta = .39$, $t[106] = 3.27$, $p < .001$, indicating that a standard deviation change in intrinsic motivation scores, predicted to correspond to a 0.39 standard deviation increase in employment readiness score.

In the final model, in addition to amotivation and intrinsic motivation, individualism (independence) remained a significant contributor to the variance in employment readiness scores with, $\beta = .19$, $t[106] = 2.27$, $p < .05$. The final regression model accounted for 43% of the variance in employment readiness, which is considered a large effect size for the behavioral sciences (Cohen, 1988; 1992). Controlling for all other factors, individualism (independence), amotivation, and intrinsic motivation were found to be significant predictors of employment readiness. Individualism and intrinsic motivation were positively associated with employment readiness whereas amotivation was negatively related to employment readiness.

CHAPTER FIVE

Discussion

In this chapter, a summary of the research findings and explanations are provided. Implications psychiatric rehabilitation, the limitations of this study, suggestions for future research, and implications for clinical practice are discussed.

Research Summary and Findings

Research has shown the benefits of work for persons with severe and persistent mental illness (SPMI) in alleviating poverty, increasing therapeutic gain, enhancing quality of life, and reducing overall use of disability entitlements and care costs (Cook, 2003). Yet factors such as stigma, employment discrimination, financial disincentives, mental health symptoms, insufficient education, and lack of work opportunities, keep the unemployment rate for persons with SPMI persistently high (McQuilken et al., 2003). In addition, vocational service providers commonly perceive persons with SPMI as unmotivated to work despite numerous reports indicating that most people with disabilities actually want to work (Bond et al., 2008; Braitman et al., 1995). Much of the misconception can be attributed to the lack of understanding of the socio-cognitive processes that drive motivational behavior. Self Determination Theory (SDT) (Deci & Ryan, 1991, 2000) is a useful framework that defines the interplay between social and personal factors that affect motivation and volition in the course of action and has the potential to inform service providers in designing theory-driven vocational interventions.

The primary goal of this study was to evaluate an expanded work motivation theory based on the tenets of SDT to predict perceived benefits to vocational program, vocational engagement, and employment readiness among persons with SPMI participating in Clubhouse psychosocial rehabilitation programs. Specifically, the relationship among the expanded work

motivation model (i.e., demographic and disability related factors, contextual factors, and SDT factors), were examined using hierarchical regression analysis to systematically identify variables that may contribute to work motivation. This study is novel because it is the first study to use SDT to investigate the variables that contribute to work motivation of persons with SPMI and to consider cultural factors that interact with motivational variables.

Relationship Between SDT Constructs and Work Motivation

In this study, a multiple regression analysis was conducted to evaluate the relationships between 17 predictor variables and each of the three outcome variables related to the research questions. Several significant relationships were found. The following section breaks down the specific factors that were found to contribute to work motivation and provides a discussion on suggestions for clinical practice, and future research trajectories.

Factors Contributing to Work Motivation

In the primary analysis, hierarchical regression analysis (HRA) was used to investigate how the SDT constructs contribute to perceived benefits to vocational program, vocational engagement, and work readiness for persons with SPMI. The predictor variables were divided into four major groups, the last two groups related to SDT constructs, and HRA was used to assess the contributions of each set of variables. Specifically, it was hypothesized that the four sets of predictor variables (demographic covariates and functioning/severity variables, contextual variables, autonomy support, and the primary SDT constructs) would each contribute significantly to the prediction of perceived benefits to vocational program, vocational engagement, and work readiness. The study showed that the expanded work motivation model in the final regression model accounted for 56% of the variance in perceived benefits to vocational program, 57% of the variance in vocational engagement, and 43% of the variance in employment

readiness (see Table 5.1). These effect sizes are considered according to Cohen's (1988) standards and provide good support for the expanded work motivation model based on SDT. The results suggested that contextual variables and most of the SDT variables (except autonomy support) accounted for the variance in the three work related variables, but the demographic factors including disability functioning, were not found to be significant. A detailed discussion of all the predictor variables is provided in the following sections.

Demographic and disability-related factors. In the first step of the analysis for all three outcome variables (benefits of vocational program, vocational engagement, and employment readiness), demographic and disability related variables (age, gender, race, educational attainment) and disability related variables (functional disability, secondary health conditions) were entered. The results indicate that demographic and disability-related characteristics did not account for a significant amount of variance in perceived benefits to vocational program and employment readiness. However, demographic and disability-related characteristics provided a small, but significant contribution to vocational engagement. Examining the individual contribution of demographic and disability related factors, it was found that individuals with at least a high school education were more likely to be engaged in vocational activities, although education was not found to significantly impact perceived benefits to vocational program or employment readiness for the Clubhouse participants. This finding is somewhat consistent with the EIDP study on demographic factors on employment outcome for persons with SPMI, as their study found that having less than a high school education was associated with an almost 40% lower likelihood of achieving an employment outcome compared to those with at least a high school education (Cook & Burke, 2002).

Table 5.1

A Summary of Significant Predictors in Final Model for the Three Dependent Variables

Dependent Variables	Perceived Benefits of Vocational Program	Vocational Engagement	Employment Readiness
Significant Predictor Variables	Intrinsic Motivation	Intrinsic Motivation	Intrinsic Motivation
	Collectivism	Collectivism	Individualism
	Perceived Workplace Stigma	Vocational Self-Efficacy	Amotivation
	____	Relatedness	____
% Variance in Final Model	**51%**	**57%**	**43%**

Labor market analyses also indicate that the fastest growing occupations are those requiring at least a 2 or 4-year college degree or technical training and a minority of Clubhouse participants had an associate degree or technical degree (6.5%) or a bachelor's degree (10.5%). An increased focus on supported education services to help with the completion of secondary and post-secondary education for persons with psychiatric illness could increase the perception of employment benefits and employment readiness for Clubhouse participants.

Functional impact. Disability-related characteristics measured by the amount of functional limitations experienced by the Clubhouse members, were negatively related to vocational engagement, and employment readiness, but did not significantly impact perceived benefits to vocational program. The greater the functional impact from the disability on multiple life domains, the less likely that vocational activities are considered and the less likely the individual will be ready for competitive employment. This finding is not surprising considering the significant employment related barriers associated with a serious mental illness (e.g., interpersonal skill deficits, diminished inhibitions, psychiatric symptoms, and cognitive deficits).

Surprisingly, secondary health conditions did not have a significant impact on perceived benefits to vocational program, vocational engagement, nor employment readiness, unlike other findings reported in the literature. It maybe that the checklist utilized in this study did not adequately capture the secondary health impact of persons with SPMI. It is also likely that the impact of secondary health conditions may have been adequately captured by measuring a global disability factor using the ICF based measurement of disability related functioning (WHODAS 2.0). Moreover, the finding that functional limitations not impacting perceived benefits to vocational program may be related to other factors. It is likely the relationship between functional impairment and perceived benefits to vocational program may be mediated by dependence on SSDI and/or SSI cash and medical entitlement programs. Persons with SPMI are conditioned to be careful to not earn an income that will threaten their SSA eligibility, and service providers are often in collusion to keep earnings under substantial gainful activity levels (Baron, 2002). An overwhelming majority of the Clubhouse participants in this study (99.2%) were receiving some type of cash and/or non-cash related public support, including SSDI benefits (60.5%) and/or SSI benefits (49.2%), and many were receiving Medicaid (46.8%) or Medicare (26.6%) benefits. The socio-economic factors influencing perceived employment are apparent when considering the fact that 45.2% of the participants were receiving food stamps (SNAP) benefits in addition to the other public benefits and 17.7% were receiving Section 8 housing vouchers. The entanglement of public supports with Clubhouse participants is a considerable variable in this study, but could not be directly entered into the regression equation as there was not enough variance in the sample to include these variables as predictors in the regression analysis.

Contextual Factors. In the second step of the analysis, perceived workplace stigma and cultural self-construal variables, were entered into the regression equation. The results indicate

that contextual factors significantly accounted for the change in variance in perceived benefits to vocational program (35%), vocational engagement (22%), and employment readiness (11%), beyond that accounted for by demographic and disability related variables.

Stigma. Consistent with the overall literature on the impact of stigma for persons with SPMI, workplace stigma decreased perceived benefits to vocational program and contributed significantly to the final work motivation model. Stigma was a significant contributor after controlling the effects of demographic and disability related factors when predicting vocational engagement, and remained significant when autonomy support was added to the model. However perceived workplace stigma was no longer a significant contributor to the expanded work motivation model after the remaining SDT variables were added at the final step of the analysis. This suggests that stigma, may be buffered by the effects of the other SDT variables such as relatedness or vocational self-efficacy, and the effects of workplace discrimination may not impact an individual's engagement in vocational activities when there is camaraderie and vocational skill development in the Clubhouse program. Although the impact of workplace discrimination should be continually addressed through legislative action, advocacy, and psycho-educational mechanisms, the potential to reduce the perception of stigma by persons with mental illness by attending to the need for relatedness and by increasing work related skills, has important implications when designing vocational intervention programs. The potential for the vocational competence and relatedness to Clubhouse members as mediating the effect of perceived work discrimination on vocational engagement warrants further investigation. In addition, a significant relationship between perceived workplace stigma and employment readiness was not found, but it is possible that perceived workplace stigma may have been mediated by another factor, such as cultural self-construal (collectivism, individualism) as work

benefits are susceptible to feedback received regarding the priority of work over other life obligations.

Self-construal. One of the most unique contributions of this study is the investigation of the relationship between a person's worldview in terms of the self in relation to the collective-independent self-construal (i.e., individualistic) and the interdependent self-construal (i.e., collectivistic) on work motivation (Markus & Kitayama, 1991). Self-construal is rooted in the idea that persons are able to simultaneously hold interdependent and independent view of the self. These prototypical views are largely shaped by cultural norms, values, and beliefs that individuals draw from their cognitive experience when confronted with social situations (Triandis, 1989). Markus and Kitayama (1991) proposed that these self-construal concepts (independent and interdependent) coexist and influence the decision making process through the situational cues that prime our cognitions related to an event. In this study, the original self-construal measurement developed by Singelis (1994) was slightly modified to prime for work-related self-construal as the original instrument primed for University of Hawaii students and their role as students.

This study found that self-construal significantly contributed to the final work motivation models for all three outcomes--perceived benefits to vocational program, vocational engagement, and work readiness. The relationship between the person and the collective, as well as the priority given to personal goals over in-group goals, was found to impact work motivation for persons with SPMI. For example, persons with a higher independent self-construal significantly were likely to have higher scores in employment readiness. Employment readiness in this study, conceptualized using the stage model (Prochaska, DiClemente, and Norcross, 1992), means that persons who had a more independent self construal in relation to employment, were more likely

to have progressed through the stages of change toward the extreme of taking action steps needed to secure employment. It is fair to assume from these findings that persons who are less constrained by family obligations or other social influences may have an easier time than those with more interdependent self-construal to move into competitive employment opportunities.

The study also found that persons high on interdependent self-construal were more likely to perceive benefits of their vocational program at the Clubhouse and vocational engagement in the final work motivation model. Persons more concerned about upholding the positive perception by others may internalize the explicit Clubhouse message of employment as a fundamental human right and key to recovery from mental illness and, therefore, may be more likely to have a positive outcome expectancy and perceive the benefits of their involvement in Clubhouse vocational activities.

Interdependent self-construal and it relationship to higher engagement in Clubhouse vocational activities is not surprising when considering that membership to the Clubhouse fosters a sense of being valued and needed (Beard, Propst, & Malamud, 1982). Interdependency in the Clubhouse, fostered through participation in the daily operations of the Clubhouse (i.e., work-ordered day) and personal responsibility to the actual functioning of the Clubhouse supports engagement for persons high on interdependent self-construal. However, the finding that persons with a more interdependent self-construal are less likely to actually take the steps toward employment outside of the Clubhouse setting suggests that, in order for persons with a strong sense of duty to the other members of the Clubhouse and who are comfortable with the security of the Clubhouse routine, may need reassurances from the staff to reduce their level of dependence on the daily operations of the Clubhouse.

Persons with an interdependent orientation might benefit from encouragement from person providing autonomy support (or other important person of authority), to move into competitive employment opportunities from Clubhouse-based transitional employment programs. This finding is consistent with a simulated study on cultural self-construal and the role of autonomy support which found that intrinsic motivation and behavior change was achieved when there is more social pressure from important others, group members, or persons of some authority over the group for persons with collectivistic orientation (Rentzelas, 2009). For example when a hypothetical "group manager" made choices on behalf of the group regarding physical activity engagement, members of the group were more likely to have an intention to make behavioral changes and experience intrinsic motivation. The provision of choice is still important, meaning that when persons with a more interdependent orientation are more likely to willfully or volitionally be dependent on significant others and experience intrinsic motivation when they choose to forego personal choice, but not personal autonomy in making decisions related to the next steps in their employment plans (Rentzelas, 2009). For the Clubhouse group, persons with interdependent orientation may benefit from strong encouragement or pressure from family members or Clubhouse staff in the form of expectations about moving into a competitive work environment in order to truly facilitate their goals for employment and self-sufficiency.

SDT Factors. The self-determination variables examined in this study were divided and entered in the regression analysis in two steps. This is largely due to the incorporation of more contemporary work on SDT, which outlines a motivational sequence in the following order: (1) social factors (i.e., autonomy support); (2) psychological mediators (i.e., competence, relatedness), self-determined motivation (i.e., intrinsic motivation, integrated motivation,

identified motivation, introjected motivation, external motivation, and amotivation); and (3) outcomes (Vallerand, 1997). The sequence is supported by research that has found that perceptions of autonomy support predicted self-determined motivation, through the needs for autonomy, competence, and relatedness (Hagger & Chatzisarantis, 2005). In this study, the social factors related to the SDT construct, perceived autonomy support from Clubhouse staff, was separated from the remaining SDT constructs and entered in the third step of the model. The remaining SDT constructs, which consisted of psychological mediators (i.e., vocational self-efficacy, relatedness) and self-determined motivation (5 types), were considered in the final step of the regression analysis.

The inclusion of psychological mediators and self-determined motivation as a unified SDT construct in the fourth step deviates from Vallerand's motivational sequence, but as a preliminary study on the utility of SDT in predicting work motivation of persons with a culturally diverse population of persons with SPMI, the separation did not seem warranted. Autonomy support as major social force and central tenet of SDT theory, coupled with the controversial Western and independent association of the construct, was an important factor to examine in terms of its contribution to overall work motivation, above and beyond the contribution of personal (demographic covariates, disability factors) and contextual factors (perceived work stigma, self-construal) considered in the expanded model. Moreover, additional steps in the model would require a larger sample size, which was geographically and logistically prohibitive for this initial study.

Autonomy support. Autonomy support as a stand-alone SDT variable was entered in the third step in the regression analysis. It was a significant predictor of perceived benefits to vocational program and vocational engagement, and it seems notable that a single construct

accounted for 3% and 8% of the variance respectively after controlling for personal (demographic, disability factors) and contextual factors (perceived stigma, self-construal) in the expanded model. However, autonomy support did not contribute to the variance in employment readiness (SOC) and did not maintain statistical significance in the final model. These findings highlight the importance of other SDT variables in predicting work motivation for this sample. Moreover, it is particularly interesting is that autonomy support did not remain significant in the culturally diverse Clubhouse setting of Hawaii. Self-construal in a previous study with SDT variables was found to moderate the effect of autonomous motivation on behavior (Rentzelas, 2009). Self-construal in this study may have moderated the effect of autonomy support (social forces) on the psychological mediators (relatedness, competence, autonomy) related to SDT, and the Clubhouse group dynamics may also have an additional situational effect on SDT variables.

Previous studies have found that autonomy support and environmental agents that support intrinsic motivation can be perceived differently depending on the general orientation of the group. For example, with a collectivistic group orientation, intrinsic motivation increased when a person of authority made the choices for the group compared to participants in the group with a more individualist (independent) orientation (Rentzelas, 2009). When considering more contemporary research on the Hierarchical Model of Intrinsic and Extrinsic Motivation (HMIEM) (Vallerand, 1997;Vallaerand & Rattelle, 2002), individuals may have a global orientation towards work but are also influenced the feedback received at the situational level (e.g., Clubhouse culture), and this highlights the importance of context, outcomes, and level of specificity in defining motivational orientations (Vallerand & Ratelle, 2002). The overall group orientation of the unique Clubhouse culture are important considerations for this study and future studies may benefit from the examination of social factors that include global factors (general

motivational disposition), contextual factors (cultural orientation), and situational factors (Clubhouse activities) that interact with psychological mediators to predict types of motivation and behavior consequences.

Major SDT factors. In the fourth and final step of the analysis, the SDT constructs-competence (vocational self-efficacy) and relatedness were identified as significant contributors to vocational engagement, although they were not statistically significant in predicting perceived benefits to vocational program or employment readiness. The role of vocational self-efficacy on vocational engagement is supported by a meta-analysis that found that self-efficacy was related to overall work-related performance and should continue to be developed to sustain employment motivation (Stajkovic & Luthans, 1998). The Clubhouse is the main support and source of efficacy expectation for persons in this study, and will remain important for the continued development and reinforcement of vocational competence needed to endure the barriers related to integrated employment. The accessibility of vicarious learning opportunities offered at the Clubhouse, and the observation of other members successfully engaging in vocational activities, can motivate other Clubhouse members to participate in similar activities (Corbière et al., 2004). In addition, the findings that relatedness was a significant contributor to vocational engagement in the final work motivation model is not surprising, particularly in the Clubhouse setting where peer relationships are intentionally developed. It is evident that continued peer and staff support in the vicarious learning, vocational skill development, and education on employment benefits, conducted within a supportive Clubhouse environment, can increase work motivation for persons with SPMI.

The major finding of this study, which found intrinsic motivation to be predictive of vocational engagement, perceived benefits to vocational program, and employment readiness,

supported the utility of SDT to examine work motivation for persons with SPMI. The study affirms that nurturing optimal motivational functioning (i.e., intrinsic motivation), based on the tenants of SDT, and designing vocational interventions that meet the social and psychological processes that drive self-regulated motivation, should be carefully nurtured and incorporated as a counseling intervention with persons with SPMI. It is interesting to note that a study on intrinsic motivation as a predictor of vocational outcomes for persons with schizophrenia, found that intrinsic motivation mediated the relationship between negative symptoms of schizophrenia, work productivity, and work performance (Saperstein, Fiszdon, & Bell, 2011). In contrast, amotivation was a significant predictor of work readiness, but not for engagement or perceived benefits to vocational program. This makes conceptual sense, as persons who have no intention to work would not consider actively engaging the vocational programs offered at the Clubhouse as they have not yet to perceive any benefits to working.

Overall the study found that although the actual processes that nurture intrinsic motivation may differ in relation to cultural self-construal, the importance of sustaining motivation based on personal choice and preferences applied to everyone and predicted all three outcomes related to employment.

Limitations

Several limitations should be considered when interpreting the results of the present study. First, as a correlational research study, the results merely demonstrate that one or more variables can predict another variable and that the variables are associated with one another. However, the two set of variables can be associated with one another without having a casual-relationship one to the other; therefore, causal conclusions can not be drawn from correlational findings, as there may be alternative explanations for the correlational relationship. Additionally,

the directionality between the predictor variables and outcome variables cannot be determined in this study.

Second, the study is underpowered due to a less than adequate sample size from the specified *a priori* power analysis conducted for this study, which yielded a sample size of 146 for a medium effect size (f^2 =.15; Cohen, 1988). This study had a sample size of 124, therefore, precautions should be taken when interpreting the results of this study. There is lower probability of detecting the effects of concerns in this study and a wider variance of the estimates of the parameters being estimated. Sampling broadly could have reduced the risk of range restriction and by transforming highly skewed variables (e.g., construct of relatedness among Clubhouse members) prior to the regression analysis (Hoyt, Leierer, & Millington, 2006). In addition, the instruments with poorer reliability could lead to the underestimation of the true correlations between the SDT constructs of interest in this study. On the other hand, despite the limited power, some significant relationships were found.

Third, the surveys in the present study relied on self-reported data, making the results vulnerable to error and bias. It is challenging to know the extent to which study findings accurately reflect the true state of the construct (e.g., motivational types, actual versus perceived autonomy support from Clubhouse staff) being measured. This is particularly true for the use of self-reports for persons with severe and persistent mental illness. It is noted that the validity of self-report measures can lead to scores that are influenced by affective bias, poor insight, and recent life events (Atkinson, Zibin, & Chuang, 1997).

In particular the negative symptoms associated with some mental illnesses such as schizophrenia, could make the readiness to change measure difficult to interpret, as individuals may not be able to exert the thoughts and efforts required to validly complete the instrument

(Corey et al., 2001). Furthermore, many persons with severe mental illness have difficulty with reading and comprehending the types of abstract questions found in many of the motivational measures. Although the investigator was available to answer any questions related to the survey, participants might not always seek her help when needed. The participants could be influenced by social desirability effects, as the investigator was present during data collection and was known to some participants as a former vocational rehabilitation counselor. Furthermore, when an environmental factor (i.e., perceived workplace stigma) is measured, it is assumed that self-perceived stigma is an accurate estimate of actual stigma and discrimination that persons with SPMI would experience in the work environment.

Fourth, there are some limitations to the generalization of findings as the majority of the participants in this study (99.2%), were receiving some type of public support, including cash and non-cash benefits--49.2% were receiving SSI and 65.5% were receiving SSDI benefits, with some receiving both. Although persons with SPMI is one of the largest beneficiaries of Social Security benefits, it was still much greater than the numbers observed in other studies with persons with SPMI (Cook, 2003). Additionally, the isolated geographical location, ethnic makeup of the Clubhouse members, and unique economic forces of the Hawaiian Islands, limit the generalizability of this study to the larger population of Clubhouse members on the mainland. It is also important to note that local unemployment rates significantly related to mental health consumer's employment outcome, regardless of personal characteristics, vocational employment services received as those residing in areas of high unemployment, such as the Hawaiian islands, had significantly worse employment outcomes (Cook, 2000). State level economic indicators have been found to have a great impact on the quality of employment outcomes for VR consumers and could impact the perceived benefits to employment for Clubhouse members

living in largely rural, economically depressed areas (Chan, Wang, Muller, & Fitzgerald, 2011). In generalizability of the results will be limited as the SDT constructs were applied to a population that has a strong amotivation to go to work due to work disincentives associated with SSI and SSDI benefits and due to the lack of local work opportunities for persons with SPMI. To increase generalizability of the results, the SDT expanded work model should be tested on other Clubhouse houses in the mainland United States.

Fifth, the data from the various Clubhouses in Hawaii were aggregated but the individual Clubhouse characteristics (e.g., employment rate) would have offered additional analysis and an intracorrelation among Clubhouses in Hawaii could offer additional information about how between group differences could further impact the work motivation model. However, due to strict adherence to confidentiality issues, the investigator did not identify the Clubhouse location with the survey responses received and further analysis could not be conducted.

Finally, one of the most salient limitations of this study is that employment outcomes was not directly measured. However, due to the actual low employment rate of the participants and low variability in the stages of the employment process, this could not be considered as an outcome. The measurement of employment outcomes for a longitudinal study, that looks at outcomes of Clubhouse members who scores high on SDT related variables and were high on intrinsic motivation and their employment outcome will be informative about the nature of a work motivation model and its subsequent impact on employment.

Implications for Psychiatric Vocational Rehabilitation Practice

The numerous employment-related barriers faced by persons with severe and persistent mental illness and their lack of work motivation as perceived by service providers, are significant challenges facing psychiatric vocational rehabilitation programs. This study provides some

specific insights into some of the social forces and psychological mechanisms that could lead to perceived low motivation and, more importantly, how to provide vocational rehabilitation counseling that is targeted to increase motivational mechanisms. In this study, the SDT model was expanded to include some person and contextual variables found in the extant literature that may impact return to work efforts. Although not statistically significant in the final work motivation model, it was noted that education attainment impacts vocational engagement and supports advocacy efforts in psychiatric vocational rehabilitation regarding the need for integrated supported education services with supported employment to enhance the work potential for persons with SPMI (Corrigan, Mueser, Bond, Drake, & Solomon, 2008).

For the Clubhouse members in Hawaii, who were overwhelmingly receiving some type of cash and/or non-cash public assistance, the impact on perceived benefits to vocational program, vocational engagement, and work readiness is worth further investigation and may interact with disability related factors to predict motivational disposition towards employment. Interventions informed by SDT such as increasing the individual competence in working through SSA work incentives, fostering peer support about working with benefits, and providing choices on how to go about working while receiving benefits could facilitate the motivation needed to overcome this substantial employment barrier. The role of autonomy support from the counselors, case managers, and Clubhouse staff, whose work is to trumpet the critically important role of work, will be admittedly challenging, but can be met with some "strong practice models" based on SDT to effectively make the case about the benefits of work for persons with psychiatric illness (Baron, 2002).

Overall, this study informs how vocational supports that meet the specific psychological needs for vocational competence, relatedness, and autonomy support, can be woven into

interventions to directly address the specified barrier to employment. A clinical assessment of the sources of support and the quality of these supports (autonomous or controlling), their level of vocational competence, and relationship with other members of the Clubhouse or other vocational programs, allows vocational counselors to target their intervention efforts. The intervention techniques can also be informed by SDT. For example if a person is assessed to have low work competence, introducing some work related tasks (e.g. scheduling, returning phone calls, dressing appropriately) in an incremental manner and in a way that offers choices on how to best achieve the work related tasks for that person, and rationale for the significance underlying the tasks, is a one example of an autonomy supportive motivational intervention informed by SDT (Hagger & Chatzisarantis, 2007).

Since Clubhouse members are influenced by the group dynamics of the Clubhouse, maintaining a larger "motivational climate" that emphasizes a promotion of cooperation between members, and a program that offers several choices in vocational skill building activities, are important considerations to reducing drop outs and increasing the motivational disposition of Clubhouse members (Sarrazin, Boiche, and Pelletier). Moreover, initial vocational assessment should include individual differences in collectivistic and individualist factors, as these factors had a statistically significant impact on how employment is perceived, the level of employment readiness, and the level of engagement in Clubhouse vocational activities. For example, it was extrapolated from the findings on higher employment readiness for persons with higher interdependent scores, that in order for persons high on collectivism to pursue competitive employment opportunities outside of the Clubhouse, the suggestion of respected authority figures may be beneficial to activate behavioral change without compromising choice (Rentzelas, 2009). It may be that that personal choice alone is not enough to evoke intrinsic motivation for

collectivistic group and the volitional reliance on group leaders may lead to more self-regulated motivation for persons high on interdependency. It will also be important to consider ways that the Clubhouse staff to emphasize the continued linkage from more independent employment opportunities outside of the Clubhouse for individuals with a more collectivistic orientation and the emphasis on continued affiliation and benefits of Clubhouse membership, along with more pressure to pursue work goals outside of the immediate Clubhouse setting.

Lastly, assessing where the person is along the SDT motivational continuum can inform the vocational counselor on the level of structure and the level of behavioral reinforcement needed for the individual. For example, persons who are less motivated might benefit from a more structured program that provides clear sub-goals and rewards for engagement in chosen vocational activities (Diclemente, Nidecker, & Bellack, 2008). This type of intervention would not be indicated for persons who are more motivated and vocationally competent, and further along in the motivational spectrum and readiness to change process.

Implications for Future Research

The consideration of independent or interdependent self-construal with SDT work motivation adds to the continuing conversation in the extant literature about the application of SDT construct to examine motivation and engagement for non-Western cultures. In addition, it is timely as researchers investigating the application of self-determination in mental health treatment engagement, to be considering the moderator effect of interdependent self-construal on service engagement for Asian cultures (Lee & Lam, 2012). For future research, an examination of the mediators and moderator variables that may be impacting the nature of the relationship between the predictor variable and outcome is indicated for a more in-depth understanding of

these relationships. For example, future research may consider examining the effects of self-construal as moderating the effect between autonomy support and the other SDT variables.

In addition perceived stigma was found to be predictive of perceived benefits to vocational program, but not vocational engagement or stages of work readiness, contrary to findings in the extant literature about the effects of stigma on persons with severe mental illness (Corrigan, 2002). The possibility that perceived stigma maybe mediated by the effect of other SDT variables on overall work motivation is worth investigating, particularly since it has clinical utility in psychiatric rehabilitation settings, and the relationships between stigma and vocational engagement and employment readiness were significantly reduced at the final step of the model. Perceived stigma is difficult to address on a person level, but if increasing vocational competence or autonomy support can help to buffer the effects of stigma on work motivation, it offers a tangible way to address work barriers for person with SPMI by direct service providers. In an effort to understand the complex nature of the relationships among personal factors, contextual variables, and SDT variables, mediator and moderator analysis might be used in future studies to tease out the third variable which may affect the strength or the direction of the association between the predictor variables and the employment related outcome variables (Hoyt et al., 2006).

The role of autonomy support and autonomous motivation (amotivation, external motivation, introjected motivation, identified motivation, intrinsic motivation) could be better differentiated. Autonomy support as a stand-alone predictor may have been overwhelming with the remaining SDT predictors in the final step of the hierarchical regression analysis. Separating vocational self-efficacy and relatedness as an additional step and as a psychological mediator between autonomy support and autonomous motivation could differentiate the effects of the

other SDT variables on motivation. In addition, intrinsic motivation, which had a high beta weight, may have overwhelmed the ability to detect the contributions of identified motivation and future research should consider additional steps that may be needed to better differentiate identified motivation from intrinsic motivation.

In addition, the Clubhouse as a research setting posed new questions about the effects of the Clubhouse on the normative group orientation as either interdependent or independent. For example, the influence of the Clubhouse dynamics, with the emphasis on interdependency, to foster a need for belonging and feeling needed, may additionally have an impact on a motivational factor not initially considered in this study. A study that intentionally set up collectivistic and individualistic group norms found that autonomy and the environmental agents that support intrinsic motivation can be perceived differently depending on the cultural orientation of the normative group (Rentzelas, 2009). This particular Clubhouse study in a largely collectivistic society, may have further primed the Clubhouse members to orient themselve to a more interdependent orientation.

This larger contextual issue is also worth investigating in future studies, considering that contemporary SDT models are considering the impact of global, contextual, and situational social factors that impact motivational disposition (Vallerand, 2002). In addition, future research should differentiate the psychological mediators-vocational competence, and relatedness from self-regulated motivation to tease out the effects of psychological mediators on motivational quality and consequences as indicated in the original motivational sequence outlined by Vallerand (1997). For example, one of the limitations to the design of this study is that the autonomous motivation variables, intrinsic motivation and identified motivation are highly related. The inclusion of intrinsic motivation in the fourth step of the regression analysis, with a

high beta weight, may have made it hard to distinguish the contributions of identified motivation. Additionally, an instrument that is able to better differentiate the five types of motivational stages from amotivation to intrinsic motivation with a higher reliability of measurement is needed.

Lastly, future research should include the measurement of cognitive limitations as a functional impairment variable to include in an expanded work motivation model. The cognitive deficits that accompany mental illness as possibly limiting a person's employment prospects may be more important than symptoms or other characteristics of the mental illness (McGurk & Meltzer, 2000). Moreover, for persons with serious mental illness like schizophrenia, almost three quarters of persons tested showed abnormal functioning on process related measurements (Palmer, Heaton, Paulsen, Kuck, Braff, et al., 1997). A meta-analysis of more than 200 studies found that persons with serious mental illness had significant deficits in memory and attention (Heinrichs & Zakzanis, 1998). These findings, among others, speak to the future need to consider information processing related impairments and its impact on overall work motivation for persons with severe and persistent mental illness.

Conclusion

This study was an initial investigation into work motivation and is novel as it was the first to develop and investigate a work motivation model for persons with SPMI based on the SDT framework. The functional relevance of low motivation for persons with severe and persistent mental illness is evident in the perceived low work motivation and consequent low unemployment rate. This is the first study of its kind in psychiatric rehabilitation counseling and psychology to investigate work motivation through the incorporation of the personal, contextual, and self determination theory to investigate the variables that contribute to work motivation. The

study found that SDT framework is useful in investigating work motivation for persons with SPMI. A novel examination of the cultural self-construal and its impact on the outcome variables offered considerable information about the role of culture and domain specific factors that contribute to how SDT related factors contribute to motivation. This study provided multiple suggestions for future research trajectories along with tangible ideas on how to apply vocational counseling interventions that support an individuals' self-determination and support their motivation to work. It is a preliminary to investigative study that will inform future research to further adapt a work motivation model for persons with SPMI with the hopes to increase employment outcomes.

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Appendix A: IRB Notice of Approval

THE UNIVERSITY of WISCONSIN MADISON

Social and Behavioral Sciences IRB

4/26/2013

Submission ID number:	2013-0407
Title:	Validating a Work Motivation Model for Individuals with Psychiatric Disabilities
Principal Investigator:	FONG CHAN
Point-of-contact:	
IRB Staff Reviewer:	LILLIAN LARSON

The convened SBS IRB conducted a full review of the above-referenced initial application. The study was approved for the period of 12 months with the expiration date of 4/18/2014.

To access the materials approved by the IRB, including any stamped consent forms, recruitment materials and the approved protocol, if applicable, please log in to your ARROW account and view the documents tab in the submission's workspace.

If you requested a HIPAA waiver of authorization, altered authorization and/or partial authorization, please log in to your ARROW account and view the history tab in the submission's workspace for approval details.

Prior to starting research activities, please review the Investigator Responsibilities guidance (http://go.wisc.edu/m0lovn.) which includes a description of IRB requirements for submitting continuing review progress reports, changes of protocol and reportable events.

Please contact the appropriate IRB office with general questions: Health Sciences IRBs at 608-263-2362 or Education Research and Social & Behavioral Science IRBs at 608-263-2320. For questions related to this submission, contact the assigned staff reviewer.

Appendix B: Promotional Flyer

WANTED!! YOUR RESEARCH PARTICIPATION AND GET A GIFT CARD TO TARGET!

What is the purpose of the study?
The purpose of this study is to collect information about employment motivation from members of the Clubhouse. This study will be conducted from April 29th 2013 to May 4th, 2013. We will be at your Clubhouse on: _____.

Who are we?
We are researchers from the University of Wisconsin-Madison conducting research on employment directed by Fong Chan, PhD and Sandra Fitzgerald, MS, CRC. Sandra Fitzgerald is a former Vocational Rehabilitation Counselor for Hawaii Division of Vocational Rehabilitation (DVR) and served as a liaison to the Hale O'luea Clubhouse in Hilo.

Am I eligible to participate in the study?
You are eligible to participate in this study if you are:

(1) a **member of the Clubhouse**;
(2) between the **ages of 18 and 65**;
(3) **read/write at the 6th grade level or above**;
(4) **contemplated employment and/or is actively looking for work**

How can I participate in the study?
You can participate in this study by completing a survey, which will **take about 30 to 40 minutes** to complete.

What will I get after participating in this study?
You will receive a **$15 Target Gift Card** upon completion of the survey.

If I have questions, whom should I contact? Please contact Sandra Fitzgerald (E-mail: sdfitzgerald@wisc.edu). Mahalo for your participation!

Appendix C: Research Script

Clubhouse Meeting
Work Motivation Research Script

Aloha. Thank you for being here and allowing me to take some time out of your member meeting. I have some important research that I am conducting and hope that you will collaborate with me. First, let me introduce myself.

My name is Sandra Fitzgerald and I am a doctoral student at the University of Wisconsin-Madison. I previously worked as a vocational rehabilitation counselor on the Big Island and have extensive experience and passion in helping individuals achieve their work goals.

I am conducting a study on the work motivation process for Clubhouse members who have either thought about or are currently pursuing employment goals. I believe there are many factors that you must consider when pursuing work goals and I would like to better understand this process so that we can hone in on the support you need to reach your goals. I know that work is a fundamental right for everyone and would like to see better participation of Clubhouse members in the community, earning a living. I hope you also feel the same way.

I would like to disseminate a survey today to better understand the process that sustains work motivation and seek your valuable input. The survey should take about 30 minutes to complete, is completely confidential, and your participation is voluntary. I have a $15 gift card that I am providing to compensate you for your time in completing the survey. A private conference room has been set up to complete a paper and pencil survey. I ask that you read the cover letter carefully which talks about confidentiality, your rights (e.g. to terminate the study at any time), and the research carefully before starting the survey. I will be available outside of the conference room to answer any questions regarding the research, cover letter, or the items on the survey. After the survey has been completed, I ask that you place your responses in the envelope provided, seal it, and drop it into the closed box provided. Please make sure that you answer all the questions that you feel comfortable answering. Once you drop your responses in the box, you will be provided with a gift card.

You must be able to independently provide consent, understand the consent form, the survey items, and read the item on your own to participate in this survey.

I am visiting the individual clubhouses on Oahu, Maui, and the Big Island this week to explain the study, and ask for volunteers. I hope that any findings from this study can provide practical information on how we can increase our understanding of the work motivation process for clubhouse house members and inform the Hawaii and the broader Clubhouse Coalition on how we can best provide vocational support for their members.
I am happy to answer any questions at this time. Thank you for your time and participation.

Appendix D: Letter of Support

Diamond Head Clubhouse
O'ahu

Friendship House
Kau'ai

Hale O Honolulu
O'ahu

Hale o Lanakila
Maui

Hale O'luea
Hilo - Hawai'i Island

Hui Hana Pono
O'ahu

The Kona Paradise Club
Hawai'i Island

Ko'olau Clubhouse
Windward O'ahu

Kauhale Lahilahi
O'ahu

Moloka'i Working Group
Moloka'i

Waipahu Aloha Clubhouse
O'ahu

The Hawaii Clubhouses are supported by the State of Hawai'i Department of Health Adult Mental Health Division
The Hawaii Clubhouses are certified by the International Center for Clubhouse Development.

For information on how to contact a Clubhouse nearest you please call The Access Line 808-832-3100

Neighbor Island Toll-free ***800-753-6879***

March 6, 2013

Sandra D. Fitzgerald, MS, CRC
Ph.D Candidate, Rehabilitation Psychology
University of Wisconsin-Madison
1000 Bascom Mall, Room 418
Madison, Wisconsin 53705

Aloha Ms. Fitzgerald,

I want to thank you for contacting me regarding your study that would focus on the motivation of men and women that have severe and persistent mental illnesses here in Hawaii. Our Clubhouse system serves approximately, 1200 Adult Mental Health Division (AMHD) consumers on an annual basis. We are very interested in gaining more understanding about their vocational interests and what motivates them to enter the work force.

I am eager to work with you and to facilitate partnerships with our Clubhouses. I am very impressed that you already have some relationships with our Clubhouse communities. We believe that it is our relationships with our Clubhouse members that assists us in helping them experience empowerment and recovery.

Your proposal appears to well thought out and accessible for our members and staff. I am happy that your study will benefit our programs and that we will learn about our services in the process.

I look forward to hearing from you and many thanks for contacting me.

Aloha, Kathleen

Kathleen Rhoads Merriam
Statewide Clubhouse Coordinator
Hawaii Adult Mental Health Division, Department of Health
Kathleen.merriam@doh.hawaii.go/808.721.0748

Appendix E: Consent Appendix E: Consent and Disclosure Form

UNIVERSITY OF WISCONSIN-MADISON
Research Participant Information and Consent Form

Title of the Study: Validating a Work Motivation Model for Persons with Psychiatric Disabilities

Principal Investigator: Fong Chan (phone: (608) 262-2137) (email: chan@education.wisc.edu)

Student Researcher: Sandra D. Fitzgerald (email: sdfitzgerald@wisc.edu)

DESCRIPTION OF THE RESEARCH

You are invited to participate in a research study about the work motivation of Clubhouse members. You have been asked to participate because you are a have contemplated going to work or currently participating in some type of return to work efforts at the Clubhouse. The purpose of the research is to investigate the factors that significantly impact work motivation for persons with psychiatric vocational disabilities. This study will include Clubhouse members within the ages of 18 to 65 and research will be conducted at the Clubhouse sites. You will be asked to complete one survey, which will take about 45 minutes to 1 hour to complete.

WHAT WILL MY PARTICIPATION INVOLVE?

If you decide to participate in this research, you will be asked to answer questions related to your return to work efforts. The answers are completely confidential. You will be asked to complete a number of surveys, which will take about 45 minutes to 1 hour to complete and require 1 session only.

ARE THERE ANY RISKS TO ME?

There are no anticipated risks associated with this research

ARE THERE ANY BENEFITS TO ME?

We do not expect any direct benefits to you from participation in this study.

WILL I BE COMPENSATED FOR MY PARTICIPATION?

You will receive a $15 gift card for participating in this study.

HOW WILL MY CONFIDENTIALITY BE PROTECTED?

This study is confidential.

WHOM SHOULD I CONTACT IF I HAVE QUESTIONS?

You may ask any questions about the research at any time. If you have questions about the research after you leave today you should contact the Principal Investigator Fong Chan at (608) 262-2137. You may also call the student researcher, Sandra D. Fitzgerald via email at sdfitzgerald@wisc.edu.

If you are not satisfied with responses from the research team, have more questions, or want to talk with someone about your rights as a research participant, you should contact the Education Research and Social & Behavioral Science IRB Office at 608-263-2320.

Your participation is completely voluntary. If you decide not to participate or to withdraw from the study it will have no effect on any services you are currently receiving.

Appendix F: Study Questionnaire

1.

1. Gender

○ Male ○ Female

2. Age

3. Marital Status

○ Single ○ Widowed

○ Married ○ Separated

○ Divorced ○ Cohabitating (living together)

4. Race/Ethnicity

○ White ○ Asian

○ Black or African American ○ Native Hawaiian or Other Pacific Islander

○ American Indian or Alaska Native ○ Hispanic/Latino

Other (please specify)

5. Health Insurance

☐ No health insurance

☐ Medicare

☐ Medicaid

☐ Public insurance from other source (e.g., Med-Quest)

☐ Insurance through your own employer

☐ Insurance through your spouse's or another family member's employer

☐ Private insurance purchased by you or other family members (e.g., Cobra)

6. Public Support

Please check off all of the benefits you are currently receiving (can be more than one)

- ☐ Not receiving any public support
- ☐ Social Security Disability Insurance (SSDI)
- ☐ Supplemental Security Income for the Aged, Blind or Disabled (SSI)
- ☐ Temporary Assistance for Needy Families (TANF)
- ☐ Veteran's Disability Benefits (VA)
- ☐ Workers' Compensation
- ☐ General Assistance (GA)
- ☐ Section 8 Housing
- ☐ Food Stamps

7. Highest level of education completed (please check one):

- ○ No formal schooling
- ○ Elementary education (grades 1-8)
- ○ Secondary education, no high school diploma (grades 9-12)
- ○ Special education certificate of completion/diploma or in attendance
- ○ High school graduate or equivalency certificate (regular education students)
- ○ Post-secondary education, no degree
- ○ Associate degree or Vocational/Technical Certificate
- ○ Bachelor's degree
- ○ Master's degree or higher

8. Please check ONE response.

- ☐ I am working for pay
- ☐ I am looking for work
- ☐ I want to work but not looking
- ☐ I do not want to work

9. If you are working, how many hours per week do you work?

10. If you are working, how much do you earn per hour?

11. Please select all vocational services and/or training you are CURRENTLY receiving

- [ ] Division of Vocational Rehabilitation (DVR)
- [ ] Peer Specialist Training
- [ ] Aquaponics training (Maui only)
- [ ] Transitional and/or supported employment from Clubhouse (e.g. TEP)
- [ ] Steadfast Employment services
- [ ] None of the above

Other (please specify)

12. Have you received benefits counseling services?

- ◯ Yes
- ◯ No

13. Please check any of the following conditions that currently apply to you (can be more than one).

- [ ] 1. Alcohol/drug use
- [ ] 2. High blood pressure
- [ ] 3. Chronic pain
- [ ] 4. Depression
- [ ] 5. Diabetes
- [ ] 6. Fatigue
- [ ] 7. Medication side effects
- [ ] 8. Memory problems
- [ ] 9. Sleep problems
- [ ] 10. Weight problems
- [ ] 11. Respiratory disease (e.g., asthma, COPD)
- [ ] 12. Cardiovascular disease (e.g., heart disease)
- [ ] 13. Oral/dental health issues
- [ ] 14. Osteoporosis
- [ ] 15. High Cholesterol
- [ ] 16. Cancer

Other (please specify)

2.

1. How much difficulty you have had in the past 30 days in performing the following activities.

	None	Mild	Moderate	Severe	Cannot do
Standing for long periods such as 30 minutes?	◯	◯	◯	◯	◯
Taking care of your household responsibilities?	◯	◯	◯	◯	◯
Learning a new task, for example, learning how to get to a new place?	◯	◯	◯	◯	◯
How much of a problem did you have in joining community activities in the same way as anyone else can?	◯	◯	◯	◯	◯
How much have you been emotionally affected by your health problems?	◯	◯	◯	◯	◯
Concentrating on doing something for 10 minutes?	◯	◯	◯	◯	◯
Walking a long distance such as a mile or equivalent?	◯	◯	◯	◯	◯
Washing your whole body?	◯	◯	◯	◯	◯
Getting dressed?	◯	◯	◯	◯	◯
Dealing with people you do not know?	◯	◯	◯	◯	◯
Maintaining a friendship?	◯	◯	◯	◯	◯
Your day-to-day work?	◯	◯	◯	◯	◯

2. What are your perceptions about employers and co-workers? Please answer even if you are not working.

	Strongly disagree	Disagree	Unsure	Agree	Strongly Agree
1. Employers are uncomfortable hiring me.	◯	◯	◯	◯	◯
2. Employers assume that I require extra time to learn new work tasks.	◯	◯	◯	◯	◯
3. Employers assume that I require some sort of job accommodation to do my job.	◯	◯	◯	◯	◯
4. Employers assume that I will have trouble getting my work done on time and need others to help me finish the job.	◯	◯	◯	◯	◯
5. My co-workers are not very comfortable working with me.	◯	◯	◯	◯	◯
6. Employers frequently assume that I will be sick more often than other workers due to my disability.	◯	◯	◯	◯	◯
7. Employers tend to assume that I will have trouble getting along with others on the job.	◯	◯	◯	◯	◯
8. Employers are reluctant to provide job accommodations for me when I truly need them.	◯	◯	◯	◯	◯
9. Employers frequently assume that people I do not have the physical stamina to work full-time.	◯	◯	◯	◯	◯
10. Employers think that I am not reliable.	◯	◯	◯	◯	◯

3. Rate your level of agreement about your encounters with the Clubhouse staff and your work goals.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. I feel that the Clubhouse staff provides me choices and options for work.	○	○	○	○	○
2. I feel understood by the Clubhouse staff	○	○	○	○	○
3. I am able to be open with the Clubhouse staff at our meetings.	○	○	○	○	○
4. The Clubhouse staff conveys confidence in my ability to make work related changes.	○	○	○	○	○
5. I feel that the Clubhouse staff accepts me.	○	○	○	○	○
6. The Clubhouse staff has made sure that I really understand my vocational plan and what I need to do.	○	○	○	○	○
7. The Clubhouse staff encourages me to ask questions.	○	○	○	○	○
8. I feel a lot of trust in the Clubhouse staff.	○	○	○	○	○
9. The Clubhouse staff answers my questions fully and carefully.	○	○	○	○	○
10. The Clubhouse staff listens to how I like to do things.	○	○	○	○	○
11. The Clubhouse staff handles people's emotions very well.	○	○	○	○	○
12. I feel that the Clubhouse staff cares about me as a person.	○	○	○	○	○
13. I don't feel very good about the way the Clubhouse staff talks to me.	○	○	○	○	○
14. The Clubhouse staff tries to understand how I see things before suggesting a new way to do things.	○	○	○	○	○
15. I feel able to share my feelings with the Clubhouse staff	○	○	○	○	○

4. Rate your current relationships with other Clubhouse members around your vocational goals.

	Totally disagree	Somewhat disagree	Neutral	Somewhat agree	Completely agree
1. I don't really feel connected with other members at the Clubhouse	○	○	○	○	○
2. At the Clubhouse, I feel part of a group that is working on vocational goals.	○	○	○	○	○
3. I don't really mix with other members at the Clubhouse	○	○	○	○	○
4. At the Clubhouse, I can talk with members about work related matters that are important to me	○	○	○	○	○
5. I often feel alone when I am with other members	○	○	○	○	○
6. Some members I interact with are close friends of mine	○	○	○	○	○

5. Rate your degree of confidence in performing the following work related tasks.

	Cannot do	Can do OK	Neutral	Do well	Do very well
1. I know how to prepare for jobs that is of interest to me.	◯	◯	◯	◯	◯
2. I know my skills and abilities and how they relate to jobs I am interested in.	◯	◯	◯	◯	◯
3. I know how to prepare a cover letter and resume.	◯	◯	◯	◯	◯
4. I know how to talk about my skills and abilities in a job interview.	◯	◯	◯	◯	◯
5. I have the physical and mental stamina for a full-time job.	◯	◯	◯	◯	◯
6. I know how to maintain regular work attendance on the job.	◯	◯	◯	◯	◯
7. I know how to get along with supervisors.	◯	◯	◯	◯	◯
8. I know how to be a team player at work.	◯	◯	◯	◯	◯
9. I know how to maintain appropriate attention and concentration on the job.	◯	◯	◯	◯	◯
10. I know how to maintain good personal hygiene at work.	◯	◯	◯	◯	◯
11. I know how to accept criticism from supervisors.	◯	◯	◯	◯	◯
12. I know how to manage my emotions on the job.	◯	◯	◯	◯	◯
13. I know when to seek help at work when needed.	◯	◯	◯	◯	◯
14. I know how to cope with discouragements from people who are important to me.	◯	◯	◯	◯	◯
15. I can determine what is appropriate to wear to work.	◯	◯	◯	◯	◯

6. To what extent are the following statements true to you?

	Not true for me	Somewhat True	Neutral	True	Very true for me
1. I work because other people say I should	◯	◯	◯	◯	◯
2. I feel guilty when I don't work	◯	◯	◯	◯	◯
3. I value the benefits of work	◯	◯	◯	◯	◯
4. I participate in work because it's fun	◯	◯	◯	◯	◯
5. I don't see why I should have to work	◯	◯	◯	◯	◯
6. I take part in work because my friends/family/partner say I should	◯	◯	◯	◯	◯
7. I feel ashamed when I miss work	◯	◯	◯	◯	◯
8. It's important to me to work regularly	◯	◯	◯	◯	◯
9. I can't see why I should bother with work	◯	◯	◯	◯	◯
10. I enjoy my work	◯	◯	◯	◯	◯
11. I work because others will not be pleased with me if I don't.	◯	◯	◯	◯	◯
12. I don't see the point in work	◯	◯	◯	◯	◯
13. I feel like a failure when I haven't worked in a while.	◯	◯	◯	◯	◯
14. I think it is important to make the effort to work regularly.	◯	◯	◯	◯	◯
15. I find work to be a pleasurable experience.	◯	◯	◯	◯	◯
16. I feel under pressure from my friends/family to work	◯	◯	◯	◯	◯
17. I get restless if I don't work regularly	◯	◯	◯	◯	◯
18. I get pleasure and satisfaction from participating in work.	◯	◯	◯	◯	◯
19. I think working is a waste of time	◯	◯	◯	◯	◯

7. Base your response on how you are feeling or acting right now.

	Strongly disagree	Disagree	Undecided	Agree	Strongly Agree
1. I am considering my career interests and vocational goals	◯	◯	◯	◯	◯
2. If I were to find a job, it would disrupt my family life and I can't let that happen.	◯	◯	◯	◯	◯
3. I am actively looking for a job.	◯	◯	◯	◯	◯
4. I have started to consider my career and employment options.	◯	◯	◯	◯	◯
5. I am following up on my initial job leads.	◯	◯	◯	◯	◯
6. If I change from the type of work I was doing, people think I failed and that's too much to take	◯	◯	◯	◯	◯
7. I am really working hard to find a job.	◯	◯	◯	◯	◯
8. Maybe the Clubhouse will be able to assist me to look for a job.	◯	◯	◯	◯	◯
9. I believe looking for work will hurt my benefits, and I can't do that now.	◯	◯	◯	◯	◯
10. I am in the process of setting up interviews with employers.	◯	◯	◯	◯	◯
11. I don't understand why I need to look for a job.	◯	◯	◯	◯	◯
12. I am considering enrolling in a training or educational program	◯	◯	◯	◯	◯

8. Indicate your level of agreement with each of the following statements.

	Strongly disagree	Disagree	Unsure	Agree	Strongly agree
1. I strive to complete assignments and vocational activities agreed upon with the Clubhouse staff.	◯	◯	◯	◯	◯
2. I communicate with the Clubhouse staff regularly.	◯	◯	◯	◯	◯
3. I show up for appointments related to my vocational program.	◯	◯	◯	◯	◯
4. I understand and accept the need for vocational services.	◯	◯	◯	◯	◯
5. I recognize the benefits of participating in vocational activities.	◯	◯	◯	◯	◯
6. I am determined to complete all the services identified in order to obtain competitive employment	◯	◯	◯	◯	◯
7. I get along with the Clubhouse staff.	◯	◯	◯	◯	◯
8. I am actively involved in the planning of my vocational program with the Clubhouse staff.	◯	◯	◯	◯	◯
9. I am open to suggestions and feedback.	◯	◯	◯	◯	◯

9. Rate your level of agreement with the following statements. Complete each sentence by beginning each sentence with:

COMPLETING MY VOCATIONAL PROGRAM WILL LIKELY LEAD ME TO:

	Strongly disagree	Disagree	Unsure	Agree	Strongly agree
....Have a job with good pay and benefits.	◯	◯	◯	◯	◯
....Do work that I would find satisfying.	◯	◯	◯	◯	◯
....Think more about mental health problems.	◯	◯	◯	◯	◯
....Reduce government financial and health benefits.	◯	◯	◯	◯	◯
....Have a supervisor who would treat me fairly.	◯	◯	◯	◯	◯
....Increase cost of housing.	◯	◯	◯	◯	◯
....Experience increased stress.	◯	◯	◯	◯	◯
....Have a job that is good for my lifestyle.	◯	◯	◯	◯	◯
....Go into a field with high employment demand.	◯	◯	◯	◯	◯
....Increase in responsibilities and stress	◯	◯	◯	◯	◯
....Disruption in my daily routine.	◯	◯	◯	◯	◯
....Find a job that I can do well.	◯	◯	◯	◯	◯
....Hide my poor employment history	◯	◯	◯	◯	◯
....Work for an employer who would be supportive of people with disabilities.	◯	◯	◯	◯	◯

10. Last Question and last stretch! Please rate your level of agreement with the following statements.

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1. I have respect for the authority figures with whom I interact	◯	◯	◯	◯	◯
2. It is important for me to maintain harmony within my group	◯	◯	◯	◯	◯
3. My happiness depends on the happiness of those around me	◯	◯	◯	◯	◯
4. I would offer the use of my office space to a supervisor or manager	◯	◯	◯	◯	◯
5. I respect people who are modest about themselves	◯	◯	◯	◯	◯
6. I will sacrifice my self-interest for the benefit of the group I am in	◯	◯	◯	◯	◯
7. I often have the feeling that my relationships with others are more important than my own accomplishments	◯	◯	◯	◯	◯
8. I would take into consideration my family's advise when making career and work plans	◯	◯	◯	◯	◯
9. It is important to me to respect decisions made by the group	◯	◯	◯	◯	◯
10. I will stay in a group if they need me, even when I'm not happy with the group	◯	◯	◯	◯	◯
11. If my co-worker fails, I feel responsible	◯	◯	◯	◯	◯
12. Even when I strongly disagree with group members, I avoid an argument	◯	◯	◯	◯	◯
13. I'd rather say "No" directly, than risk being misunderstood	◯	◯	◯	◯	◯
14. Speaking up in an employment setting is not a problem for me	◯	◯	◯	◯	◯
15. Having a lively imagination is important to me	◯	◯	◯	◯	◯
16. I am comfortable with being singled out for praise or rewards	◯	◯	◯	◯	◯
17. I am the same person at home that I am at work	◯	◯	◯	◯	◯
18. Being able to take care of myself is a primary concern for me	◯	◯	◯	◯	◯
19. I act the same way no matter who I am with	◯	◯	◯	◯	◯
20. I feel comfortable using someone's first name soon after I meet them, even when they are much older than I am	◯	◯	◯	◯	◯
21. I prefer to be direct and forthright when dealing with people I've just met	◯	◯	◯	◯	◯
22. I enjoy being unique and different from others in many respects	◯	◯	◯	◯	◯
23. My personal identity independent of others, is very important to me	◯	◯	◯	◯	◯
24. I value being in good health above everything	◯	◯	◯	◯	◯