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THE ROLE OF RECOVERY IN ATTENUATING THE NEGATIVE EFFECTS OF PERCEIVED
STIGMATIZING ATTITUDES FOR PERSONS WITH PSYCHIATRIC DISABILITIES

by

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Southwestern University, 2009

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ABSTRACT

For many people who experience psychiatric disabilities, community experiences are largely characterized by stigmatizing interactions, discrimination, and losses of opportunities for employment, housing, or relationships. Social withdrawal and loss of self-esteem can be secondary consequences of such negative experiences. However, research has also explored various mechanisms through which people in historically stigmatized social groups can minimize some of the negative effects of stigma. Many of these strategies are theorized to be similar to a mental health recovery orientation which emphasizes the empowerment, capabilities, and strengths of mental health consumers. The present investigation explores the possibility of recovery attenuating some of the negative consequences of perceived stigma for individuals diagnosed with psychiatric disabilities. Specifically, the study hypothesizes that the relationship between perceived stigma and social functioning indicators (i.e., vocational engagement, social network size and contact, community integration) will be stronger in those with a lower sense of recovery than those in a high recovery group. A series of logistic and linear regressions testing perceived stigma as a predictor of the three outcomes were compared for participants with recovery scores in the highest and lowest thirds of the sample. Results partially supported hypotheses for social networks and community integration: those with a higher sense of recovery experienced a weaker

relationship between stigma and these negative outcomes than their lower-recovery peers. This finding supports the theory that one's sense of recovery has potential to attenuate some of the negative outcomes associated with stigmatizing attitudes.

Contrary to hypotheses, however, results of analyses on vocational engagement indicated a positive relationship between stigma and vocational engagement, suggesting that those with more vocational experiences are more aware of stigmatizing attitudes. Altogether, these findings provide a basis for further theory-building and research on the relationship between recovery, stigmatizing attitudes, and community experiences.

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SECTION 1

INTRODUCTION

As Corrigan and Penn (1999) aptly stated, psychiatric disabilities "strike with a two-edged sword," causing difficulties related both directly to symptoms and functional impairment, as well as to the social consequences of such disabilities. For many, these social consequences, such as experiences of stigma (i.e., being devalued and discriminated against by society), can reach farther and last longer than the actual symptoms or impairment from the illness (Corrigan & Penn, 1997; Kloos, 2010). Specifically, perceptions of societal stigma have been linked with greater difficulty finding and keeping a job, trouble building new relationships, and less engagement in their community for people experiencing psychiatric disabilities (Link, 1987; Link, Cullen, Struening, Shrout, & Dohrenwend, 1989; Prince & Prince, 2002).

It is clear that the negative social consequences of psychiatric disabilities can be persistent sources of stress and limitation for those already experiencing the challenges associated with severe psychiatric distress and functional impairment (Anthony, 1993; Corrigan & Penn, 1997). Therefore it is important to consider ways of minimizing such social consequences and even promoting positive outcomes, such as empowerment and increased engagement in community life. Although a body of literature exists around the ability of stigmatized groups to combat the negative consequences of stigma

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(Crocker & Major, 1989; Watson & Corrigan, 2001; Watson & River, 2005), little research has explored the potential role of one's sense of recovery from a psychiatric disability to act as another such strategy for minimizing the effects of stigmatizing attitudes.

As conceptualized in a seminal paper by William Anthony (1993), mental health recovery was first introduced as an alternative to the medical model of mental illness, which focuses on medication management and symptom reduction as the primary modes of treatment. By contrast, recovery is characterized as an individualized process whereby persons diagnosed with psychiatric disabilities can learn to live meaningful lives at any level of symptom distress. A recovery orientation emphasizes supporting consumers in living the lives they choose, especially encouraging opportunities for community engagement through meaningful activities, roles, and relationships (Rodgers, Norell, Roll, & Dyck, 2007; SAMHSA, 2006). With its emphasis on strengths and capabilities rather than focusing on social deficits and impairment, it is possible that the promotion of a sense of recovery in individuals diagnosed with psychiatric disabilities allows them to deny the societal stigma around psychiatric disabilities and fight against some of the negative social consequences often experienced by members of this population.

The present investigation will explore whether one's sense of recovery is associated with differences in the relationship between individuals' experiences of stigma and their social functioning outcomes (i.e., vocational engagement, social network size and contact, and community integration). The first section reviews the current literature on stigma, including the various dimensions of stigma, their impacts

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on individuals diagnosed with psychiatric disabilities, and the literature around stigma resistance. After a brief overview of the concept of recovery within mental health, the second section then draws parallels between stigma resistance strategies and the process of recovery, ultimately arguing for the possibility that one's sense of recovery can attenuate the negative effects of stigma. Following this review, a model will be proposed and tested in which recovery is associated with differences in (i.e., moderates) the relationship between one's perceptions of stigma and various social functioning outcomes.

Stigma

Goffman (1963) defined a "stigma" as a characteristic that, when it is initially perceived by another, creates a rift in the perceiver's mind between who that individual "ought" to be (*virtual social identity*) and who they are (*actual social identity*). Specifically with stigma, this discrepancy is interpreted *negatively* as others perceive the stigmatized as less desirable, discredited, or devalued as a result of the characteristic (Goffman, 1963). In contrast to more historical psychological definitions of stigma as a "mark of shame" within the individual, Goffman's and other sociological perspectives of stigma emphasize the roles of *others* in how they label differences as "deviant" and consequently discriminate against and exclude these individuals from society (Scheyett, 2005, p. 82). Because language can be an important indicator of how we conceptualize social issues like stigma, the present paper largely uses the term "stigmatizing attitudes" to reference the history of and literature on stigma while emphasizing the problematic

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nature of the *attitudes* and external judgments made by others rather than personal attributes of the stigmatized individuals.

Link and Phelan (2001) proposed a model of stigma which also emphasizes the social and cultural forces involved in stigma. Their theory delineates five components which converge to create social stigma: (a) people identify and label differences, (b) cultural norms judge these differences to be undesirable, forming negative stereotypes, (c) labeled individuals are placed in separate social categories, creating an "us" versus "them" (i.e., in-group vs. out-group) dynamic, and (d) those in labeled categories are devalued and discriminated against, leading to social disparities. For example, a landlord may (a) sense differences in a housing applicant which she labels "mental illness," (b) assume the applicant is therefore lazy, incompetent, and dangerous, (c) mentally separate herself from the applicant and place him in an "outgroup" category, and (d) conclude that the applicant is not worth the hassle he may cause (devaluation) and decide to deny him the opportunity to rent the space (discrimination). For psychiatric disabilities, common stigmatizing attitudes include views that persons with psychiatric disabilities are weak, incompetent, childlike, dangerous, irresponsible, or worthless (Corrigan & Watson, 2002).

It is critical to note that each step of this process requires the social, economic, and political *power* to label these differences, create such social separation, and build a sociocultural environment of discrimination and exclusion (Link & Phelan, 2001). Stigmatizing attitudes undoubtedly play a role in decision-makers' distribution of access to resources, as evidenced by the presence of institutional discrimination against mental

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illness—both intentionally (e.g., restrictive voting laws) and unintentionally (e.g., insurance policies; Corrigan, Markowitz, & Watson, 2004; Link & Phelan, 2001). By contrast, individuals with psychiatric disabilities are more likely to be in positions of social disadvantage than in power (e.g., female, criminal history, un- or under-employed, and living in poverty; SAMHSA, 2012), and are therefore often not in social positions which would facilitate their influence on the social norms of stigma and discrimination.

Dimensions of stigma. Various dimensions of stigma have been defined (see Figure 1.1), including *public stigma* (i.e., the general public's negative attitudes toward
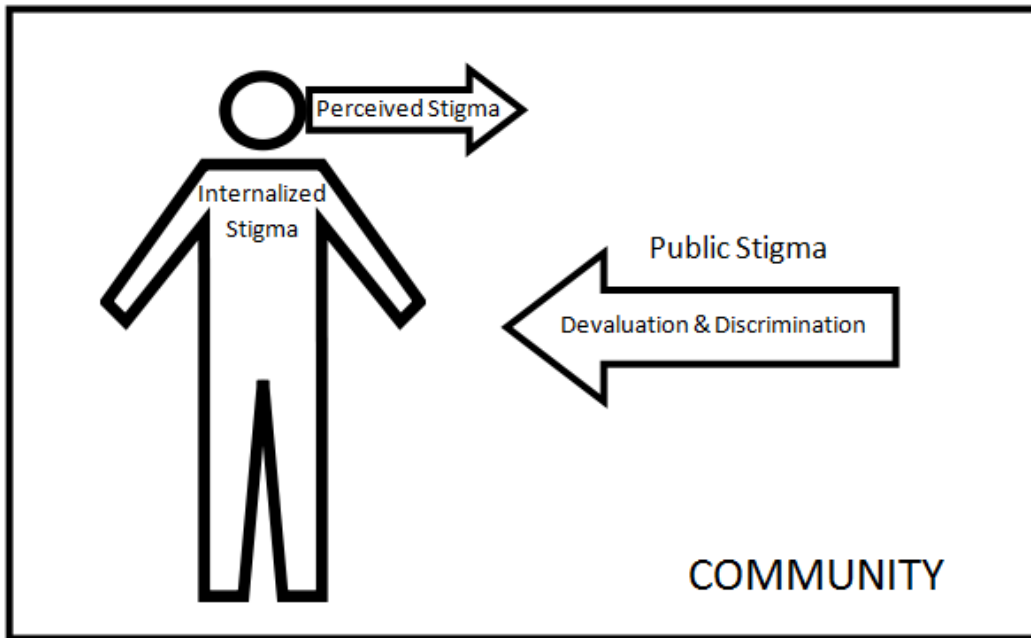

Figure 1.1 Dimensions of stigma in relation to the community and the individual.

those with psychiatric disabilities; Corrigan & Watson, 2002), *perceived stigma* (i.e., an individual's perceptions of public stigma; Link, 1987), and *internalized stigma* (i.e., consumers' negative attitudes about themselves because of their psychiatric disabilities;

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Corrigan & Watson, 2002). Each dimension of stigma affects those diagnosed with psychiatric disabilities in different ways, described here in order ranging from external society-orientated effects (e.g., negative social interactions) to more internal person-oriented impacts (e.g., lower self-esteem).

On the most external level, public stigma often leads to actual experiences of being devalued or discriminated against in a range of settings, including in vocational, housing, social, and even mental-health related contexts (Corrigan & Watson, 2002; Dickerson, Sommerville, Origoni, Ringel, & Parente, 2002; Wahl, 1999). Indirect experiences of stigma, such as hearing disparaging comments about mental illness in the media, or by family members, neighbors, service providers, or co-workers, contribute to consumers' experiences of feeling devalued by society (Dickerson et al., 2002; Wahl, 1999). More direct experiences of discrimination also stem from such attitudes, including being treated as less competent, being discouraged from taking risks, or being rejected by friends or dating partners (Dickerson et al., 2002; Wahl, 1999). Such attitudes often have real costs for individuals experiencing psychiatric disabilities in their participation in community life and their social and emotional well-being (e.g., lower self-esteem, social withdrawal, and increased anxiety and depression; Wahl, 1999).

The next dimension of stigma, perceived stigma, is defined as an individual's *perception* of public stigma; it is essentially one's *beliefs* about how "most people" feel and act towards people with psychiatric disability diagnoses (Link, 1987). For those diagnosed with psychiatric disabilities, such perceptions of stigma can quickly translate

into concerns or expectations for how they themselves will be treated by the general public (Dickerson et al., 2002), which in turn can have profound effects on their behavior (Link, 1987). Most notably, perceived stigma can increase the frequency of stigma defense behaviors, such as social withdrawal, as a way of coping with expectations of rejection or devaluation by society (Link, 1987). Therefore perceptions of stigma can again decrease opportunities for individuals diagnosed with psychiatric disabilities to engage in everyday community activities such as work or socializing, but through a different mechanism: individuals' fear of having stigmatizing and devaluing social interactions.

Finally, internalized stigma (or "self-stigma") is the process whereby consumers apply public stigma to how they think about themselves, often with direct negative impacts on their identities and self-concepts. For instance, an individual may come to believe he is incompetent and socially inept because he has a psychiatric disability—a result of applying stigmatizing social messages to his own self-concept (Corrigan & Watson, 2002). It may be argued that, of the dimensions of stigma discussed here, internalized stigma has the most deleterious effects on outcomes because of its direct negative impact on internal factors such as self-esteem and self-efficacy (Corrigan & Watson, 2002). Furthermore, by accepting stigmatizing attitudes as legitimate, individuals may lessen their ability to fight or reject others' negative perceptions and discriminating experiences—a defense mechanism which can sometimes serve to buffer the negative consequences of stigma (Crocker & Major, 1989; discussed further below). In addition to the impact on internal processes, self-stigma has also been linked with a

multitude of negative functioning outcomes, including lower vocational functioning, higher rates of psychiatric hospitalization, and poorer social adjustment (Livingston & Boyd, 2010; Rusch et al., 2009; Yanos, Lysaker, & Roe, 2010).

Modified labeling theory. Of the three dimensions presented here, perceived stigma is arguably the best-represented in the literature investigating stigma of psychiatric disabilities. Much of this literature uses Bruce Link's *modified labeling theory* to outline a causal process by which stigma leads to negative outcomes (Link, 1987; Link et al., 1989). Within a broader context, Link's theory was based on Scheff's (1966) work which applied the sociological notion of labeling theory to the realm of psychiatric disabilities. However, Link was the first to develop the concept of perceived stigma and incorporate it into labeling theory. In Link et al.'s (1989) modified labeling theory (Figure 1.2)*,* stigmatizing attitudes around psychiatric disabilities, specifically social devaluation and discrimination, are learned from a young age (Step 1) and become personally relevant to a given individual upon diagnosis with a psychiatric disability (Step 2; i.e., "labeling"). The *perception* of this personally relevant stigma then leads to negative consequences via two mechanisms: (1) indirectly through an individual's response to the stigma (e.g., withdrawal, secrecy, education) aimed at assuaging expected rejection (Step 3) and (2) directly through its impacts on internal self-esteem and external discrimination (Step 4; Link et al., 1989). In Link et al.'s (1989) model, such negative outcomes then increase one's vulnerability to further mental health and social functioning problems (Step 5).

In terms of the three dimensions of stigma previously discussed, modified labeling theory proposed that *public stigma* becomes personally relevant to individuals upon diagnosis with a psychiatric disability. These individuals may then react to their *perceived stigma* (i.e., expectations of being treated negatively) by both *internalizing* it, with consequences for their self-concepts, and changing their behavior, with consequences for their social and community engagement. Therefore, Link's conceptualization of modified labeling theory provided the field with an integrative model of various dimensions of stigma, with particular emphasis on *perceived stigma* as a critical point of intersection between public stigma and negative consequences. Due to its centrality in this important theory, *perceived stigma* will be the level at which the present investigation will explore the effects of stigmatizing attitudes.

Evidence supporting social impact of perceived stigma. The importance of perceived stigma and its subsequent processes (i.e., internalization and stigma coping responses) in impacting social functioning outcomes, namely employment and social networks, has been supported empirically (Link, 1987; Link et al., 1989). Specifically, self-ratings of demoralization (e.g., loss of self-esteem; hopelessness) were predicted by perceived stigma in individuals with current diagnoses of psychiatric disabilities. Additionally, perceived stigma predicted negative employment outcomes in individuals with long-term diagnoses of psychiatric disabilities, for whom stigma likely had both direct (i.e., internalized) and indirect (i.e., social withdrawal) impacts (Link, 1987).

Similarly, Link et al. (1989) explored the role of stigma response behaviors in impacting various social network characteristics. Results reflected a negative impact of

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Modified Labeling Approach

Step 1	Step 2	Step 3	Step 4	Step 5

Societal Conceptions of What it Means to be a Mental Patient: Perceptions of Devaluation - Discrimination

Labeled: Societal conceptions become relevent to self.

Labeled Individual's Response—Eg., secrecy, withdrawal, education.

Negative consequences for self-esteem, earning power, or social network ties.

Vulnerability to new disorder or to repeat episodes of existing disorder.

Not Labeled: Societal conceptions are irrelevant to Self.

No consequences due to Labeling—Negative effects attributable to psychopathology or to social and psychological factors unrelated to labeling.
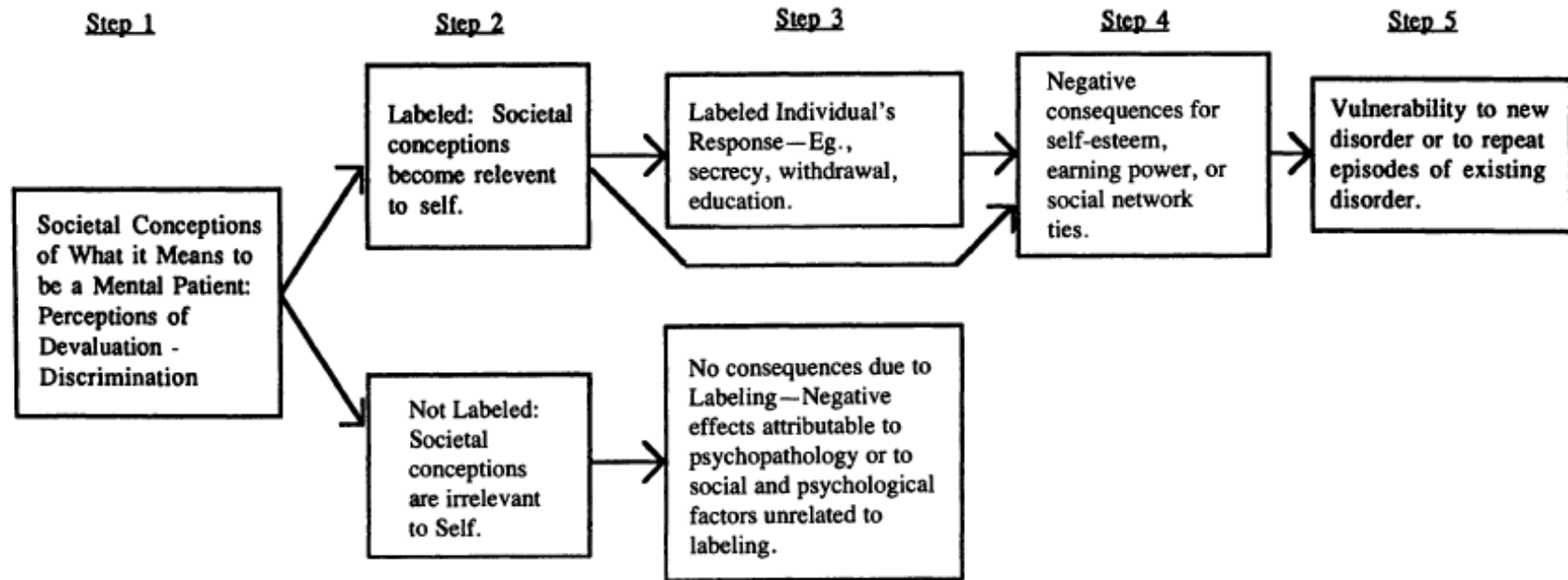
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Figure 1.2 Diagram of modified labeling theory (Link et al., 1989)

perceived stigma in those with longer or more intense periods of diagnosis (i.e., recurrent patients and those who had been previously hospitalized), presumably due to more stigmatizing experiences. Overall, this group had smaller social networks than undiagnosed individuals. Link et al.'s (1989) specific social network findings suggest that even individuals reporting high perceived stigma can build supportive social networks through careful selection of supportive friends, etc.; however, this strategy is limited when high levels of withdrawal are used to cope with the perceived stigma (Link et al., 1989). As predicted, no significant relationships were found between perceived stigma and network variables among those too recently diagnosed to have negative long-term effects of perceived stigma, or among healthy controls. Therefore, results support the notion that perceived stigma and subsequent withdrawal behavior contribute to specific negative social network outcomes.

Finally, Prince and Prince (2002) found modest support for the impact of perceived stigma on various facets of community integration in individuals using mental health services. Prince and Prince (2002) reported negative correlations between perceived stigma and both social and psychological integration but not physical integration. They also found perceived stigma to significantly contribute to a regression model of psychological integration at about equal levels (but in the opposite direction) as psychosocial functioning and perceived support (Prince & Prince, 2002). Together, these findings suggest that perceived stigma may be one contributing factor in determining an individual's level of community integration, especially their sense of belonging in the community.

Alternative responses to stigma. Although the above studies provide convincing support for modified labeling theory and the negative impact of stigma on a variety of outcomes, it may be argued that they lack at least one component: the potential for alternative, challenging responses to stigma. The above studies ignore the possibility that individuals may have different responses to perceived stigma than to automatically withdraw and/or internalize it and experience a multitude of negative outcomes (Watson & River, 2005). In fact, there is evidence to suggest that individuals may have several different kinds of stigma responses, including righteous indignation and empowerment, as well as simple indifference. Watson and River (2005) proposed a *social-cognitive model of self-stigma* in which stigma internalization results from an individual both accepting the stigmatizing beliefs as legitimate and personally identifying as a member of the stigmatized group. Alternative responses to stigma (i.e., other than internalization) can also be predicted from these factors: righteous anger results from a strong positive group identity and low perceived stigma legitimacy, whereas indifference simply stems from low group identification, regardless of other factors (Watson & River, 2005).

Goudge, Ngmoa, Manderson, and Schneider (2009) used qualitative interviews of persons in another historically stigmatized group—those living with HIV in South Africa—to identify several personal attributes and experiences that seemed to contribute to individuals' varying responses to stigmatizing attitudes of HIV. One experience related to stigma *resistance* was having valuable social roles on which the individual could build an identity apart from the illness, such as taking care of a niece or

nephew or serving as a peer-support counselor. In contrast, it seemed that individuals who lacked meaningful social roles (e.g., whose children had been taken away) were especially susceptible to internalizing stigma and feeling disempowered (Goudge et al., 2009). Social support also seemed to be central to an individual's stigma response such that more positive support from family and friends encouraged participants to accept their illness and "build new, positive identities" (p. 101). However, lack of social support or, even more so, reliance on stigmatizing family members appeared to lead to disempowerment, internalized stigma, and poorer outcomes (Goudge et al., 2009).

Finally, Goudge et al. (2009) posited that most individuals use a variety of stigma coping strategies at various times. They also discussed stigma response behaviors as components of the broader effort to cope with a lifelong illness. That is, finding meaningful roles and relationships and developing a positive identity are involved in both stigma resistance and illness coping in oftentimes complex interactions and cycles (Goudge et al., 2009).

In summary, all types of stigmatizing attitudes (e.g., public, perceived, and internalized stigma) pose a threat to the well-being and community engagement of individuals with psychiatric disabilities. Consequences of such stigmatizing attitudes include limited opportunities for community participation, increased social withdrawal, and decreased self-esteem. Fortunately, many members of stigmatized groups have found ways to resist the stigmatizing attitudes and diminish their negative impacts. Factors important to this process include having a positive group identity, low belief in

the legitimacy of stigmatizing attitudes, non-stigmatizing close social relationships, and

valued social roles.

Recovery from Psychiatric Disabilities

Just as stigma resistance can be conceptualized as part of the process of coping

with HIV (Goudge et al., 2009), experiences around stigma—acceptance or resistance—

may be integrally related to the process of recovery from psychiatric disabilities. Before

this potential relationship is explored further, a brief overview of the concept of

recovery will be provided.

Although the concept of recovery was first developed by consumers as part of a

consumer empowerment movement (e.g., Deegan, 1988), it was introduced into the

academic literature by William Anthony (1993), who defined it as:

> A deeply personal, unique process of changing one's attitudes, values, feelings,
> goals, skills, and/or roles. It is a way of living a satisfying, hopeful, and
> contributing life even with limitations caused by illness. Recovery involves the
> development of new meaning and purpose in one's life as one grows beyond the
> catastrophic effects of mental illness. (p. 527)

Recovery has since been developed into a multifaceted and complex construct.

In fact, a core characteristic of recovery is that it is highly personal and individualized, so

the meaning and significance of recovery can vary widely across individuals.

Nevertheless, various attempts to define the multiple dimensions have been made. The

U.S. Substance Abuse and Mental Health Service Administration (SAMHSA) defined

recovery as having ten core components: self-direction, individualized and person-

centered, empowerment, holistic, non-linear, strengths-based, peer support, respect,

responsibility, and hope (SAMHSA, 2006). Another framework for defining recovery

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proposed by Whitley and Drake (2010) is comprised of five separate dimensions of recovery: clinical (e.g., symptom reduction), existential (e.g., empowerment, hope), functional (e.g., employment, housing), physical (e.g., healthy behaviors), and social (e.g., relationships, community integration).

Research on the recovery orientation has found it to be correlated with a number of positive outcomes, including decreased psychiatric symptoms, increased service use, higher rates of employment, higher self-esteem and empowerment, larger social networks, and higher quality of life (Corrigan, Giffort, Rashid, Leary, & Okeke, 1999; Resnick, Rosenheck, & Lehman, 2004). Interventions designed to promote one's sense of recovery have also been found to increase consumers' engagement in activities and social integration and functioning (Hodgekins & Fowler, 2010; Segal, Silverman, & Temkin, 2010).

Recovery and stigma resistance. A number of researchers have connected the process of recovery with stigma resistance. Yanos, Roe, and Lysaker (2010) stated that "an essential part of the recovery process involves transforming undervalued identities associated with internalized stigma and replacing them with more individualized 'empowered' identities" (p. 79). Mezzina, Borg, Marin, Sells, Topor, and Davidson (2006) also linked recovery with "the need of developing resilience and resistance to stigma and actively fighting against it" (p. 46). Therefore, resisting internalized stigma may be conceptualized as part of the recovery process, with both concepts sharing an emphasis on individuals building positive self-identities and finding new meaning in their experiences.

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Furthermore, the ten elements of recovery identified by SAMHSA can be considered alongside the components of stigma resilience outlined above to reveal a number of important similarities. First, the emphasis on *strengths and competencies*—core to recovery—directly challenges the legitimacy of stigmatizing attitudes, such as that mental health consumers are incompetent, weak, and helpless (Watson & Corrigan, 2001). Watson and River (2005) also identified *empowerment*, another of SAMHSA's core components of recovery, as "the polar opposite of self-stigma" and defined it as specifically stemming from rejecting stigmatizing beliefs as legitimate (p. 156). Furthermore, the emphasis on *peer support* within the recovery movement coincides with Watson and River's (2005) strategy of building a positive identity within the stigmatized community, such as through self-help or mutual support groups, in order to help resist stigma. Various elements of recovery also center on considering the individual *holistically* and building a range of competencies, roles, and responsibilities. This element of recovery is in line with Goudge et al.'s (2009) emphasis on the importance of *meaningful roles and responsibilities*, which facilitate developing an identity outside of the illness in combating internalized stigma.

Finally, a closer examination of SAMHSA's recovery element of *respect* provides perhaps the strongest case for the close parallel between recovery and stigma resistance (Chiu, Ho, Lo, & Yiu, 2010). The 2006 SAMHSA Consensus Statement on recovery defined respect as:

> Community, systems, and societal acceptance and appreciation of consumers— including protecting their rights and eliminating discrimination and stigma—are crucial in achieving recovery. Self-acceptance and regaining belief in one's self

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are particularly vital. Respect ensures the inclusion and full participation of consumers in all aspects of their lives. (p. 2)

The first sentence of this definition highlights the importance of decreasing public stigma in order to facilitate the process of recovery for individuals diagnosed with psychiatric disabilities. It is especially difficult for individuals to develop a sense of self-efficacy and self-confidence when their opportunities for experiences such as work, education, and relationships are greatly limited by stigma.

The second sentence of the above definition emphasizes resisting stigma as integral to the process of recovery, similar to the findings by Goudge et al. (2009). That is, the processes of "self-acceptance and regaining belief in one's self," often through meaningful roles and relationships, are elements of recovery which can help to decrease the internalization of stigma. More specifically, many of the stigma resistance strategies discussed above, such as building positive group identities and rejecting stigma as legitimate, are facilitated by an initial sense of self-acceptance and self-worth (Shih, 2004). In this way, recovery and stigma resistance may be seen as similar processes in that they both involve rejecting negative "narratives" of mental illness and instead working towards self-acceptance, self-confidence, and empowerment to live a meaningful life of one's choice.

Moreover, the last sentence of the above recovery definition of respect highlights the relationship between recovery, stigma resistance, and social functioning outcomes. Once individuals are able to accept themselves and be accepted by society— through the process of recovery and stigma resistance—they are more likely to participate in a fuller range of community life.

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Outcomes Associated with Perceived Stigma

Perceived stigma has been shown to have negative impacts on individuals' willingness to engage in treatment (Corrigan, 2004), self-esteem (Wahl, 1999), and, as reviewed above, employment (Link, 1987), social networks (Link et al., 1989), and community integration (Prince & Prince, 2002). The present investigation will focus on these last three outcomes related to social functioning. In all three cases, past research has highlighted these areas as pervasive problems among those diagnosed with psychiatric disabilities (Bond, Salyers, Rollins, Rapp, & Zipple, 2004; Farone, 2006). Below, each outcome will be briefly introduced then discussed in relation to both stigma and recovery.

Vocational engagement. Vocational activities, including work or education, are often viewed as core parts of the "normative" adult experience in Western culture and have been identified as activities in which many adults diagnosed with psychiatric disabilities are interested but unable to access (Lloyd et al., 2006). Vocational activities are important because they provide individuals with often needed financial resources to improve their lives (e.g., access to better housing, transportation, community activities, etc.), as well as offer them the opportunity to develop meaningful social roles and identities outside of the mental health system (Mezzina et al., 2006). Unfortunately, there are a number of employment-related barriers for individuals diagnosed with psychiatric disabilities, including symptom-related impairment in cognitive or social skills and a lack of resources such as appropriate interview attire or transportation.

On top of such challenges, various facets of stigma also often work against consumers' employment interests or efforts. Actual and perceived experiences of stigma and discrimination in relation to job searching can limit individuals' employment options, as well as their willingness to pursue any potential opportunities when available (Link, 1987). Such discrimination can come both from employers as well as from service providers or friends and family members who feel that employment will add unnecessary and overwhelming levels of stress to the individual's life (Lloyd et al., 2006). Additionally, negative self-perceptions (likely related to internalized stigma) such as low "work-related self-efficacy" and lack of hope about employment possibilities have been associated with negative work outcomes (Yanos, Roe, et al., 2010, p. 83).

Alternatively, vocational outcomes have been connected with recovery in a number of ways. Supported employment and education services are becoming increasingly common types of recovery-oriented services within the mental health system (Bond et al., 2004). Such programs are considered to increase participants' sense of recovery and social inclusion by providing them with a sense of agency and choice around employment opportunities, as well as actually facilitating their opportunities to fulfill valued social roles (i.e., "employee" or "student") and to increase social interactions (Forrester-Jones, Jones, Heason, & Di'Terlizzi, 2004; Lloyd et al., 2006; Mezzina et al., 2006). Working for pay has also been associated with the empowerment component of recovery and with contributing to symptom alleviation over time (Resnick et al., 2004; Yanos, Roe, et al., 2010).

Of note, there is support for the notion that the presence of *any* type of meaningful vocational activity (e.g., psychosocial clubhouse, part-time or full-time mainstream employment, or student) can provide many of the financial, existential, and social benefits discussed above (Mezzina et al., 2006). Therefore illuminating the specific differences between the frequency and type of employment or educational activity is beyond the scope of this study; instead, any type of vocational activity (e.g., full-time or part-time employment or education) will be analyzed together.

Social networks. As typically defined, social networks include family members, close friends, and significant others, but they can also expand to involve professional health care providers, coworkers, roommates, and even landlords. The social networks of individuals diagnosed with psychiatric disabilities have been shown to be smaller and have fewer reciprocal relationships than those of the general population (Perese & Wolf, 2005). This difference may be *partially* related to psychiatric symptoms themselves, such as lack of interest in relationships and activities, decreased social skills, and elevated social anxiety or fearfulness (Perese & Wolf, 2005); however, broader social forces are also thought to play a role.

As proposed by modified labeling theory, perceived stigma has an important impact on social networks, largely via withdrawal behaviors used to avoid stigma and rejection. Such social withdrawal ultimately limits opportunities for these individuals to develop social skills or expand their social networks (Link et al., 1989). Furthermore, the lack of reciprocity found in these individuals' networks is likely related to the perception of individuals diagnosed with psychiatric disabilities as unable to contribute

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meaningfully to relationships or take care of others, as well as to the high proportion of professional health care providers (typically a one-way relationship) in such networks (Perese & Wolf, 2005).

Social network size has been found to be correlated with recovery orientation (Hendryx, Green, & Perrin, 2009), likely in a complex and bidirectional relationship. In fact, Anthony (1993) discusses the presence of natural support systems, social support, and regular social interactions as contributing to the recovery process; conversely Farone (2006) frames the development of "meaningful social relationships in the community" as an important goal that must be worked towards throughout one's recovery process. On the whole, larger social networks have been associated with greater access to resources, increased self-esteem, and higher satisfaction with leisure activities and relationships (Farone, 2006; Forrester-Jones et al., 2004; Yanos, Roe, et al., 2010).

Community integration. Broadly, community integration refers to the level of participation and engagement an individual has within various spaces of his or her community, such as workplaces, neighborhoods, religious groups, or recreational activities. It can be divided into *physical* (i.e., frequency of community activity participation), *social* (i.e., quality of interactions with neighbors and other community members), and *psychological* (i.e., sense of belonging in the community) components (Aubry & Myner, 1996).

Decreased community integration across all dimensions, but especially social integration, has been found in people with psychiatric disabilities, as compared with the

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general population (Abdallah, Cohen, Sanchez-Almira, Reyes, & Ramirez, 2009; Aubry & Myner, 1996). Similar to social networks, there are a variety of explanations for this finding. Low community integration can be a direct result of symptoms (e.g., loss of interest, anxiety, paranoia) and the decreased social functioning or resources (e.g., finances, transportation) often concomitant with psychiatric disabilities (Perese & Wolf, 2005). At a societal level, stigma and discrimination encountered in communities frequently make it more difficult to engage in important domains such as employment, housing, or social opportunities and magnify the barriers to community integration experienced by such individuals (Corrigan & Penn, 1997; Farone, 2006). Furthermore, the tendency toward social withdrawal as a coping mechanism against perceived stigma is another specific mechanisms through which stigma may limit an individual's community integration (Link et al., 1989).

Within a recovery orientation, one's level of community integration can be viewed as a manifest indicator of one's level of recovery (Bond et al., 2004). That is, recovery often involves moving beyond the mental health system and developing one's sense of identity outside of psychiatric disabilities, usually by engaging broader and more naturalized community structures like workplaces, neighborhoods, and recreational activities (Farone, 2006). In line with this notion, many of the indicators of community integration, such as "employment, housing, education, participation in leisure/social activities" and access to health and social resources are key elements of recovery-oriented services (Lloyd et al., 2006, p. 2).

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Relationships among outcomes. It should be noted that all three of these outcomes can be overlapping processes. For instance, involvement in vocational activities can increase one's social network and community integration; similarly, one's level of community integration is often associated with size of the social network (Farone, 2006; Forrester-Jones et al., 2004). Therefore, although they can be separated into distinct constructs and certainly do not always occur simultaneously, we would expect some level of correlation between participants' experiences of vocational engagement, social networks, and community integration. Although statistically modeling the relationships between these variables is beyond the scope of this study, it is important to conceptually map these relationships for future investigation.

Rationale for Recovery Attenuating the Social Impacts of Stigma

In accordance with the literature reviewed, the present study proposes that one's sense of recovery will work to attenuate the negative effects of perceived stigma on social functioning outcomes. Notably, the present investigation uses *perceive stigma* in its hypotheses because (1) it is the type of stigma used in previous investigations of modified labeling theory (e.g., Link, 1987) and (2) it is the type most relevant to hypotheses in that it measures individuals' awareness of stigma (i.e., whether one believes the attitudes exist) but not people's reactions to it (i.e., may or may not be internalized).

Because recovery and stigma resistance are proposed to be parallel processes, it is thought that a high sense of recovery will act as an indicator of stigma resistance and therefore be related to fewer negative effects of perceived stigma on social functioning

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outcomes. Specifically, it is hypothesized that differences in recovery will be associated with differences in the relationships between perceived stigma and three different social functioning domains: vocational engagement, social networks, and community integration. That is, it is believed that perceived stigma and negative social functioning outcomes will be highly related at low levels of recovery; however, at higher levels of recovery, this relationship will be attenuated by one's sense of recovery. Notably, it is not expected that there will be differences in the overall *amount* of stigmatizing attitudes perceived by individuals in the low and high recovery groups—in fact, Link (1987) found similarly high levels of perceived stigma among those with and without psychiatric disabilities. Instead, differences in the *relationship* between such perceived stigma and the examined outcomes are expected between those at high and low levels of recovery.

The present study will test three models:

Hypothesis 1: Vocational engagement. Hypothesis 1 states that differences in recovery will be associated with differences in the relationship between perceived stigma and rates of vocational engagement, such that perceived stigma and vocational engagement will be negatively related at lower levels of recovery but unrelated at higher levels of recovery. In accordance with Link (1987), it is expected that high perceptions of stigma in society will discourage individuals from pursuing and engaging in vocational opportunities, for fear of negative stigmatizing experiences. However, it is hypothesized that a sense of recovery will be associated with consumers possessing the internal resources and confidence needed to combat the effects of such societal stigma.

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Hypothesis 2: Social networks. Hypothesis 2 posits that differences in recovery will be associated with differences in the relationship between perceived stigma and size of social networks, such that perceived stigma and social network size will be negatively related at lower levels of recovery, but unrelated at higher levels of recovery. Following Link et al.'s (1989) finding that perceptions of stigma increased withdrawal behaviors which negatively impacted non-household social networks, it is expected that perceived stigma will discourage individuals diagnosed with psychiatric disabilities from engaging in as many social encounters as they may otherwise, leading to smaller social network sizes. Again, recovery is thought to be connected with consumers combating such fears of rejection and pursuing meaningful relationships in spite of possible stigmatizing attitudes.

Hypothesis 3: Community integration. Hypothesis 3 states that differences in recovery will associated with differences in the relationship between perceived stigma and community integration, such that perceived stigma and community integration will be negatively related at lower levels of recovery, but unrelated at higher levels of recovery. This hypothesis builds from Prince and Prince's (2002) finding that perceived stigma was negatively associated with certain components of community integration. The rationale behind such a connection is that an individual's perception of higher levels of stigma will be associated with a decreased likelihood of feeling a sense of belonging or socially engaging in that setting. However, it is believed that a greater sense of recovery will co-occur with individuals' abilities to move beyond such barriers and pursue greater community engagement.

SECTION 2

METHOD

Participants

The present study interviewed adults using mental health services who were recruited from the adult outpatient unit of a community mental health center (CMHC) in a mid-sized city in the Southeastern United States. To be eligible for the study, individuals must have been a client at the CMHC for at least six months and be living in independent housing (i.e., not in a supported housing program, residential treatment program or other institution, and not homeless) at the time of recruitment. A more detailed account of recruitment procedures is given below.

Demographic characteristics of the final sample (n=165) were roughly representative of the recruitment pool: 69% were female; 62% self-identified as Black, 32% as White, 2% as Latino, 2% as Alaskan Native/Native American, 1% as Asian, and 3% as other. Research participants' ages ranged from 21 to 74 years with a mean of 47 years. Furthermore, education levels of participants varied: 23% of participants reported completing less than high school, 29% stated they finished high school or obtained a GED, 38% reported attending of some college or completion of a two-year degree, and 10% indicated completion of a four-year degree or higher. The monthly income of participants ranged from $0 to $4500, with a mean of $829 and standard

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deviation of $686. The plurality of participants was diagnosed with thought disorders (i.e., Schizophrenia, Schizoaffective disorder; 41%). Other participants' primary diagnoses included Major Depression (28%), Bipolar Disorder (26%), and other disorders (e.g., PTSD, anxiety disorders; 5%).

Measures

The research interview protocol consisted of a large number of measures assessing a wide range of constructs, five of which will be used for the present analyses and are discussed below.

Perceived Stigma. The Devaluation-Discrimination Measure (DDM), developed by Link (1987) was used to assess perceived stigma. This 12-item scale consisted of a number of statements to which respondents indicated their levels of agreement, ranging from "Strongly Disagree" to "Strongly Agree" on a five-point Likert scale. Items inquired about respondents' perceptions of how "most people" would react to or view someone with a psychiatric disability diagnosis, such as accepting them as a caretaker of young children, hiring them for a job, viewing them as less intelligent or trustworthy, or taking their opinions less seriously.

Previous investigations using a sample with fair amounts of diversity across race/ethnicity and gender found the scale to have acceptable psychometric properties, including an overall Cronbach's alpha of .76 - .78 and low correlations between the DDM and a measure of acquiescence (Link, 1987; Link et al., 1989). Further construct validity was supported by the measure behaving according to theoretical predictions, as specifically indicated by its ability to predict negative social functioning outcomes only in

those who had been diagnosed with psychiatric disabilities (Link, 1987; Link et al., 1989). Finally, this scale has consistently shown that perceptions of stigma around psychiatric disabilities were similarly elevated among both individuals diagnosed with psychiatric disabilities and general community members (Link, 1987; Link et al., 1989), suggesting that the measure is able to tap into broadly held stigmatizing attitudes in society. In the present sample, the DDM demonstrated adequate internal consistency, with a Cronbach's alpha of .83.

Recovery. The Recovery Assessment Scale-Short form (RAS-S) was used to assess one's sense of recovery (Corrigan, Salzer, Ralph, Sangster, & Keck, 2004). The RAS-S was a 25-item scale inquiring about respondents' support structures ("Even when I don't care about myself, other people do."), hope about the future ("Something good will eventually happen."), self-attitudes ("If people really knew me, they would like me."), and perceptions of their psychiatric disabilities ("My symptoms seem to be a problem for shorter periods of time each time they occur."). Respondents were asked their levels of agreement to each statement on a five-point Likert scale ranging from "Strongly Disagree" to "Strongly Agree." The RAS-S alpha for the present sample was .92.

These items were taken from the original 41-item RAS. In one sample (50% African American; 65% men), the RAS was found to have an internal consistency alpha of .93, test-retest reliability of .88, and significant correlations with measures of self-esteem, empowerment, size of support network, psychiatric symptoms, and quality of life in the theoretically predicted directions (Corrigan et al., 1999). To further the validity evidence for the RAS, Corrigan et al. (2004) conducted a series of factor analyses, finding

24 items to fit into five factors: personal confidence and hope, willingness to ask for help, goal and success orientation, reliance on others, and not dominated by symptoms. These factors are consistent with previously defined domains of recovery, providing support for the construct validity of the RAS (Corrigan et al., 2004).

Vocational engagement. Vocational engagement was not assessed in the present study with a full scale; instead, a combination of three individual self-reported questions about the presence or absence of vocational activities was used to indicate this outcome. Specifically, the present study broadly defined vocational engagement by whether participants reported either (1) any type of work in the past year, (2) attending educational classes in the past six months, or (3) currently being in vocational training.

Although broad, each type of vocational activity indicated that the individual was either working or taking initiative towards improving his or her capacity to work. This expanded definition of employment/vocation was chosen partially because the present data were collected under a particularly difficult economic time nationally, which greatly restricted both employment and service (including vocational rehabilitation) opportunities. Therefore it was hoped that the broader indicator of employment and employment-related activities encompassed in "vocational engagement" would capture all participants who were willing to work towards employment in the community. Furthermore, research has found any type of vocational activity to be associated with similar benefits for consumers' recovery and well-being (Mezzina et al., 2006). Since the employment measure may be considered more of an index, internal consistency is not appropriate to report.

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Social networks. Participants' social networks were measured using the Network Support Index developed for the present study. This index asked participants to report the number of family members, romantic interests, friends, coworkers, professional health care providers, and religious congregation members they felt close to, which comprised participants' network *size* scores. The network size was then weighted by the number of times the respondent saw members of his or her social network in the past year, which may be considered an indicator of the individual's level of social withdrawal, to form an *index* score. Altogether, higher index scores indicated larger networks with more frequent contact. Again, internal consistency was not appropriate to report for this index.

Community integration. Finally, the Community Integration Measure (CIM) was used to assess the extent of participants' community engagement (McColl, Davies, Carlson, Johnston, & Minnes, 2001). In this measure, community was defined as one's broader town or city, rather than a more specific indicator such as neighborhood. The 10-item scale asked respondents their levels of agreement with a series of statements on a five-point Likert scale ranging from "Always Disagree" to "Always Agree." The content of the items covered two main domains: belonging ("I feel like part of this community, like I belong here.") and independent participation ("I can be independent in this community.").

The measure was compiled from a series of qualitative interviews with individuals with traumatic brain injury (TBI) about their experiences of community integration (McColl et al., 2001). Original reliability and validity analyses from a sample

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of TBI survivors, family members, and college students (60% women; race/ethnicity data not reported) demonstrated an internal consistency score of .87, discriminate validity through significant differences in CIM scores between TBI survivors and college students, and construct validity through a significant correlation with a measure of social support (McColl et al., 2001). Furthermore, content validity was supported by the convergence of the CIM items with the three components of community integration defined by Aubry and Myner (1996): physical ("I know my way around this community."), social ("There are people I feel close to in this community."), and psychological ("I feel that I am accepted in this community."). Construct validity was further supported by a recent survey of mental health consumers in South Carolina, which found the CIM to significantly correlate with a measures of community activities (r=.356), social support (r=.417), and sense of community (r=.519; HOME Study, in preparation). Although developed on a sample of individuals with TBI, this measure has also been used with individuals diagnosed with psychiatric disabilities (Lloyd, King, & Moore, 2010). The Cronbach's alpha for the CIM in the present sample was .85.

Design and Procedure

As previously mentioned, participants were recruited from an outpatient unit of a community mental health center. Due to HIPAA restrictions, the researchers were not able to directly recruit participants; therefore a partnership with the CMHC staff was developed to aid in this process. All eligible clients were identified by CMHC staff and letters were inserted on a weekly basis into the charts of those with upcoming appointments until every eligible client was given a letter (eight-month period total).

Letters were then reviewed by staff (case managers, nurses, or doctors) with the clients at their appointments. If interested in participating, clients were asked to contact the research staff or to leave their contact information for the researchers. From this point on, the researchers contacted participants directly to set up research interviews.

Of the 1,287 clients given letters, a total of 398 clients were initially interested in participating. Of these 398 clients, 84 later decided not to participate or could not be reached to schedule the survey; 11 interviews were ended early for reasons ranging from participants having difficulty answering questions to behaving inappropriately; and 3 clients were not deemed competent to sign the consent form, as described below. The sample of 300 participants was further narrowed to 253 for the present analyses because 47 participants were not given the measure of perceived stigma due to attrition (details discussed below). As discussed in the data analysis plan below, only participants with high and low recovery scores (as determined by a three-way split of scores) were included in final analyses, totaling a final sample of 165 participants.

The present investigation used data collected from the first of three waves of interviews, each nine months apart. Interviews were conducted at the CMHC and usually lasted 60-90 minutes. Participants were offered $20 to answer a series of self-report questions administered and recorded by a trained research assistant. The informed consent procedure involved a review of the consent form by the research assistant during which participants were encouraged to ask questions. Following this review, participants were administered a five-question "quiz" about the content just

reviewed and were required to answer four correctly before signing the form and beginning the interview.

Interviews included a variety of questions about housing and neighborhood experiences, community engagement, social support, psychiatric symptoms and functioning, and recovery. It should be noted that the DDM was administered during a separate visit to participants' homes (with an additional $10 incentive). This supplemental interview was included in the research study to provide opportunities for more objective researcher assessments of housing and neighborhood quality. Thirty participants (10% of total 300) declined home visits and were given the DDM at the end of their second interview at the CMHC. Unfortunately, 47 participants (15.6% of total 300) declined a home visit and were not found for a second interview, resulting in data from 253 participants available for the present analyses.

Interviews were conducted by trained research assistants who underwent a rigorous training procedure: online training through the University of South Carolina's Office of Research Compliance, extensive review of the interview protocol, and multiple role play scenarios and interview observations. All recruitment and interview procedures were approved by the University of South Carolina and South Carolina Department of Mental Health Institutional Review Boards.

Data Analysis

Data preparation. Composite scores were created for each scale. Vocational engagement was dichotomized into no vocational engagement (n=150) and any

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vocational engagement (n=103). Psychometric properties of the other scales were

assessed for the sample of 253 participants (Table 2.1), including mean, standard

Table 2.1 Descriptive statistics for scales (n=253)

Variable	Range	Mean	SD	Skewness	Kurtosis
Perceived Stigma	1 – 4.92	3.20	.70	-.24	.35
Recovery	1.6 – 5.0	3.86	.53	-.22	.95
Social Network Index (original)	0 – 281.2	13.77	31.87	5.79	38.67
Social Network Index (transformed)	-2 – 2.45	.73	.60	-.99	5.66
Comm Integration	1.8 – 5.0	4.14	.73	-.88	.31

deviation, skewness, and kurtosis. Due to abnormally high skewness and kurtosis of the

social network index, the variable was adjusted with a logarithmic transformation which

improved the scale's normality indicators, also reported in Table 2.1.

After checking assumptions of normality, an extreme groups approach (EGA) was

taken for further analyses. Scores on the recovery scale were ranking in ascending order

and divided into three approximately even groups of low (n=87), medium (n=88), and

high (n=78) scores. The medium-recovery group was then dropped from the data set for

the present analyses, resulting in a sample size of 165 participants. Although not always

an ideal analytical method, EGA has been found to maximize power to find a small

moderating effect, as hypothesized here, over more traditional methods and has been

suggested for use in exploratory analyses (Preacher, Rucker, MacCallum, & Nicewander,

2005). Therefore, for the exploratory and hypothesis-building purposes of the present

investigation, EGA was selected as the most appropriate analytical strategy.

SECTION 3

RESULTS

Descriptive Statistics

In order to demonstrate equivalency of the high- and low-recovery groups, results from a series of *t*-tests on demographic factors will be presented. Group differences in the variables of interest—both the explanatory and outcome variables—will also be assessed with *t*-tests. Following this, regression results testing the three separate hypotheses will be presented, each comparing regressions at low and high levels of recovery.

T-tests of demographic variables. A series of *t*-tests were conducted to assess the differences in demographic variables between participants with low and high levels of recovery. As shown in Table 3.1, no significant differences in sex, age, or race were found between low and high recovery groups. There was a trend towards participants with a lower level of recovery showing a slightly lower average level of education (*M*=4.06) than the high recovery group (*M*=4.59), *t*(163)=-1.762, *p*=.08. Together these findings indicate that differences between the groups are generally unlikely to be explained by differences in demographic characteristics in the samples, with the possible exception of education level.

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Table 3.1 Results of *t*-tests comparing low and high recovery groups

Variable	Low Recovery (N=87)		High Recovery (N=78)		*t*	*P*
	M	SD	M	SD		
Demographic Characteristics						
Sex	1.68	.47	1.71	.46	-.372	.710
Age	48.01	10.29	46.82	12.43	.666	.506
Race	1.77	.79	1.82	.77	-4.15	.679
Education	4.06	1.91	4.59	1.96	-1.762	.080
Variables of Interest						
Recovery	3.31	.34	4.45	.30	-22.422	<.001
Perceived Stigma	3.29	.61	3.21	.80	.667	.506
Voc. Engagement	.22	.41	.56	.50	-4.696	<.001
Social Networks	.56	.62	.91	.51	-4.011	<.001
Comm. Integration	3.76	.75	4.36	.61	-5.618	<.001

T-tests of predictive and outcome variables. Another series of *t*-tests were conducted to explore differences between low and high recovery groups on the variables of interest in the regression models (see Table 3.1). As expected, no differences were found between groups on the perceived stigma scale, $t(163)=.677$, *ns*, indicating that the extent to which participants perceived stigmatizing attitudes in their communities was not related to their level of recovery. There were differences in the outcome variables, though, with the high recovery group reporting significantly more vocational engagement, $t(151)=-4.696$, $p<.001$ (56% of high-recovery vs. 22% of low-recovery group reported vocational activity), larger social networks, $t(163)=-4.011$, $p<.001$, and more community integration, $t(163)=-5.618$, $p<.001$.

Regression Models

To assess the impact of recovery on the relationship between perceived stigmatizing attitudes and social functioning outcomes, each outcome was regressed on a block of demographic variables (race, sex, age) and a separate block of the explanatory variable of interest, perceived stigma. Regressions were tested separately for participants reporting low and high recovery levels, for a total of six regression analyses across three outcomes. Differences between low- and high-recovery groups were assessed according to differences in ΔR² and beta weight significance levels (i.e., *p*-values) between the two regressions within each hypothesized model.

Model 1: Vocational engagement. Because vocational engagement was measured with a dichotomous variable, logistic regressions were used to compare the ability of perceived stigma to explain vocational engagement at low and high levels of

recovery. In the low recovery group, results of an omnibus Chi-square test revealed that the model showed a trend in explaining vocational engagement but did not reach statistical significance, χ^2(4, N=87)=7.635, p=.106. The Cox & Snell R² approximation found that the model accounted for about 8.6% in variance of vocational engagement. Goodness of fit for the model was found to be acceptable using the Hosmer and Lemeshow Test, χ^2(7, N=87)=3.549, $ns,$ which indicated that the observed data did not differ significantly from the model predictions. As shown in Table 3.2, age was the only demographic factor which significantly explained vocational engagement, with every one year increase in age explaining a .948 decrease in the likelihood of being engaged in employment or education. The explanatory variable of interest, perceived stigma, trended toward a significant role in the model (p=.083), but in an opposite direction than hypothesized: every one point increase in perceived stigma was associated with participants being 2.287 times *more* likely to be engaged in vocational activity.

In the high recovery group, the omnibus Chi-square test showed the model to be significantly explanatory of vocational engagement, χ^2(4, N=78)=9.753, p=.045. According to the Cox and Snell R² approximation, the model accounted for about 11.8% of variance in vocational activity and the Hosmer and Lemeshow Test revealed a good model fit, χ^2(8, N=78)=5.044, $ns.$ As seen in Table 3.2, none of the demographic factors were significant in this model; however, contrary to hypotheses, the perceived stigma variable *more* significantly explained vocational engagement than in the low recovery model, p=.025. The odds ratio was slightly lower than in the previous model: every one point increase in perceived stigma corresponded with participants being 2.088 times

Table 3.2 Logistic regression of vocational engagement

Variable	Low Recovery (N=87)				High Recovery (N=78)			
	B	SE(B)	Odds Ratio	95% *CI*	B	SE(B)	Odds Ratio	95% *CI*
Block 1: Demographics								
Sex	.044	.599	1.045		.564	.532	1.757	
Age	-.053**	.026	.948	[.901, .998]	-.024	.020	.976	
Race	.134	.334	1.143		-.235	.342	.791	
Block 2: Stigma								
Perceived Stigma	.827*	.477	2.287	[.899, 5.822]	.736**	.329	2.088	[1.095, 3.980]

Note: CI = confidence interval. **p* <.10, ***P*<.05

more likely to engage in vocational activities. Therefore Hypothesis 1 was *not* supported because perceived stigma and vocational engagement were *positively* associated, and more strongly related at high levels of recovery than at low levels (Figure 3.1).
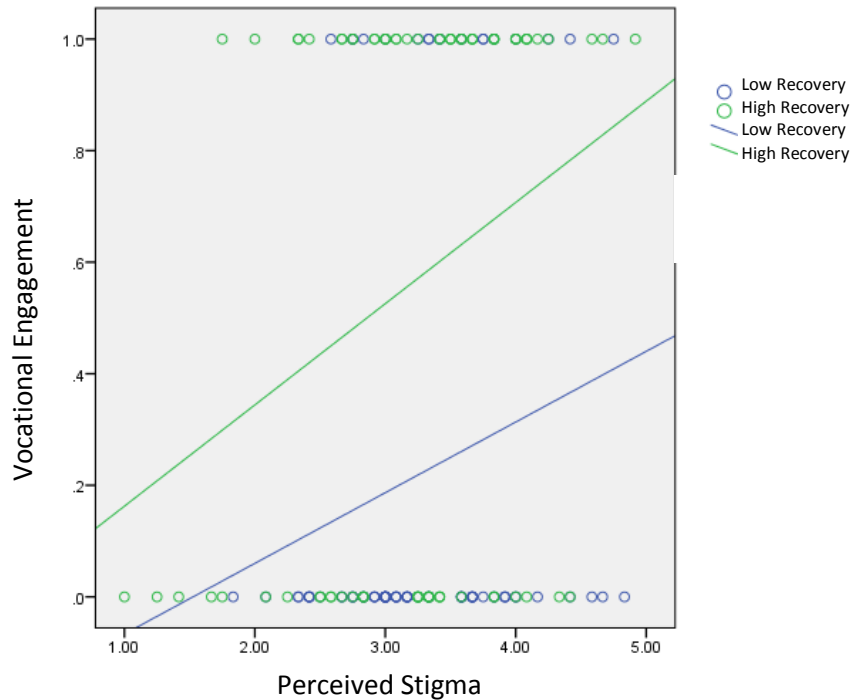

Figure 3.1 Graph of stigma explaining vocational engagement by recovery group.

Model 2: Social network index. Linear regressions were conducted at low and high levels of recovery to explore the ability of perceived stigma to explain variance in participants' social network characteristics. In the low recovery group, the overall model explained only 4.1% of the variance in social networks, and an ANOVA test indicated that the overall model did *not* significantly explain the outcome, $F(4, 82)=.886$, *ns.* In the regression model, no demographic variables were significant in explaining the outcome. However, as shown in Table 3.3, perceived stigma was a trending explanatory variable for social network characteristics, $β=-.191$, $t(82)=-1.746$, $p=.085$, and explained 3.6%

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Table 3.3 Linear regression of social network characteristics

Variable	B	SE(B)	β	ΔR²	p	B	SE(B)	β	ΔR²	p
		Low Recovery (N=87)					High Recovery (N=78)			
Block 1: Demographics				.006	.921				.074	.125
Sex	-.062	.146	-.047		.672	-.213	.127	-.193		.097
Age	-.002	.007	-.026		.818	.007	.005	.179		.121
Race	-.018	.086	-.023		.832	-.049	.076	-.074		.521
Block 2: Stigma				.036	.085				.000	.855
Perceived Stigma	-.193	.110	-.191		.085	-.013	.073	-.021		.855

Low recovery R^2=.041; High recovery R^2=.075

unique variance in social networks. More perceived stigma was associated with smaller

social networks with less frequent contact.

In the high recovery group, the model accounted for about 7.5% of the social

network variance and the ANOVA test of the overall model was again non-significant,

$F(4, 73)=1.469$, *ns.* No demographic characteristics were fully significant in the model,

but sex showed a trend, $β=-.213$, $t(73)=-1.680$, $p=.097$, indicating slightly smaller, less

active social networks in women compared to men. As hypothesized, perceived stigma

was solidly non-significant in the high recovery model, $β=-.021$, $t(73)=-.183$, $p=.855$; it

explained no unique variance in social networks. Therefore Hypothesis 2 was partially

supported by a marginal negative relationship between perceived stigma and social

networks at low recovery but no relationship between the two at high levels of recovery
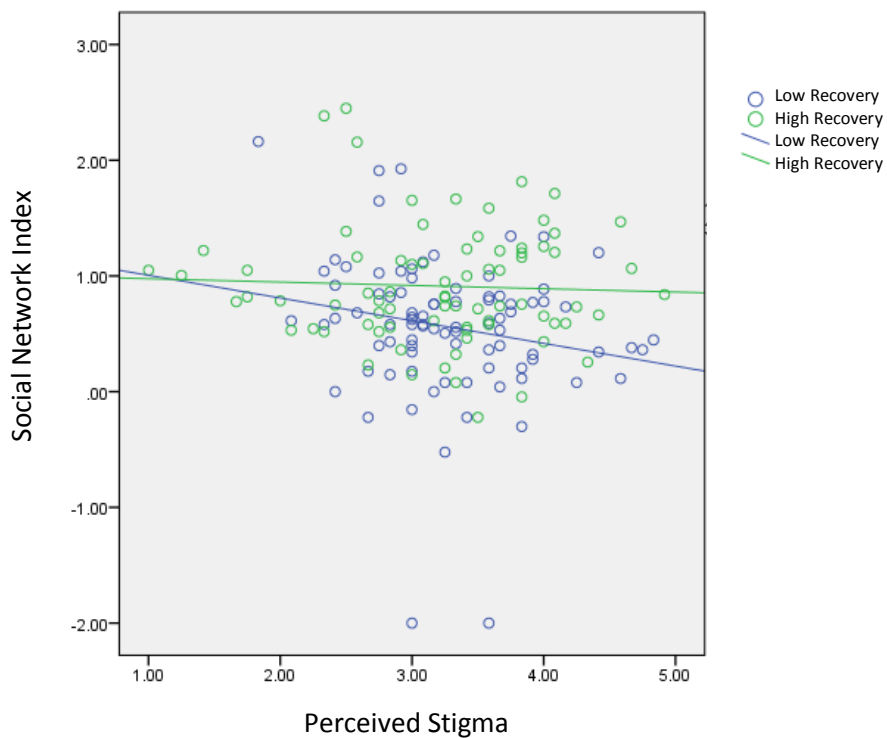
(Figure 3.2).

Figure 3.2 Graph of stigma explaining social networks by recovery group.

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Model 3: Community integration. Another set of linear regressions were conducted to assess perceived stigma as an explanatory variable for community integration for participants in low and high recovery groups. In the low recovery group, the overall model explained 8.4% of the variance in community integration; the ANOVA test of the overall model was non-significant, F(4, 82)=1.892, *ns.* Similar to Model 2, perceived stigma showed a trend towards explaining community integration, β=-.185, t(82)=-1.732, p=.087. It explained 3.3% unique variance in community integration, with more perceived stigma indicating less community integration (see Table 3.4). No demographic variables reached full statistical significance, but age showed a trend, β=.185, t(82)=1.698, p=.093, with older individuals reporting more community integration.

For the high recovery group, the full model accounted for only 3.1% of the variance in community integration scores and the ANOVA test of the overall model was non-significant, F(4, 73)=.578, *ns.* No demographic variables were significant in the model. In support of hypotheses, perceived stigma was again solidly non-significant in the model, β=-.104, t(73)=-.882, p=.381, uniquely explaining only about 1% of the outcome variance. Therefore Hypothesis 3 was also partially supported in that perceived stigma and community integration showed a trend towards being negatively associated at low levels of recovery, but the two variables were unrelated for participants with a higher sense of recovery (Figure 3.3).

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Table 3.4 Linear regression of community integration

Variable	B	SE(B)	β	ΔR²	p	B	SE(B)	β	ΔR²	p
		Low Recovery (N=87)					High Recovery (N=78)			
Block 1: Demographics				.051	.224				.020	.674
Sex	-.224	.174	-.140		.201	.172	.157	.130		.275
Age	.014	.008	.185		.093	-.001	.006	-.028		.812
Race	.005	.102	.005		.960	.066	.094	.083		.482
Block 2: Stigma				.033	.087				.010	.381
Perceived Stigma	-.227	.131	-.185		.087	-.079	.090	-.104		.381

Low recovery R^2=.084; High recovery R^2=.03
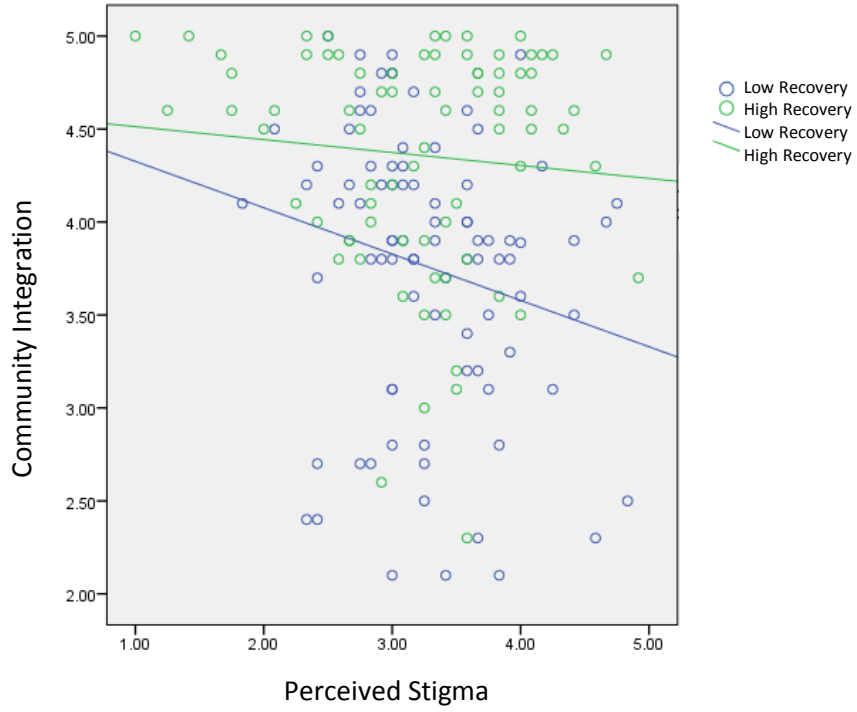
Figure 3.3 Graph of stigma explaining community integration by recovery group.

SECTION 4

CONCLUSION

The findings of the present study are first steps in the exploration of the relationship between mental health recovery and the negative effects of stigmatizing attitudes. Although not necessarily conclusive in their own right, these results provide a foundation for future hypothesis-building and empirical investigation. Following a summary and discussion of the results, the literature on stigma resistance strategies will be revisited as a potential explanatory mechanism for some of the present findings. Finally, limitations of the present study will be presented along with suggestions for addressing such limitations and other questions in future research.

Summary of Results

The above results provide partial support for the proposed theory that a higher sense of recovery may attenuate some of the negative effects of perceived stigmatizing attitudes in the community. Hypotheses 2 and 3 were supported in that the models of social networks and community integration showed perceived stigma as explaining comparatively *less* of the variance in outcomes in the higher recovery group than for low recovery participants. In this respect, recovery may have an attenuating effect on the relationship between perceived stigma and some negative outcomes. However contrary to hypotheses, none of the models at low levels of recovery reached full

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statistical significance, suggesting that social functioning outcomes may be better explained by factors other than perceptions of stigmatizing attitudes. Furthermore, results of the models of vocational engagement were in direct opposition of Hypothesis 1: (1) in both groups, more perceived stigma was related to *more*—not less—vocational engagement and (2) perceived stigma better explained vocational activity at high levels of recovery than at low levels. These findings are further explored below.

Discussion of Results

Vocational engagement. As discussed above, results of Model 1 were directly opposite of the hypothesized model in both the direction of the relationship *and* the comparative strength of perceived stigma to explain outcomes in low versus high recovery groups. Essentially these results support two observations: (1) that perceived stigma is *not* a major deterrent for mental health consumers in seeking out vocational activities such as employment, further education, or vocational rehabilitation services and (2) that recovery does not seem to have a major influence on whatever association perceived stigma has with vocational activity and, if anything, it strengthens this relationship.

Although puzzling, a possible explanation of the results is simply that the direction of influence is reversed from the hypothesis (possible with this cross-sectional research design): more vocational engagement may contribute to more perceived stigma. Vocational activities most often happen in non-mental health settings and involve a significant amount of interaction with a wider range of community members. More interaction with those in community settings may create more opportunities for

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experiences of discrimination or exposure to negative attitudes toward mental health

consumers, explaining the increased perceptions of stigma (Angermeyer, Link, &

Majcher-Angermeyer, 1987). In fact, coworkers and supervisors have been found to be a

significant source of stigmatizing experiences for many mental health consumers

(Dickerson et al., 2002; Wahl, 1999).

If this explanation for the positive direction of the relationship between

perceived stigma and vocational engagement is true, it may also explain the other

inconsistency in the results: the relationship was more significant for higher recovery

participants than lower recovery ones. One possibility is that, because individuals with

higher recovery are more likely to engage in vocational activities (see *t*-test of high and

low recovery groups), the effect of this exposure to broader community experiences on

perceptions of stigma is simply more pronounced in this group than in those with lower

senses of recovery (and less vocational engagement).

These results potentially speak to the importance of creating ways for individuals

to engage in educational or employment opportunities without having stigmatizing

experiences. Community-level interventions to generally promote knowledge of

psychiatric disabilities and reduce negative attitudes toward mental health consumers

could be helpful (Thornicraft, Brohan, Kassam, & Lewis-Holmes, 2008). Another option

could be implementing policies to further protect individuals with psychiatric disabilities

from workplace discrimination if they choose to disclose their mental health status or

working with employers to create work environments which are more tolerant of all

types of diversity, including experiences of psychiatric disabilities. On an individual level,

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supported employment programs work with consumers to build collaborative partnerships and natural supports within their workplaces. Although these services can effectively provide consumers with the supports they need to be successful in a mainstream position, they can also increase an individual's chances of stigmatizing experiences by immediately labeling him or her as a mental health consumer (Murphy, Mullen, & Spagnollo, 2005). Fortunately, it seems that even having higher perceptions of stigma does not deter these individuals from their vocational pursuits.

Regardless of speculative explanations for the present results, one conclusion can be drawn: recovery operates differently depending on the setting. Within the context of all three models explored in the present study, these findings suggest that recovery may serve a different purpose in relation to vocational opportunities than other social functioning outcomes—potentially creating situations with more chances for exposure to negative community attitudes rather than attenuating their effects.

Social networks and community integration. Results of Models 2 and 3 provided partial support for the hypotheses that a higher sense of recovery would attenuate the negative impact of perceived stigma on participants' social networks and community integration. Specifically, the models followed the general pattern of the hypotheses—the relationships were stronger at lower levels of recovery than at higher levels, but they failed to reach the threshold of statistical significance in either group.

One explanation for this issue was the small sample sizes which led to decreased power within the analyses. By using an extreme groups analysis designed to increase the study's power to find the hypothesized small moderating effect of recovery, the study

unfortunately created a separate problem: smaller sample sizes of each extreme group (low recovery N=87; high recovery N=78) reduced the power to find a relationship between stigma and outcomes within these separate groups. In fact, a post-hoc analysis of observed power revealed that the present investigation's power to find an effect with 95% confidence (alpha=.05) was only .228 (i.e., 28.8% chance of finding a present effect) for social networks and .58 for community integration. Raising the alpha level (*p*-value) to .10 increases the study's observed power to .42 and .71 for social networks and community integration, respectively, and therefore decreases the chance of overlooking a true effect (i.e., committing a "Type II error"). Under this adjustment, the trending negative relationships between perceived stigma and the outcomes at low levels of recovery could be validated as statistically significant.

Another possible explanation for the small overall effect of perceived stigma on these social outcomes is simply that there may be other more salient factors accounting for individuals' abilities (or inabilities) to expand their social networks and engage their communities. In the particular geographical area sampled in the present study, lack of finances and access to public transportation are two of the most frequently identified barriers for people, especially those with disabilities, in increasing their community activities (Weber, in press). These various factors influencing access to community life may be organized into a structure similar to Maslow's Hierarchy of Needs (Maslow, Frager, & Fadiman, 1970), which states that more basic needs (e.g., food, sleep) must be fulfilled before "higher-order" needs can be pursued (e.g., relationships, self-esteem). In an analogous process, logistical barriers to community integration, such as access to

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transportation or financial resources to do activities, may first need to be overcome before "higher-order" factors such as stigma are considered. Therefore perceptions of stigma may simply account for less of the variance in these models because other factors not included in the present investigation, such as access to transportation, are more critical in determining an individual's opportunities for participation in *this* local community. Future research is needed to explore these relationships both within low-resource and high-resource communities (e.g., those with easier access to public transportation or housing subsidies). It is possible that "higher order" factors like perceptions of stigma may play a larger role in affecting the community integration of those in high-resource communities where more basic community integration needs (e.g., transportation, finances) are widely met.

Although it is important to acknowledge the limitations of these models to find a large effect of perceive stigma on social functioning, the present investigation was less concerned with this effect *per* se and more interested in the *comparison* of these relationships at low and high levels of recovery. When considered in this light, the present results provide preliminary support that recovery may attenuate even small relationships between perceived stigma and negative social network characteristics or community integration. That is, greater reporting of perceived stigma partially accounted for smaller social networks with less frequent contact, as well as lower levels of community integration, in the group of participants with lower recovery orientations; however that tentative relationship was not found in participants with higher recovery orientations.

Potential Role of Stigma Resistance Strategies

A possible explanatory mechanism for the attenuating effects of a high sense of recovery against negative outcomes (as in Models 2 and 3) is the previously mentioned element of *stigma resistance*. Beliefs associated with stigma *resistance* (i.e., low perceived legitimacy and high group identification) predicted more stable outcomes, namely out-patient service use rather than hospitalization (Rusch et al., 2009). Because stigma resistance strategies and recovery are theorized to be similar processes, it is reasonable to conclude that those with a higher sense of recovery would be able to enact more stigma resistance, whereas those with a lower sense of recovery would be more prone to internalize stigmatizing attitudes. Logically, those with more stigma resistance (here, assumed to be the high recovery group) would have fewer negative outcomes and those outcomes would also be unrelated to their perceptions of stigma. That is, even when people perceive an equal level of stigma in the community, their reactions to that stigma (i.e., resistance or internalization) are likely to determine whether those perceptions lead to negative effects in other areas of their lives or not. In the present study, individuals with a stronger sense of recovery may have been able to resist the stigmatizing attitudes they perceived in the community, which prevented these attitudes from negatively impacting their social relationships and level of community integration.

Another possible mediator in the present findings is an individual's use of more adaptive or maladaptive stigma coping behaviors. Stigmatized individuals often engage in a range of stigma responses and coping behaviors, including: *strategic avoidance*

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(e.g., nondisclosure, moving to a new area, social withdrawal; Goudge et al., 2009; Link et al., 1989; Wahl, 1999), *resistance thinking* (e.g., rejecting blame for the illness, rejecting negative beliefs; Goudge et al., 2009; Watson & River, 2005), building a *positive group identity* (e.g., joining a self-help group; Watson & River, 2005), *activism* (e.g., education, sharing experiences of the illness with others; Goudge et al., 2009; Watson & River, 2005), or *acceptance* (Miller & Kaiser, 2001). Some of these responses are more adaptive in the long-term than others.

Of particular interest is the potential for social withdrawal, which can reduce one's opportunities for stigmatizing interactions but at the cost of fewer chances to build social networks and community connections (Link et al., 1989). A possible explanation of the present findings is that among those with higher senses of recovery, even strong perceptions of stigma in the community did not deter them from pursuing community-related activities and relationships (i.e., low withdrawal). On the other hand, those with a lower level of recovery and potentially fewer adaptive stigma coping strategies would be more influenced by expectations of rejection from the community and have higher rates of social withdrawal (Link et al., 1989), leading to a slightly stronger relationship between perceived stigma and negative social outcomes.

Another related set of coping strategies potentially involved are what Miller and Kaiser (2001) call *secondary control coping*, or strategies aimed at coping with situations beyond one's control. One such strategy is simple acceptance that stigmatizing attitudes are present in our society and that they will likely always be part of one's experiences in the community. Another strategy is *cognitive reappraisal,* such as attributing negative

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interactions to one's group status rather than to individual attributes (Crocker & Major, 1989; Miller & Kaiser, 2001).

In the present study, those with a higher a sense of recovery may be more accepting of stigma, while simultaneously rejecting the legitimacy of such beliefs. For these individuals, experiences of discrimination would not be interpreted as reflecting poorly on themselves, but rather serve as further evidence of the stigmatizing attitudes pervasive in society which must simply be endured. Unfortunately, these coping strategies are not always wholly adaptive: acceptance of discrimination has been linked with negative outcomes, such as higher blood pressure for some members of stigmatized groups, and may also discourage individuals from working to fight stigma and discrimination in society (Miller & Kaiser, 2001).

Although the specific strategies discussed here are only a few of the potential mechanisms at work, *some* type of stigma resistance and coping behaviors seem to be theoretically supported as mediating processes in the present study. Future research is needed to specifically investigate which coping strategies are most adaptive, along with the roles of these and other mechanisms in the relationships between stigma, recovery, and social functioning.

Implications of Findings

Taken together, the results of the present study—both those expected and unexpected—shed light on this new area of research and help to lay a foundation for future investigations. Although further work is needed to clarify these relationships, the present findings provide a few potential insights into the experiences of those with

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psychiatric disabilities. First of all, these findings reveal the tentative impacts of one's sense of recovery in realms beyond symptom alleviation. Even though stigma resistance is not typically considered a core component of most recovery-oriented services, these analyses preliminarily supported the notion that one's sense of recovery may have influence on how individuals experience and handle perceptions of stigmatizing attitudes.

Pending confirming evidence that stigma resistance is an active mechanism in the recovery process, recovery-oriented services could work more explicitly to promote adaptive stigma resistance strategies. The present findings suggest that a sense of recovery implicitly builds one's ability to resist the negative impacts of stigma, but more directly addressing such issues could further promote these skills for consumer groups. Such stigma resistance curriculum could be modeled after racial socialization strategies often used by minority parents. Specifically, two of the main components of racial socialization have been identified as *cultural socialization* (i.e., teaching about cultural history and customs and instilling a sense of cultural pride) and *preparation for bias* (i.e., presenting reality of discrimination and teaching coping strategies; Hughes et al., 2006). Such strategies have potential to be similarly effect in building mental health consumers' positive self-and group-identity *and* providing strategies for dealing with real-world discrimination and stigma.

The present findings furthermore speak to the broad importance of considering social and community experiences of individuals with psychiatric disabilities. It seems likely from these results that more "traditional" mental health experiences, such as

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recovery, are intertwined with broader social experiences, such as perceptions of community stigma. Together they impact individuals' daily lives, such as who they spend their time with and how accepted they feel in their communities. Reaching beyond the narrow scope of symptoms and medication to incorporate a holistic view of an individual's experience is in line with recovery principles (SAMHSA, 2006) and is critical if research and services are to have a true impact on individuals' lives.

Limitations

Limitations of the present study include its cross-sectional design, small sample size, and failure to include hypothesized mediators in analyses. The cross-sectional design meant that a direction of influence for the effect could not be established. This limitation was particularly evident in the model of vocational engagement in which the counter-hypothesis results were potentially explained by a reversal of the direction of influence. Even for the models of social networks and community integration, exploring similar research questions with a longitudinal design would strengthen the inference that perceived stigma *affected* social functioning.

Additionally, the small sample size—largely due to the extreme groups approach taken to analyses, which eliminated a third of the original sample—caused a decrease in this investigation's power to find effects. The decreased power most impacted the results of the low recovery group predicting social networks and community integration. In both cases, these nearly-significant relationships may have reached full significance levels given larger sample sizes to increase the power to find an effect.

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Finally, the present analyses were not able to include hypothesized mediators of the effects, such as social withdrawal or a direct measure of stigma resistance or internalization. Instead these processes were *assumed* to be indicated by other variables. Specifically, withdrawal behaviors were thought to be indicated by smaller social networks or vocational engagement. Stigma internalization was assumed by a negative association between perceived stigma and the social functioning outcomes and stigma resistance was implied by a lack of this negative association. If mediators were measured directly, they would be expected to account for the attenuating effect of recovery on the negative consequences of stigma. That is, higher recovery would likely be associated with more stigma resistance and less stigma internalization, resulting in less subsequent social withdrawal. Less withdrawal would then allow for more social engagement, including more vocational activity, larger social networks, and greater overall community integration. More direct measures of these intermediary processes would strengthen the validity of conclusions being drawn and likely provide a more nuanced and complex picture of the interactions between community experiences and individuals' internal perceptions and coping processes.

Future Directions

Much is left to be explored in future research relating to the community experiences of individuals with psychiatric disabilities. One such area emerging from the present findings is the interaction between an individual's experience of stigma and their overall well-being. What are the implications of the current and previous findings (Angermeyer et al., 1987) that community settings (e.g., work and school) can increase

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one's perceptions of stigma? It is possible that the increase in perceived stigma resulting from community experiences is an inevitable, and comparatively small, part of the process of community engagement that is out-weighed by other positives, like social connections, meaningful roles, and an increased sense of recovery. However, research exploring the holistic, personal experience of more fully integrating into community life, including possible iatrogenic effects, would shed more light on how to support others in their community experiences. Qualitative investigations of such questions would be best suited to capture the complexity and nuance of such experiences.

Furthermore, a deeper understanding of ways to best address issues of stigma and discrimination, including promoting stigma resistance and adaptive coping strategies, will allow individuals to be better prepared for living in the community with a psychiatric disability. Individuals who are newly diagnosed will likely have different needs in dealing with stigma (e.g., *preventing* internalization, strategies to disclose to close friends and family members) than those who have spent years living in isolated mental health settings (e.g., promoting self-confidence, rebuilding community interests and connections). In addition to working with individual consumers, researchers can explore ways of working with community members and community settings (e.g., libraries, churches, police forces) to facilitate their roles as naturalized community supports and welcoming community settings for individuals with psychiatric disabilities.

Conclusion

The present study was an important introductory exploration of the relationship between a recovery orientation and individuals' experiences of stigmatizing attitudes.

Encouragingly, the findings generally support the role of recovery in attenuating the negative effects of perceived stigma on social functioning. Such research is important for considering the holistic experiences of consumers—which factors are involved in determining whether they pursue an opportunity to get a job or go back to school, how often they spend time with friends and family members, or how much they feel like a part of their communities. Although there are countless variables to consider in these decisions, the present investigation provides preliminary evidence that the level of stigmatizing attitudes consumers perceive in the community, as well as their personal ability to cope with such attitudes through their sense of recovery, may make a difference in these choices for many people.

The ultimate goal must be the reduction of stigma in the broader community, but it is nevertheless valuable to explore more individual-level variables, such as stigma resistance and coping strategies, which will allow individuals with psychiatric disabilities to become more engaged in their communities now. Indeed, promoting community integration for all consumers is necessary to create opportunities for the person-to-person interaction which seems most effective at reducing broad community stigma (Corrigan & Watson, 2002; Thornicraft et al., 2008). Eventually, efforts on both individual and community levels to promote social inclusion of those with psychiatric disabilities will benefit consumers as well as communities.

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