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# Predictors of personal recovery for persons with psychiatric disabilities: An examination of the Unity Model of Recovery

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ABSTRACT

This study examined a comprehensive set of potential correlates of recovery based on the Unity Model of Recovery. Thirty-two community psychiatric rehabilitation centers in Taiwan agreed to participate in this study. A sample of 592 participants were administered the questionnaires. Five groups of independent variables were included in the model: socio-demographic variables, illness variables, resilience, informal support, and formal support. The results of regression analysis provided support for the validity of the Unity Model of Recovery. The independent variables explained 53.5% of the variance in recovery for the full sample, and 55.5% for the subsample of the consumers who have been ever employed. The significance of the three cornerstones (resilience, family support, and symptoms) for recovery was confirmed. Other critical support variables, including the extent of rehabilitation service use, professional relationship, and professional support were also found to be significant factors. Among all the significant correlates, resilience, family support, and extent of rehabilitation service use ranked in the top three. The findings could shed light on paths to recovery. Implications for psychiatric services were discussed and suggested.

## 1. Introduction

Recovery has been accepted as a treatment orientation and the goal for psychiatric services over the past two decades. Recovery is a word with two meanings: clinical recovery and personal recovery (Slade, 2009). Clinical recovery is characterized by clinical outcomes, such as symptom remission, diagnosis, etc., intended to lead to a cure (Liberman and Kopelowicz, 2002). Personal recovery means moving beyond the role of a patient with a mental illness and regaining hope, identity, meaning, and personal responsibility (Andersen et al., 2003; Slade, 2009). In recent years, personal recovery has been the focus of many related studies, as it is close to the personal experiences of persons with psychiatric disabilities (hereinafter called consumers).

With personal recovery being the ultimate goal, efficacious ways to facilitate recovery have become the central topic of concern (Liberman and Kopelowicz, 2002). We also need to understand the correlates of personal recovery for developing effective treatment programs. The Unity Model of Recovery is a conceptual model that integrates the recovery process, outcomes, stages, and correlates of personal recovery (Song and Shih, 2009). All these concepts and components link together to depict the journey of personal recovery. In the model, personal recovery is treated as both the process and the outcome. The three essential process components include sense of self, management of disability, hope, willingness, and responsible action. The outcome indicators cover both subjective evaluation of self-efficacy, quality of life, and life satisfaction, as well as objective skill attainment, role performance, establishment of reciprocal relationships, etc. Based on the different functional statuses of both process components and outcome indicators, four distinct stages of personal recovery among the consumers were identified: overwhelmed by disability, struggling with disability, living with disability, and living beyond disability.

The model encompasses broad and comprehensive factors of personal recovery. The factors related to recovery include: (1) the three cornerstones (symptom remission, mental strengths (e.g., resilience), and family support) that integrate the biological, psychological, and social systems of a recovered person; and (2) the environmental factors, including both informal and formal social networks.

The Unity Model was included in the systematic review article by Leamy et al. (2011). The review and synthesis revealed five categories of the recovery process: (1) connectedness, (2) hope, optimism about the future, (3) identity, (4), meaning in life, and (5) empowerment (CHIME). CHIME has gained consensus among experts on recovery. It seems that the CHIME encompasses the essential process components and outcome indicators of the Unity Model. The uniqueness of the Unity Model is that it differentiates the process, outcomes, and correlates of recovery and illustrates the relationship between them.

The correlates depicted in the Unity model concur with the findings in the literature. Based on meta-analyses, studies have revealed that the

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consistent factors related to personal recovery are family support (Chou and Chronister, 2012; Corrigan and Phelan, 2004; Mancini et al., 2005; Pernice-Duca, 2010) and professional support (Horvath et al., 2011; Martin et al., 2000). From the consumers' point of view, family provided support through "unwavering" belief in the consumers' ability to recover was crucial in fostering consumer optimism, positive self-image, and self-confidence (Mancini et al., 2005). With regard to formal support, the working alliance constitutes the emotional bond between the consumer and professionals, and the partnership between them that facilitates pursuing goals and accomplishing tasks.

Anthony et al. (2002) has maintained that recovery can occur even though symptoms reoccur. Law et al. (2015) found psychiatric symptoms were a longitudinal predictor of subjective recovery, however it was not the strongest one. Another study revealed that when symptoms are perceived as less distressing, consumers are better able to progress toward their goals, which in turn facilitates psychological recovery (Clarke et al., 2009).

Resilience refers to the ability to bounce back, resist illness, adapt to stress, or thrive in the face of adversity (Smith et al., 2008). Resilience is a process whereby risk is successfully engaged and outcomes of adaptation and competence are fostered (Anderson, 1997; Cohler, 1987). Thus, it is an inner mental strength that is conducive to recovery. The retrospective longitudinal study by Torgalsbøen and Rund (2010) found that permanent clinical recovery from schizophrenia is, to a great extent, dependent on the person's shaping of his/her own recovery process, which is dependent on resilience. For a subgroup of schizophrenia characterized by high resilience, a sustained full recovery without medication seems possible (Torgalsbøen, 2012).

To date, we have gained some knowledge concerning the factors related to recovery. This study aimed to go further and examine a comprehensive set of recovery correlates based on the Unity Model in a large sample (see Fig. 1), with the intention of providing suggestions for psychiatric services.

In the operationalization of personal recovery, the investigator followed the factor structure of the Stage of Recovery Scale (Song and Hsu, 2011), which was developed based on the conceptualization of recovery in the Unity model (see Fig. 1). The scale measures three process indicators (regaining autonomy, management of disability, and sense of hope) and three outcome indicators (social functioning/role performance, overall well-being, and helping others), respectively. Moreover, the tested model covers four groups of potential correlates: illness variables, resilience, informal support, and formal support.

## 2. Methods

A survey was conducted to collect the data from consumers in community psychiatric rehabilitation centers. In addition to the independent variables in the tested model, data on socio-demographic variables were also collected (see Table 1). The potential effects of socio-demographic variables were explored, and those that were significant were treated as control variables. This study has been approved by the Institutional Review Board of the National Chengchi University in Taiwan for quality and research ethics.

### 2.1. Participants

Participants were drawn from community psychiatric rehabilitation centers in Taiwan. These centers needed to have been in operation for at least one year to be included in this study. Criteria for the selection of participants were: 1) consumers must have a severe mental illness other than substance abuse, personality disorder, or dementia due to any cause; 2) consumers must have been hospitalized at least once since the onset of a mental illness; and 3) consumers have used the services in the center for at least three months.

Based on the information provided by the Ministry of Health and Welfare in Taiwan, there were 44 rehabilitation centers in 2015, and 32 of them agreed to collaborate with the investigators. They requested willing attendees to fill in the questionnaires and provide informed consent. They also helped arrange the time for data collection in the center. There were 1143 attendees among the 32 centers, and 732 (64.04%) of them agreed to participate in this study. Self-administered questionnaires were mailed to the centers with follow-up calls to answer any questions. The staff at the centers handed out and guided the data collection. The questionnaire was anonymous to ensure privacy. The coordination of data collection was done by phone calls, mail, and email. The entire process took approximately two months (from October to November 2015) to accommodate the time schedule of each center and the pace of consumers in filling out the questionnaire. As a result, 632 questionnaires (86.34% out of 732, 55.3% out of 1143) were returned. The response rate (number of response/total attendees) at each center ranged from 8.33% to 100% (mean=57.51%, Sd=25.04). The variance of the response rates was large. The cutoffs for the quartiles of the response rates were 40%, 56.9%, and 76.7%. Forty questionnaires were excluded due to too much missing data or response patterns, leaving 592 usable cases (80.87% out of 732, 51.8% out of 1143). Each subject was given a voucher (worth US $6.30) to a convenience store as payment.

### 2.2. Variables and instruments

"*Recovery*" was measured by Stage of Recovery Scale (SRS), which is a 45-item scale developed in Taiwan by Song and Hsu (2011). Some of the items in the existing three scales, such as STORI (Andersen et al., 2003), RAS (Corrigan et al., 2004), and MHRM (Bullock, 2005), were adopted in the SRS. The SRS has sound psychometric properties and covers both the processes and the outcomes of recovery. The four-point response category includes: never (0), seldom (1), sometimes (2), and often (3). The SRS has very good internal consistency for the entire scale (α=0.97). It could significantly differentiate the rehabilitation sample and the improved functioning sample (discriminant validity). It also has internal and external construct validity (Song and Hsu, 2011). The norm for stages of recovery is as follows: overwhelmed by disability (0–57), struggling with disability (58–90), living with disability (91–119), and living beyond disability (120–135). The stage differentiation on recovery also has discriminant and external validity. Different stage groups reach significant differences on empowerment, social functioning, and life satisfaction. The internal consistency in this study was 0.97.

"*Symptoms*" were evaluated by the Mental Health Inventory (MHI-5) (Berwick et al., 1991), which is a six-point Likert scale with five items assessing the extent of symptoms (anxiety, depression, and behavioral/emotional control) and positive affect during the past month. The response category ranges from never (1) to always (6). As a screening test, MHI-5 was as good as the MHI-18 and the General Health Questionnaire (GHQ-30), and better than the Somatic Symptom Inventory (SSI-28), for detecting most significant DIS disorders, including major depression, affective disorders, and anxiety disorders. Areas under curve for the MHI-5 ranged from 0.739 (for anxiety disorders) to 0.892 (for major depression). The summation score was used in the analysis, with the greater score indicating more symptoms. In this study, the Cronbach's alpha of MHI-5 was 0.56, which was acceptable given a five-item scale.[1]

*"Resilience"* was measured by the Brief Resilience Scale (BRS) (Smith et al., 2008). The scale is a reliable means of assessing resilience as the ability to bounce back or recover from stress. It has six items with five response categories ranging from strongly disagree (1) to strongly agree (5). The BRS was tested on four samples, consisting of undergraduate students, cardiac rehabilitation patients, and women

[1] Based on Nunnally's formula (1978), to achieve $r \geqq 0.8$, the number of items needs to be increased to 16 for the MHI-5 scale. His formula is as follows: $K=r_{kk}(1-r_{ii})/r_{ii}(1-r_{kk})$.