Recovery of People With Psychiatric Disabilities Living in the Community and Associated Factors

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Objective: Consumer-oriented recovery has been discussed for more than two decades in the mental health field. Although there are some qualitative recovery studies that have shown important findings, few quantitative studies of this concept currently exist. This study examined the relationship between recovery and associated social-environmental and individual factors. Method: A total of 159 people with psychiatric disabilities receiving services from a large community mental health agency participated in the study. Participants completed a self-report survey that assessed individual recovery status, social support, perceived recovery-oriented service quality, psychiatric symptoms, and demographics. One hundred twenty-four surveys were analyzed. Hierarchical multiple regression analysis was conducted to examine the relationship between recovery and associated factors. Results: Social support and perceived recovery-oriented service quality had a significant positive relationship with recovery; psychiatric symptoms had a significant negative relationship with recovery. The final regression model accounted for 58% of the variance in recovery, F(9, 114) = 17.72, p < .001. Conclusion and Implications for Practice: Social-environmental factors play an important role in people’s recovery, even after taking into account psychiatric symptoms. Namely, people with psychiatric disabilities can pursue recovery with symptoms as long as they receive appropriate support and services. Mental health professionals should provide services adhering to recovery principles in order to help their clients achieve personal recovery.

Keywords: recovery, psychiatric disability, recovery-oriented care, social support

Consumer-oriented recovery principles were used as the conceptual framework for this study. Unlike the traditional scientific view on recovery, which focuses on cure and symptom reduction, this consumer-oriented recovery model was developed by people with psychiatric disabilities and emphasizes personal goals and potential (Bellack, 2006; Young & Ensing, 1999). It endeavors to improve the lives of people with psychiatric disabilities and to redesign service delivery methods. Under this concept, people with psychiatric disabilities are treated as independent individuals rather than as dependent patients; mental health professionals are helpers rather than controllers. Common consumer-oriented recovery components include hope, empowerment, taking personal responsibility, self-redefinition, and participating in meaningful activities (Davidson, O’Connell, Tondora, Lawless, & Evans, 2005; Ridgway, 2001; Young & Ensing, 1999). This consumer-oriented recovery concept has been regarded as a guiding vision of the future of mental health services (Anthony, 1993). More and more agencies provide recovery-oriented services.

Social support and mental health services, which belong to social-environmental factors, have been discussed in much of the recovery literature, and are regarded as important facilitators of the recovery process (Jacobson & Greenley, 2001; Spaniol, Wewior-ski, Gagne, & Anthony, 2002). Recovery advocates believe that, with appropriate support and services, people with psychiatric disabilities can experience a better recovery process and improve their quality of life (Davidson, O’Connell, Tondora, Styron, & Kangas, 2006; Spaniol et al., 2002).

Furthermore, advocates have also stated that people with psychiatric disabilities can pursue recovery even though symptoms exist (Anthony, 1993; Davidson et al., 2005). Psychiatric symptoms, which have commonly been regarded as individual problems, are simply viewed as one attribute of psychiatric disabilities in the consumer-oriented recovery perspective. Although some studies have found an inverse relationship between psychiatric symptoms and recovery (Brown, Rempfer, & Hamera, 2008; Resnick, Rosenheck, & Lehman, 2004), these advocates believe that symptoms do not necessarily prevent recovery. While people...
with physical disabilities are not expected to regain their mobility in order to live successfully in the community, similarly, people with psychiatric disabilities are not expected to eliminate their symptoms in order to pursue their recovery (Davidson et al., 2006; Davidson et al., 2005).

Many studies have examined factors related to traditional scientific definitions of recovery, but few studies have investigated factors associated with consumer-oriented recovery (Resnick et al., 2004). Some qualitative recovery studies have found common recovery components and statements (Ridgway, 2001; Smith, 2000; Spaniol et al., 2002). However, these results have been limited by small sample sizes (i.e., \( n < 20 \)). The above statements supported by advocates have not been examined by quantitative studies with a large sample size.

Therefore, this study aimed to investigate the relationship between recovery and social—environmental and individual factors (i.e., social support, perceived recovery-oriented service quality, and psychiatric symptoms) through a self-report survey. We used hierarchical multiple regression to examine whether social—environmental factors have a significant relationship with recovery after taking into account psychiatric symptoms, and controlling for demographic characteristics (i.e., age, illness length, sex, race, and education). Although few consumer-oriented recovery studies have discussed the influence of demographic characteristics, it is possible that these factors impact consumer-oriented recovery. For example, people of different ages tend to have various personal goals, and may exhibit different recovery perspectives. Sex difference may also influence recovery expectations. Because demographic factors were not the focus of this study, they were controlled to examine accurately the relationship between recovery and associated factors.

Method

Participants and Data Collection

Study participants were recruited from a large community mental health agency located in metropolitan Chicago, Illinois. The agency provides a wide range of services, including case management, housing, vocational rehabilitation, and social skills training, to people with psychiatric disabilities, regardless of their diagnosis on the Diagnostic and Statistical Manual of Mental Disorders. Because the inpatient population is relatively unstable and the consumer-oriented recovery model may be inapplicable (Fresen, Stanley, Kress, & Vogel-Scibilia, 2001), only the community sample was considered for inclusion in this study.

Study participants had to meet the following inclusion criteria: having a diagnosis of mental illness, being age 18 years or older, living in the community, receiving services from the study site (i.e., the collaborating agency), and being able to fill out the study survey independently. People who were actively symptomatic or could not understand the survey content were not enrolled.

With assistance of program staff, the first author convened meetings in several community programs of the agency and explained the study’s purpose and procedures to potential participants. During these recruitment meetings, program staff helped to identify individuals who were actively symptomatic or had limited literacy. These individuals were not allowed to complete surveys and were excluded from the study. After informed consent was obtained, participants completed the self-report survey. They received a $5 gift card as a reimbursement for their time and participation. This study was approved by the institutional review boards of the University of Illinois at Chicago and the study site. Data collection occurred from June 2010 through August 2010.

A total of 159 participants filled out the survey. After removing 35 surveys with significant missing data (i.e., the individual answered < 70% of scale items; \( n = 32 \)) and inattentive response sets (i.e., the individual responded to the whole survey with a specific answer or a pattern; \( n = 3 \)), 124 surveys were included in the regression analysis. A summary of characteristics of both analyzed and excluded participants is shown in Table 1. Except for race and ethnicity, there were no significant differences between the analyzed sample and the excluded sample. Sixty-seven percent of participants in the analyzed sample were men. Most participants were single (73%). Nearly equal percentages of Blacks (40%) and Whites (42%) completed surveys. Regarding education level, 53% of participants had a high school degree or lower while 47% of participants reported some college or higher. Most participants were unemployed or not in the workforce (83%). The majority of participants (71%) lived in a private residence or household. Four diagnoses were reported most often: bipolar disorder (37%), schizophrenia (24%), major depression (19%), and schizoaffective disorder (15%). The average age of the analyzed sample was 47.10 years (range: 20–68, Mdn = 47.96) and the average illness length was 23.82 years (range: 0–56, Mdn = 24.41).

Instruments

The self-report survey included two parts. The first part collected personal information, such as age, sex, and education. The second part included a battery of self-report scales. First, the revised Mental Health Recovery Measure (MHRM-R) was used to measure the individual recovery status. The original MHRM (Bullock, 2005; Young & Bullock, 2003) was developed according to the recovery process model of Young and Ensing (1999). Chang, Ailey, Heller, and Chen (in press) evaluated the MHRM using Rasch analysis. Four items inappropriate for the measured recovery concept were removed from the scale to improve its validity. The revised scale (MHRM-R) has 26 items and uses a 4-point Likert scale, ranging from 0 (strongly disagree) to 3 (strongly agree). It assesses comprehensive recovery content, including overcoming stuckness, self-empowerment, learning and self-redefinition, basic functioning, overall well-being, new potentials, and advocacy/enrichment. It showed high internal consistency in the present study (Cronbach’s alpha = .95). Higher total scores represent a better recovery status.

The 19-item Social Support Survey (SSS; Sherbourne & Stewart, 1991) measures five types of social support: emotional support, informational support, tangible support, positive social interaction, and affectionate support. Respondents were asked how often the support is available if they need it. Response choices include: none of the time, a little of the time, some of the time, most of the time, and all of the time. The SSS showed high internal consistency (Cronbach’s alpha = .97). Higher total scores represent greater receipt of social support.

The revised version of the Recovery Self-Assessment (O’Connell, Tondora, Croog, Evans, & Davidson, 2005) was used...
to assess perceived recovery-oriented service quality, defined in this study as participants’ perceptions of the degree to which the services they received follow recovery principles. This 32-item scale assesses life goals, involvement, diversity of treatment options, choice, individually tailored services, and inviting space. It uses a 5-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree), and includes an N/A (not applicable) option; it showed high internal consistency in this study (Cronbach’s alpha = .97). A higher item average indicates better perceived recovery-oriented service quality.

Finally, psychiatric symptoms were measured by the Brief Symptom Inventory (BSI; Derogatis & Melisaratos, 1983). The BSI is a 53-item self-report symptom scale, and has nine dimensions: somatization, obsessive–compulsive, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid ideation, and psychoticism. Respondents were asked to rate the presence and severity of their symptoms in the past 7 days. Each item is rated on a 5-point scale, ranging from 1 (not at all, a little bit, moderately, quite a bit, to extremely). The BSI uses three global indices of distress to describe the individual’s condition, including the General Severity Index (GSI), the Positive Symptom Distress Index, and the Positive Symptom Total. This study used the GSI to represent the severity of psychiatric symptoms. The BSI showed high internal consistency (Cronbach’s alpha = .98). Higher GSI scores indicate greater symptom severity.

Data Analysis

In addition to descriptive statistics, which explored data distributions and characteristics of participants, a hierarchical multiple regression analysis was conducted to further examine the relationship between recovery and associated factors. Demographics (i.e., age, illness length, sex, race, and education) were entered first because they were regarded as control variables. Then, the psychiatric symptom variable (i.e., GSI score) was entered in the second block, and social–environmental factors (i.e., social support and perceived recovery-oriented service quality), which were the focus of this study, were entered in the third block. This regression model explored whether the social–environmental factors had a significant relationship with the individual recovery status, after taking into account other variables.

Missing data are common in self-report surveys, and they occurred in this study. Hawthorne and Elliott (2005) found that if at least half the items of the scale are present, person mean substitution is a better choice because it has simpler computation and its efficiency is as good as hot deck imputation. Hence, this study used person mean imputation to handle missing data in each scale. To maintain each survey scale, person mean imputation was used. If the individual answered 70% of the scale items, person mean substitution is a better choice because it has simpler computation and its efficiency is as good as hot deck imputation. Hence, this study used person mean imputation to handle missing data in each scale. To maintain each survey scale, person mean imputation was used.
Results

The hierarchical multiple regression results are presented in Table 2. The first regression model was not significant, $F(6, 117) = 0.63, p = .71$. After entering psychiatric symptoms, the second model, $F(7, 116) = 4.85, p < .001$, accounted for 23% of variance in recovery, and $R^2$ change was significant, $F(1, 116) = 29.29, p < .001$. When social–environmental factors were entered, the third model, $F(9, 114) = 17.72, p < .001$, accounted for 58% of variance in recovery, and $R^2$ change was significant as well, $F(2, 114) = 48.79, p < .001$.

Social support, perceived recovery-oriented service quality, psychiatric symptoms, and illness length were significantly associated with recovery status in the third model. Participants with greater social support, better perceived recovery-oriented service quality, lower symptom severity, and longer illness lengths tended to have higher recovery scores.

Discussion

This study provided preliminary findings on the factors significantly associated with consumer-oriented recovery. Results of the hierarchical multiple regression analysis found that social support, perceived recovery-oriented service quality, psychiatric symptoms, and illness length had significant relationships with individual recovery status and accounted for a significant amount of variance in recovery. These findings have several implications for mental health providers who seek to enhance clients’ recovery.

Social support had the positive and highest standardized coefficient in the final regression model (see Table 2), which indicates that it had the most impact in the model. People with more social support tend to have a better recovery status. This result is similar to that of previous research findings (Corrigan & Phelan, 2004; Hendryx, Green, & Perrin, 2009; Pernice-Duca & Onaga, 2009), and indicates the importance of social support for people in recovery. It also suggests that programs that facilitate connections among people with psychiatric disabilities may enhance their recovery. For example, because peer support has been regarded as an important support for people with psychiatric disabilities (Mead & Copeland, 2000; Substance Abuse and Mental Health Services Administration, 2005), adding peer support groups to existing programs may facilitate people’s recovery process.

Perceived recovery-oriented service quality also showed a significant positive relationship with recovery. In this study, perceived recovery-oriented service quality was assessed by participants’ perceptions of whether the services they received were recovery-oriented. Although recovery-oriented services have not been clearly identified, they have several characteristics in common, including offering services that are consumer-centered and that assist individuals in achieving personal goals (Anthony, 2000; Noordsy et al., 2002). In addition, attitudinal changes in mental health professionals are the key of recovery-oriented services. Mental health professionals need to believe that recovery is possible, to respect clients’ decisions, and to provide different suggestions and options for people in different recovery levels (Anthony, 1993; Mead & Copeland, 2000; Smith, 2000). Although all study participants were from the same mental health agency, they may have had different experiences in receiving services due to various attitudes or behaviors of designated service providers and variability in the quality of the specific programs provided. The research finding indirectly confirms the effectiveness of services that are perceived as recovery oriented. Namely, people who receive services that are viewed as adhering more to recovery principles tend to have better recovery statuses. Therefore, it is recommended that mental health professionals, administrators, and policy-makers implement recovery principles in their work.

Greater adaptation of recovery-oriented services is likely to lead to greater recovery among people with psychiatric disabilities. Moreover, psychiatric symptoms had a significant negative relationship with recovery. Using the MHRM-R, this study had findings similar to other previous studies, which assessed recovery with recovery-related measures, such as hope and empowerment scales (Brown et al., 2008; Resnick et al., 2004). The result is not surprising. Symptom reduction has been the main focus of the traditional scientific recovery paradigm and has been discussed by

Table 2

The Hierarchical Regression Model for Recovery (n = 124)

<table>
<thead>
<tr>
<th>Block</th>
<th>First model</th>
<th>Second model</th>
<th>Third model</th>
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<tr>
<td></td>
<td>$\beta$</td>
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<tr>
<td>Block 1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>$-0.01$</td>
<td>$-0.05$</td>
<td>$-0.09$</td>
</tr>
<tr>
<td>Illness length</td>
<td>$0.06$</td>
<td>$0.58$</td>
<td>$0.11$</td>
</tr>
<tr>
<td>Female</td>
<td>$0.13$</td>
<td>$1.39$</td>
<td>$0.13$</td>
</tr>
<tr>
<td>Black</td>
<td>$-0.07$</td>
<td>$-0.57$</td>
<td>$0.01$</td>
</tr>
<tr>
<td>White</td>
<td>$-0.03$</td>
<td>$-0.20$</td>
<td>$-0.05$</td>
</tr>
<tr>
<td>High school or lower</td>
<td>$0.12$</td>
<td>$1.28$</td>
<td>$0.13$</td>
</tr>
<tr>
<td>Block 2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Psychiatric symptoms</td>
<td>$-0.46$</td>
<td>$-5.41^{***}$</td>
<td>$-0.27$</td>
</tr>
<tr>
<td>Block 3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social support</td>
<td></td>
<td></td>
<td>$0.49$</td>
</tr>
<tr>
<td>Perceived recovery-oriented service quality</td>
<td></td>
<td></td>
<td>$0.22$</td>
</tr>
<tr>
<td>$R^2$</td>
<td>$0.03$</td>
<td></td>
<td>$0.23$</td>
</tr>
<tr>
<td>$F$ for change in $R^2$</td>
<td>$0.63$</td>
<td>$29.29^{***}$</td>
<td>$48.79^{***}$</td>
</tr>
</tbody>
</table>

$a$ Unadjusted $R^2$.

*p < .05.  **p < .01.  ***p < .001.
The results may not reflect experiences of people without services or receiving no recovery-oriented services. From their demographics and responses to the survey, this sample tended to represent a population that had relatively stable conditions, both in regard to symptoms and to the environmental support system. Moreover, because participants were required to fill out the survey independently, the experiences of people with limited literacy were excluded from this study.

Finally, the use of a self-report survey also resulted in several study limitations. Social desirability (Huang, Liao, & Chang, 1998) and missing data are common in self-report surveys. Participants might answer items in a way that matches social desirability and could skip items that they did not want to answer. These may cause an overestimation or underestimation of the results. However, the self-report survey is valuable for appropriately reflecting the respondents’ perceptions. This study used anonymous participation to decrease the influence of social desirability, and used person mean substitution to better estimate participants’ responses, hence increasing the reliability of the findings.

Although the study participants may not represent all people with psychiatric disabilities living in the community, our study results contribute important quantitative evidence for the consumer-oriented recovery concept. Future research should collect data from various mental health agencies and attempt to reach people with limited services. People with low literacy may be included by face-to-face interviews. A larger and diverse sample can expand the generalization of study findings. Moreover, although these associated factors may truly have significant contributions, it will be beneficial to have more empirical studies to reconfirm these results.

Conclusion and Implications for Practice

The study explored the relationship between recovery and social—environmental and individual factors. We found that social support and perceived recovery-oriented service quality had significant positive relationships with recovery; psychiatric symptoms had a significant negative relationship with recovery. The final regression model accounted for 58% of variance in recovery. These findings support the statements of recovery advocates. Social—environmental factors do play an important role in people’s recovery, even after taking into account psychiatric symptoms. It indicates that people with psychiatric disabilities can pursue recovery with symptoms as long as they receive appropriate support and services. In addition to symptom control, people with psychiatric disabilities who live in the community also need adequate support and services to improve their lives and achieve their personal goals.

The results of this study are useful for mental health service designs and mental health policy-making. Mental health professionals can have more confidence to follow the consumer-oriented recovery paradigm, and they are encouraged to adopt and provide recovery-oriented services to help their clients achieve personal recovery. These research results expand the knowledge base of the consumer-oriented recovery concept, and they are beneficial for further follow-up or randomized controlled studies, which can provide stronger evidence to verify the relationship between recovery and associated factors.

Study Limitations

Several limitations exist in this study. First, cross-sectional data cannot determine the causal direction of these relationships between recovery and associated factors. It is unclear whether the improvement in social support, perceived recovery-oriented service quality, and psychiatric symptoms influences recovery and/or whether the enhancement of recovery helps people with psychiatric disabilities to receive social support, better services, and control their symptoms.

Second, several factors limit the generalization of this study. The present study sample is limited to people with psychiatric disabilities served in one recovery-oriented mental health agency. The results may not reflect experiences of people without services.
References


