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Abstract

The introduction of the concept of recovery from mental illness into the operations of mental health systems has created the need to accurately measure recovery and a concurrent need to examine common characteristics that may contribute to the process of recovery (Liberman, Kopelowicz, Ventura, & Gutkind, 2002). Gender, race, and level of education have been implicated in several areas of mental illness (Flaskerud & Hu, 1992; Pincus & Callahan, 1994). The current study's goal was to determine if gender, race, or LOE are predictors of positive recovery beliefs, as measured by the Personal Vision of Recovery Questionnaire (PVRQ). One hundred and thirty-two consumers from mental health agencies participated and were administered the PVRQ, an instrument measuring beliefs about personal recovery. Only race was found to be a significant predictor of PVRQ scores. These findings suggest that race may affect beliefs about personal recovery from mental illness, having implications for mental health systems.

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Introduction

Historically, serious mental illness has been viewed as a persistent and deteriorating condition. The prognosis for a person with a diagnosis such as schizophrenia was poor, stemming from early assumptions of an inevitable downward course with a progressive loss of function in all areas of daily living (American Psychiatric Association, 1980; Kruger, 2000). In light of this view, individuals who received a psychiatric diagnosis, such as schizophrenia or bipolar disorder, were often advised to limit their personal and vocational expectations and discard any hope of having a "normal" life (Frese & Davis, 1997; Harding, Brooks, Ashikaga, Strauss, & Breier, 1987b). There was a prevailing belief in the "homogeneity of outcomes" (i.e., that all serious mental illnesses followed the same course [Harding, 1986; Harding et al., 1987b; Surgeon General, 1999]). This attitude pervaded not only society, in general, but the mental health system as well (Anthony, Cohen, & Farkas, 1999; Frese & Davis, 1997).

More recently, the long-standing belief in the chronic and progressive deterioration caused by serious mental illness has been challenged by evidence demonstrating heterogeneous outcomes. This evidence has come in the form of longitudinal studies and personal accounts of individuals who, despite receiving a diagnosis of this kind, continued to lead productive lives (Anthony, 2000; Deegan, 1988; Harding, Brooks, Ashikaga, Strauss, & Breier, 1987a). These accounts provided a foundation for the emergence of the concept that recovery from serious mental illnesses, in the form of restored psychological, social, and vocational functioning, was a viable

prognosis for its sufferers (Deegan, 1988; Liberman, Kopelowicz, Ventura, & Gutkind, 2002; Ralph, 2000). This became known as the recovery movement.

The initial forces behind the emergence of the recovery movement came from consumers (also known as "survivors") and the introduction of rehabilitation principles into the conceptualization of the course of serious mental illnesses (Jacobson & Curtis, 2000). The consumer/survivor movement[1] began in the United States in the 1970s and paralleled other social movements of the time. The movement fought for the oppression of the mentally ill to be acknowledged by society and the creation of a distinct group identity (Jacobson & Curtis, 2000). Former mental patients worked to improve conditions for individuals who were still in institutions and raised awareness of the stigmatizing treatment of individuals with mental illness by greater society (Frese & Davis, 1997).

The concept of recovery was introduced in the writings of consumers in the 1980s (Anonymous, 1989; Deegan, 1988; Leete, 1989). Consumers offered personal accounts of regaining a desired level of functioning, either with or without the assistance of mental health professionals. These accounts, in conjunction with the publication of Harding's studies on the long-term outcomes of people who had been psychiatrically hospitalized for serious mental illnesses, provided evidence against the traditional view of the unrelenting deteriorative course of these illnesses (1987a, 1987b).

Anthony (1993) furthered this movement by fusing the themes of physical rehabilitation with the concept of recovery from mental illness. Facets of physical rehabilitation once applied only to persons with physical limitations, such as paraplegia

[1] Consumers being those individuals who receive services from the mental health system; the terms "consumer" and "survivor" are often used interchangeably.

or neurological disabilities, are now viewed as equally relevant to psychiatric recovery. These themes include emotional and personal adjustment to a chronic illness, changes in, but not complete disregard of, life goals, and the development of hope despite the permanence of illness (Bishop, 2001).

The process of recovery is wholly unique and personal to each individual experiencing it. Consequently, there is no universally accepted definition of recovery. The meaning of recovery differs for the many populations that are affected by it: consumers, mental health service providers, family members, and policy makers (Jacobson, 2001). The multi-faceted nature of recovery includes constructs such as the restoration of health and functioning, establishing an identity in the face of a mental illness, and the development of new purpose in one's life (Jacobson & Curtis, 2000). Recovery also includes other areas of importance in a person's life, such as social success and achievements (Jacobson, 2001).

Many mental health systems have incorporated the goals and outcomes of a recovery-oriented system into their operations (Anthony, 1993). In doing so, these systems provide recovery-focused client services in the areas of treatment and crisis intervention, as well as enrichment and rights protection. This approach entails several basic assumptions about recovery. These assumptions include: a) recovery can occur without professional intervention, b) symptoms may persist but with increasingly minimal interference, and c) the presence of people who support the consumer during the process is essential (Anthony, 1993). Familiarity with these assumptions allows mental health professionals to have a better understanding of how to facilitate consumer

recovery. Further, it provides the various populations affected by recovery with a universal foundation.

Adopting the view that individuals with serious mental illness can recover can lead to the creation of interventions and services that specifically support recovery (Jacobson & Curtis, 2000; Liberman et al., 2002). This shift in focus, from a system designed to control symptoms to one that actively supports individual recovery, has created the need for accurate measurement of various aspects of recovery and a concurrent need to identify factors that may be associated with positive outcomes in the recovery process. By utilizing outcome measures, mental health professionals can assess current services and the degree to which they encourage and assist in the recovery process.

Qualitative studies to date have focused on describing common themes within the recovery process (Jacobson, 2001; Young & Ensing, 1999) whereas quantitative research has created models and operational definitions in order to measure outcomes (Jacobson & Curtis, 2000; Liberman et al., 2002). The findings from studies of recovery using qualitative methods have provided powerful descriptions of recovery while greatly expanding knowledge in such essential areas as self-concept, beliefs and attitudes, and personal meaning (Mead & Copeland, 2000; Ralph, 2000; Smith, 2000). These studies have helped unify the concept of recovery and provided direction for determining which variables should be measured using quantitative methodologies.

The body of literature studying subjective dimensions of recovery through qualitative research is much larger than its quantitative counterpart (Coursey, Keller, & Farrell, 1995; Lyons, Cook, Ruth, Karver, & Skagg, 1996; Smith, 2000). Research in

developing instruments to measure recovery perspectives, attitudes, and beliefs is sparse. A major obstacle in this endeavor has been the lack of a universal definition for the term "recovery," one that encompasses the various meanings it holds for different groups (Liberman et al., 2002). Two quantitative questionnaires measuring attitudes about recovery (the Recovery Attitudes Questionnaire and the Agreement with Recovery Attitudes Scale) have been developed (Borkin et al., 1999; Murnen & Smolak, 1996), with limited use. The focus of these instruments is broad, assessing beliefs about what factors both support and hinder recovery for consumers in general. Only one instrument that measures consumers' beliefs about personal recovery using a quantitative approach is known, the Personal Vision of Recovery Questionnaire (PVRQ) (Ensfield, 1998).

Although the recovery process is conceptualized as varying across consumers, common factors that are related to, and may promote, recovery need to be identified. Identification of these commonalities may provide evidence of more productive pathways to recovery that are influenced by or based upon selected individual characteristics. This, in turn, would aid in the creation of more specific instruments in the measurement of recovery as well as provide information about how to better tailor current recovery-oriented mental health services.

Gender, race, and level of education (LOE) are examples of these individual characteristics. Minimal attention has been given to how these factors are related to consumer beliefs and attitudes about the recovery process. There is evidence that men and women are impacted very differently by mental illness, beginning with initial diagnosis. For example, women are about twice as likely as men to be diagnosed with mood or anxiety disorders, whereas men are about four times as likely as women to

receive a substance abuse or antisocial behavior diagnosis (Rhodes, Goering, To, & Williams, 2002). Additionally, it has been found that, beginning in adolescence, men have higher rates of aggressive behavior and conduct disorders than women (Hafner & an der Heiden, 1999). Due to the controversy over the prevalence of select psychiatric diagnoses in certain populations (i.e., mood disorders in women), it is unclear whether true differences in base rates in etiology actually exist. Potential explanations of these differences have included biases within the diagnostic criteria, as well as sampling and reporting biases (Hartung & Widiger, 1998; Seeman, 1988).

Numerous sex differences exist beyond diagnosis. In the case of schizophrenia, several studies have found that, compared to men, women generally have a later age of onset, are more likely to be married, and have strong social supports at time of onset (Hafner & an der Heiden, 1999; Hambrecht, Maurer, & Hafner, 1992; Liberman et al.,2002; Usall et al., 2001). There is evidence that women have better responses to antipsychotic medication and are the predominant group served in community outpatient treatment facilities (Sajatovic, Sultana, Bingham, Buckley, & Donenwirth, 2002; Seeman, 1988). However, not all of these findings have been replicated. Other studies have found that there is no significant difference between men and women in terms of their utilization of mental health services (Albizu-Garcia, Alegria, Freeman, & Vera, 2001; Räsänen, Nieminen, & Isohanni, 1999). If men and women do, in fact, use mental health services at different rates, it is unclear whether this is attributable to a true sex difference or another factor that has not yet been identified. Although the study of sex differences in mental illness has generated a considerable amount of research, there is no

known study examining differences in recovery attitudes and beliefs between men and women.

In addition to gender, racial and ethnic background is another characteristic that may contribute to differences in recovery attitudes and beliefs. There is evidence that a patient's ethnicity affects diagnosis and recommended treatment (Emsley, Waterdrinker, Pienaar, & Hawkridge, 2000). Studies have found that African Americans are more likely to be diagnosed with schizophrenia whereas Caucasians are more likely to be diagnosed with mood disorders and depression (Delahanty et al., 2002; Delbello, Lopez-Lawson, Soutullo, & Strakowski, 2001). This is consistent with research that has found higher treatment rates for depression among Caucasians and higher treatment rates for schizophrenia among African Americans (Flaskerud & Hu, 1992). Clinical presentation of psychopathology, specifically schizophrenia and depression, has been found to vary among races (Delbello et al., 2001; Neighbors, Jackson, Campbell, & Williams, 1989). It is hypothesized that this variation in symptom manifestation in Caucasians and African Americans affects the clinician's ability to diagnostically differentiate between disorders (Neighbors et al., 1989).

Further differences in mental illness among races exist in psychopharmacological treatment and utilization of mental health services. Emsley et al. (2000) found that ethnicity may influence both pharmacokinetic and pharmacodynamic processes, affecting response to traditional medications prescribed for mental illness. This finding has gained support from research suggesting African-American patients often receive higher doses of antipsychotic drugs than Caucasians, whereas Asians receive lower doses than Caucasians (Emsley et al., 2002). Hypotheses to explain the higher dosage levels in

African Americans than Caucasians include differences in body mass, age, and time elapsed prior to seeking help (i.e., delays in receiving treatment for psychotic symptoms have been found to significantly increase time to remission and to be a predictor of poorer outcomes) (Liberman et al., 2002). Underutilization of services among non-Caucasians has been attributed to stigma associated with mental illness, social barriers preventing service, and an interaction effect with gender, whereby men seek help less often than women (Husaini et al., 2002). The aforementioned diagnostic differences appeared during comparisons made between African Americans and Caucasians; it is not known if these significant differences carry over to other racial and ethnic groups.

An additional individual characteristic that may affect recovery attitudes and beliefs is LOE. Traditional research has blended LOE with income and occupation to form a measure of socioeconomic status (SES) (Pincus & Callahan, 1994). Although these three variables are related, it is theorized that they do not entirely overlap (Adler et al., 1994). The designation of LOE solely as part of the larger variable of SES minimizes its unique relation to an array of chronic illnesses, including mental illness.

The existing literature studying the impact of LOE on health is limited. Nevertheless, previous studies of LOE and health have consistently found a graded relationship between health and all levels of education; that is, individuals who attain higher levels of education experience lower rates of mortality and physical illness, while those with lower levels of education experience higher rates of mortality and illness (Kitagawa & Hauser, 1973; Pincus, 1988). Although the underlying mechanisms of this relationship are not completely known, it is theorized that the influence of physical

environment, social environment, and experiences that influence socialization and proper psychological development contribute to the gradient (Adler et al., 1994).

In studies that have considered common diseases and LOE, it was found that these diseases, including mental illness, were found 2-3 more times as often in individuals with less than 12 years of education (Pincus & Callahan, 1994). Individuals with less education report not only an increase in poor physical health but higher rates of depression (Adler et al., 1994; Kaplan, Roberts, Camacho, & Coyne, 1987). Furthermore, LOE has been identified as a predictor of dropping out of mental health treatment (Edlund et al., 2002). Despite these links to mental illness, there is no known study of LOE and its impact on recovery from serious mental illness.

As mental health systems become more recovery-based in their service delivery and treatment planning, it will become necessary to identify individual characteristics that may support or influence the recovery process. Gender, race, and LOE may play a role in this process. The first goal of this study is to determine if gender, race, or LOE are predictors of positive recovery attitudes and beliefs, as measured by the PVRQ. The second goal is to examine the associations between the individual characteristics (i.e., gender, race, LOE) and PVRQ factors. Previous research has suggested that gender, race, and LOE impact numerous areas of mental illness, including diagnosis and treatment, and therefore it was hypothesized that they would be predictive of and associated with positive recovery attitudes and beliefs.

Method

Participants

The data used in this study are part of a larger data collection that assessed consumer attitudes toward recovery from mental illness and other areas of well-being. One hundred and thirty-two consumers of mental health services in Hamilton County mental health agencies were interviewed. Consumers were contacted after replying to a recruitment flyer posted at the agency from which they receive services. All consumers participating in the study were certified as having a serious mental illness using standards established by the State of Ohio (i.e., 508 certification). Other than the requirement of 508 certification, no inclusion or exclusion criteria were established and researchers made an effort to include as diverse a group of consumers as possible.

The ages of participants ranged from 21 to 69 years (M = 42.65, SD = 11.14) and 62.4% of the sample completed high school or some college (Tables 1 and 2). The sample was composed of 52% men and 48% women. Although most participants were unemployed, nearly 25% of the sample were working part- or full-time. Schizophrenia or bipolar disorder accounted for 60% of the diagnoses in this sample.

Procedures

The larger study of recovery attitudes required informed consent and received approval by the University of Cincinnati institutional review board. Permission to recruit participants was obtained from an administrator at each agency. Flyers were posted in areas of high visibility by trained research assistants and were distributed to case managers at the agencies (see Appendix A). Each flier had a contact telephone number

for individuals interested in obtaining more information about the research project. Before and after the scheduled interviews, researchers spoke with other interested consumers[2] about becoming involved in the study. Interviews were conducted during various weekdays and time periods at different agencies, allowing researchers to speak with a varied group of potential participants. Trained graduate and undergraduate student research assistants made appointments with consumers who had contacted the research team by telephone. Interviews were completed at the agencies where the individuals received services. If individuals were unable to meet at an agency, accommodations were made to meet at a mutually convenient location.

Interviews were completed by trained psychology and social work graduate student researchers from the University of Cincinnati. Each member of the research team was made aware of the confidentiality policies of the research. Before each interview, the researcher read through an informed consent form with the participant. The consent form detailed the confidentiality policies and goals of the study (see Appendix B). Any questions that arose from the consent form were addressed. Those who chose to take part in the study signed the consent form. The researcher then administered the research protocol which included reading aloud the measures to the participant and recording the answers. Copies of the questionnaires were available to any participants who wished to read along. The questionnaires were administered in a counterbalanced order to minimize order effects.

Interviews were completed in 30 to 60 minutes. At any time, a participant could stop the interview, in which case the participant was paid $5 for his or her time, with the

[2] Individuals who had learned of the study through fliers, their case managers,i or other consumers but had not called the researchers to schedule an interview.

understanding that no negative consequences would ensue as a result. Similarly, if the researcher felt the participant was not able to fully attend to the interview (due to medication issues, active symptomatology, or external distractions), he or she would end the interview and pay the participant $5 for his or her time. Participants who completed the interview received $10 compensation. The funding for this project came from an Ohio Department of Mental Health grant.

Measures

Personal Vision of Recovery Questionnaire (PVRQ) (Ensfield, 1998): This is a 24-item self-report instrument that measures consumers' beliefs about their own recovery from mental illness. It was developed through the collaboration of consumers, mental health professionals, and academic researchers for use in both research and clinical settings. On the PVRQ, responses were coded as 5 for "strongly agree," 4 for "agree," 3 for "neither agree nor disagree," 2 for "disagree," and 1 for "strongly disagree" (Appendix C).

The PVRQ consists of five factors: Factor 1 is "recovery through support", Factor 2 is "recovery through personal challenges", Factor 3 is "recovery through professional assistance", Factor 4 is "recovery through action and help-seeking" and Factor 5 is "recovery through affirmation". This instrument demonstrates adequate internal consistency. Coefficient alphas were calculated in the present study and found to be .75 for Factor 1, .65 for Factor 2, .54 for Factor 3, .72 for Factor 4, and .70 for Factor 5. Convergent and discriminant construct validity of the PVRQ was examined by investigating the relationship between the factors of the PVRQ and related constructs

(Ensfield, 1998). Pearson correlations were calculated to determine associations among PVRQ factor scores and other factor scores of similar measures, such as the Community Living Skills Scale, the Multidimensional Scale of Perceived Social Support, and the Client Experiences Questionnaire: Life Satisfaction Measure. These correlations were low to moderate. This suggests that although each of these instruments measures a related facet of the recovery concept, the PVRQ provides distinct information about consumers (Ensfield, 1998). Participants received a total score of 24-120 on the PVRQ, based on their responses.

Demographic Questionnaire (Appendix D): Participants also completed a short demographic questionnaire, created for this specific study. The nine items included on the questionnaire were gender, age, race, marital status, primary psychiatric diagnosis, employment status, education level, spiritual vs. religious affiliation, religious preference, and two questions about the duration of mental illness and length of time in the recovery process.

Results

A power analysis was conducted using GPOWER (Faul & Erdfelder, 1992). The analysis indicated that for one-tailed *F* tests (multiple regression) with a sample size of N = 132, at a significance level of .05, a "medium" effect size (r = .15) could be detected with 97% power. For two-tailed independent sample *t*-tests (comparing correlations), a "medium" effect size (r =.3) could be detected with 95% power with a sample size of N = 132 at a significance level of .05. For *F* tests (ANOVA), a "medium" effect size

(r = .25) could be detected with a sample size of N = 132, at a significance level of .05, with 81% power.

Descriptive statistics were computed for the PVRQ total scores. Specifically, the means and standard deviations for the total PVRQ scores were calculated for three independent variables: gender, race, and LOE. For purposes of analysis, race was separated into two categories: Caucasian and non-Caucasian. Similarly, LOE was separated into two groups: individuals with less than a high school diploma and individuals with a high school diploma or greater (Table 3).

Analyses of variance (ANOVAs) were computed to examine differences in total PVRQ scores between gender, race, and LOE. There were no statistically significant differences detected amongst the three comparisons. Pearson product moment correlations were computed to examine the associations between PVRQ scores (i.e., the total and the five factor scores) and the independent variables (Table 4). Race was found to be significantly correlated with total PVRQ scores and Factor 3 of the PVRQ ("recovery through professional assistance"). Neither gender nor LOE were significantly correlated with total PVRQ scores or any of the five factors.

Multiple regression was conducted to predict total PVRQ scores from the three independent variables of gender, race, and LOE. As a result of findings in the literature, hierarchical regression was used and the order in which the variables were entered was determined. Numerous sex differences have been cited regarding mental illness, resulting in the expectation that gender would account for most of the variance in the regression equation. Hence, it was entered first. Differences in diagnosis and prevalence of mental illness have been attributed, in part, to the racial background of individuals so it

was entered second. LOE was entered last; its relation to illness as a whole and mental illness in particular is evident but still unclear. Therefore, it was expected that this variable would account for the least amount of variance in scores.

The results of this analysis indicated that only race accounted for a significant amount of the total scores' variability ($R^2 = .03$, $F(1, 126) = 4.18$, $p = .043$). This suggests that race impacts consumers' perceptions concerning what factors contribute to the recovery process. Gender and education level were not found to be significant in predicting total PVRQ scores ($R^2_{gen} = .001$, $F(1, 127) = 0.14$, *ns*; $R^2_{loe} = .04$, $F(1, 125) = 1.35$, *ns*).

A second multiple regression analysis was conducted to determine if scores on the five PVRQ factors could be predicted by gender, race, and LOE. The results of the analysis indicated that race accounted for a significant amount of the variability on Factor 3 (Recovery Through Professional Assistance), $R^2 = .04$, $F(1, 126) = 5.13$, $p = .025$. Race was not a significant predictor of the other factors. Neither gender nor LOE predicted the scores on any of the factors. Table 5 displays the results of the analyses.

Discussion

The primary goal of this study was to determine if gender, race, or LOE are predictors of total scores on the PVRQ. It was expected that all three variables would predict attitudes and beliefs about personal recovery from mental illness. However, gender and LOE did not appear to play a role in beliefs about recovery. Race was the only variable associated with scores on the PVRQ and it appears to partially account for the variance in these scores. Previous researchers have reported that gender and LOE are

involved in several areas of mental illness, including diagnosis and prevalence (Hafner & an der Heiden, 1999; Pincus & Callahan, 1994), yet in this study, these two factors did not have a similar level of involvement in recovery beliefs and attitudes. This may be explained in part by the fact that the current study is the only one known to have examined recovery beliefs and attitudes using the PVRQ and these specific characteristics (gender, race, and LOE).

The significant relationship between race and scores on the PVRQ suggests that this sample of Caucasians and non-Caucasians have different views about things that support the recovery process and may hold disparate beliefs about personal recovery. The additional significance of race and Factor 3 of the PVRQ, a factor assessing the perceived necessity of mental health professionals in the recovery process, points to a divergent view between the groups regarding the role of case managers, psychiatrists, and other mental health professionals in the consumer's recovery. It is important to note that although race was found to be statistically significant in this instance, the total amount of variance it accounted for in the PVRQ scores was less than 5%. Thus, numerous other factors beyond the scope of the present study appear to affect scores on the PVRQ.

The findings from the current study provide additional information about recovery from mental illness. The implications of this study are twofold. First, demographic factors may not influence the recovery process as expected. In this sample, gender and LOE were not associated with differences in consumers' views of their own recovery. The total scores of men and women on the PVRQ did not significantly differ. Numerous sex differences in mental illness have been cited in the literature including prevalence of illness, treatment seeking behaviors, and outcomes (Rhodes et al., 2002; Usall et al.,

2001). However, these findings have been contradicted in other studies (Albizu-Garcia et al., 2001; Räsänen et al., 1999). The unclear role of gender may be due to several factors including different operational definitions within studies, varying methodologies (i.e., data gathered from self-report vs. medical charts), or that studies have not properly tapped into the manner in which gender does affect the course of mental illness.

Like gender, LOE was not significantly associated with PVRQ scores. The research regarding the impact of LOE on mental illness is limited. Findings from studies examining the association between LOE and disease suggest that lack of education eventually leads to higher rates of illness, including mental illness (Anderson & Armstead, 1995; Pincus & Callahan, 1994). However, the mechanism by which education influences mental illness is unknown. Further research focusing on LOE and recovery from mental illness could not be found, thus, at the present, the impact of education on recovery beliefs remains unknown.

There are numerous potential explanations for the lack of significance between gender, LOE, and recovery beliefs. First, it is possible that these individual characteristics may not affect beliefs about how to enhance recovery as markedly as they affect mental illness itself. Second, the PVRQ may have limited sensitivity in assessing recovery beliefs or the involvement of other unidentified, yet possibly influential, factors affecting how individuals view recovery from mental illness.

Although gender and LOE were not significantly associated with personal beliefs about recovery, race appears to play a role in recovery beliefs and attitudes. Race has been found to influence type of psychiatric diagnosis among individuals. The prevalence of mood disorders is higher in Caucasians, while African Americans more often receive a

diagnosis of schizophrenia (Delahanty et al., 2001; Delbello et al., 2001). In this study, race was significantly associated with total PVRQ scores and Factor 3 of the PVRQ. However, there were no significant differences in mean scores between Caucasian and non-Caucasian participants. In the two multiple regression analyses in which race was significant, it accounted for a small amount of the total variance, again suggesting the involvement of other factors in PVRQ score variability. With a larger and more racially diverse sample, this amount may fluctuate and the identification of other factors may occur.

The second implication is that the findings lend support to previous findings that the quantitative assessment of the concept of recovery is complex. One of the greatest deterrents to further development of recovery research has been establishing an operational criterion for recovery (Liberman & Kopelowicz, 2002). This process has been hindered, in part, by the many perspectives of recovery held by those involved in its research (i.e., consumers, academic researchers, mental health policy makers). As a result, consumers may not have a unified understanding of what recovery from serious mental illness is, preventing accurate research from occurring. Also, research in the area of recovery is in its infancy; specific studies involving quantitative measurement of recovery attitudes are few. Methodology in most recovery research to date has been qualitative in nature, e.g., concerned more with common themes of the recovery process, whereas research with a more quantitative bent is limited and has not yet provided an accepted standard for the measurement of these recovery dimensions.

Useful examples to model for standard measurement of recovery come from within the field of psychology. The Minnesota Multiphasic Personality Inventory-II

(MMPI-II) and Beck Depression Inventory-II (BDI-II) are commonly used in the detection of general psychopathology and depression, respectively, and both have established acceptable levels of reliability (Greene, 2000; Steer, Kumar, Ranieri, & Beck, 1998). As recovery principles continue to be implemented in mental health systems, instruments of similar reliability would be beneficial to professionals working with consumers. Although future research is not expected to develop one sole instrument for this purpose, just as the MMPI-II and BDI-II are not used alone but in conjunction with other gathered clinical data, multiple measures used to assess a consumer's recovery beliefs and attitudes would allow treatment and services to be tailored to the consumer's needs and wants, avoiding "one-size-fits-all" service delivery.

There are several limitations to the current study. First, the PVRQ was created through the collaboration of several groups whose members have varied interests in serious mental illness. While input from these groups makes the PVRQ a useful tool in assessing personal beliefs of recovery from mental illness, the instrument is not standardized and may not have the psychometric sensitivity to detect influential nuances of demographic characteristics on beliefs about personal recovery. Second, the foundation of the present study relies greatly on the assumption that the concept of recovery from mental illness has been disseminated and understood by consumers in the community. If this is not the case, many consumers may have misinterpreted the idea of "recovery." No screening device was given to prevent individuals unfamiliar with the concept of recovery from mental illness from participating in the study. Third, demographic information was gathered through self-report which is often unreliable. Therefore, a variable such as reported LOE may not be accurate and would in turn affect

the results. Finally, data used for this study was part of a larger study with different hypotheses and research goals. Inherent differences such as the number of measures used and comparable yet diverse research goals may have influenced the goals and purpose of the current study.

Replication of these results is necessary before conclusive recommendations can be made and future work is needed to better examine recovery processes. However, some suggestions can be made. First, research in this area must partially shift its focus to the quantitative measurement of recovery, beginning with an operationally defined concept that reflects the various meanings of recovery held by different populations (Liberman & Kopelowicz, 2002). The theoretical framework in which the recovery concept was formed has been properly established and the common themes within the concept are well documented (Anthony, 1993; Deegan, 1988; Jacobson, 2001). Based on this research, instruments to assess a consumer's attitudes toward recovery and what may support an individual's recovery can now be created. This direction appears to be the logical next step for research in this area.

Second, future research needs to examine how demographic factors affect responses to items on recovery instruments. For example, the significant association between race, PVRQ scores, and items on Factor 3 merits further examination. This finding suggests that race may play some role in recovery beliefs, whether due to cultural, socioeconomic, or other factors and that a discrepancy may exist in how Caucasians and non-Caucasians view the role of mental health professionals in consumer recovery. Determining how race may affect the recovery process is yet another step in creating more personalized treatment for consumers based on who they are, rather than what they

are expected to be based on their diagnoses and racial background. Additional research needs to include the present demographic characteristics as well as others such as marital status or SES to determine their potential role in the recovery process.

Finally, demands by the current health care environment, as controlled by health management organizations, call for the development of brief instruments to assess both mental illness and recovery (Bufka, Crawford, & Levitt, 2002). Many mental health systems have experienced substantial budgetary cuts in all areas of service delivery. Because of these cutbacks, consumers will be allotted less individual time with mental health professionals (e.g., case managers, job coaches, psychologists, psychiatrists). By having access to a brief instrument that reliably assesses an individual's recovery needs or views of recovery, professionals may be able to use their time with consumers more efficiently. Such an instrument may reduce some of the "guesswork" of creating proper treatment plans and could be given to consumers at selected times during their treatment, as their recovery needs change. The PVRQ is not yet standardized, but further research into its psychometric properties and a better understanding of the specific populations for which its use is best suited may provide evidence of its ability to be useful in this capacity.

The process of recovery is believed to be a unique experience; thus not all methods to promote it may be equally useful. The identification of common factors that may support or enhance the process is essential for mental health systems. An equally vital need is for the development of brief instruments that can accurately measure the recovery beliefs of consumers. With this knowledge, providers may be able to ascertain the level of belief in personal recovery a consumer holds at a given time, determine

services and treatment with these beliefs in mind, and pursue the goal of creating an environment that encourages recovery for all consumers of mental health services.

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Table 1

Demographic Characteristics of the Study Sample (n = 132)

Characteristic	n	%	Characteristic	n	%
Gender			*Race*		
Male	68	52	Caucasian	76	57
Female	64	48	African American	47	35
			Multi-Racial	1	1
			Other/Missing	8	7
Education Level			*Employment Status*		
Less than High School	41	31	Unemployed	50	38
			Full-Time	8	6
High School Diploma	41	31	Part-Time	23	17
Some College	42	32	In School/ Vocational Training/		
Bachelor's Degree	5	4	Volunteer	4	3
Graduate Degree	2	1.5	Other	46	35
Missing	1	<1	Missing	1	<1

Table 2

Self-Reported Primary Diagnoses (n = 132)

Diagnosis	n	Percentage
Schizophrenia	54	41
Schizoaffective	12	9
Bipolar Disorder	25	19
Major Depression	11	8
Substance Abuse	1	<1
Personality Disorder	1	<1
Other/ Do not know	11	9
More than one diagnosis	15	11
Missing	2	2

Table 3

Means and Standard Deviations of Total PVRQ Scores Among Selected Groups

Group	Mean PVRQ score	SD
Men	93.10	9.69
Women	92.00	9.90
Caucasians	92.07	10.43
Non-Caucasians	92.51	8.81
Less than High School	94.78	9.91
High School or Greater	91.46	9.95

Table 4

Correlations Among Gender, Race, Education Level, Total PVRQ Scores, and Factors of the PVRQ

	Total Score	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
Gender	.040	.031	.011	.060	.013	.034
Race	.180*	.106	.110	.207**	.095	.156
Education Level	.034	.019	-.012	.030	.039	.056

** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).

Table 5

Summary of Hierarchical Regression Analysis for Variables Predicting Participant Scores on the PVRQ (N = 132)

Variable	*B*	*SE B*	β
Step 1			
Gender	.387	1.052	.033
Step 2			
Gender	-.369	1.103	-.031
Race	1.499	.733	.190*
Step 3			
Gender	.121	1.179	.010
Race	2.085	.889	.264*
Level of Education	-1.351	1.163	-.140

Note. $R^2 = .001$ for Step 1; $\Delta R^2 = .032$ for Step 2; $\Delta R^2 = .010$ for Step 3 (*$p < .05$)

Appendix A

* * * * * * * * * *

Members of the UC Recovery Research Team are conducting a questionnaire study on attitudes about recovery and other aspects of people's lives.

If you are a consumer of mental health services, you can:

GET PAID $10 for
1 hour of your time.

A member of the Research Team will be available to answer your questions.

You may call the researchers to learn more about the research project at 556-0895. If you decide you are interested, you may set up an interview.

* * * * * * * * * *

Appendix B
Consent Form

RECOVERY STUDY

ID# AGENCY:

Department of Psychology
University of Cincinnati
John Steffen, Ph.D. and Joyce R. Borkin, Ph.D.
513-556-3324

Informed consent to participate in a study

Before you agree to take part in this study, we want to make sure you understand the reason for the study, how it will be carried out and your right to stop at any time.

The goal of this study is to understand your beliefs about yourself and recovery from mental illness. You are one of about 200 people asked to take part in this study. We will be asking you to tell us about yourself and to answer questions about recovery and other topics. The study will take you between 30 and 60 minutes. We will pay you $10 an hour. If it takes less than an hour to complete the entire study, we will still pay you $10. We will ask you similar questions every six months for the next two years. We will pay you $10 per hour each time. You can stop being a part of the study at anytime.

You should know that what you tell us will be data for this study. It will be used only for research. Your answers are confidential. We will keep questionnaires in a locked file. We will use code numbers to identify them. Only the researcher and trained research assistants will have access to it. We will not use names or any personal information in reporting the findings. We will not tell the names of the people taking part in this study to anyone, except as required by law. We will destroy questionnaires when the study is finished. It is your choice whether to take part in this study. You have the right to say no. You have the right to stop AT ANY TIME. If you decide to stop, we will pay you $5.00 for your time. You have the right to ask questions. Your taking part or not taking part in this study will make no difference to the treatment you are now getting at your agency.

We do not think that taking part in this study will make you uncomfortable. If you do feel that any questions make you uncomfortable, you do not have to answer them.

If you have any questions about this study, you can call John Steffen (513-556-5571) or Joyce Borkin (513-556-4629). You can also contact the West Campus Human Subjects Committee of the University of Cincinnati at 556-2875 if you need to talk with anyone else.

I understand what was written above and agree voluntarily to take part in this study.

Signature of study participant indicating understanding and consent	Date
Signature of participant's guardian indicating consent (where applicable)	Date
Signature of investigator	Date

Appendix C

THE PERSONAL VISION OF RECOVERY QUESTIONNAIRE (PVRQ)

We are interested in your beliefs about your own recovery from mental illness. By recovery we mean the way you have learned to cope with your mental illness and go forward with your life. Please answer all questions, whether or not you consider yourself to be in recovery right now.

Please read each of the following statements. Circle the rating that most closely matches your opinion: **Strongly Agree; Agree; Neither Agree nor Disagree; Disagree; or Strongly Disagree**

1. Spirituality is a part of my recovery.

Strongly Agree | Agree | Neither Agree nor Disagree | Disagree | Strongly Disagree

2. I am responsible for my own recovery.

Strongly Agree | Agree | Neither Agree nor Disagree | Disagree | Strongly Disagree

3. People who expect very little of me interfere with my recovery.

Strongly Agree | Agree | Neither Agree nor Disagree | Disagree | Strongly Disagree

4. Recovery means becoming more satisfied with my life.

Strongly Agree | Agree | Neither Agree nor Disagree | Disagree | Strongly Disagree

5. Hope is important for my recovery.

Strongly Agree | Agree | Neither Agree nor Disagree | Disagree | Strongly Disagree

6. Being diagnosed correctly is necessary for my recovery.

Strongly Agree | Agree | Neither Agree nor Disagree | Disagree | Strongly Disagree

7. Family support is important for my recovery.

Strongly Agree | Agree | Neither Agree nor Disagree | Disagree | Strongly Disagree

8. Sticking up for clients' rights is a part of my recovery.

Strongly Agree | Agree | Neither Agree nor Disagree | Disagree | Strongly Disagree

9. Having something meaningful to do is important for my recovery.

Strongly Agree | Agree | Neither Agree nor Disagree | Disagree | Strongly Disagree

10. Helping others is a part of my recovery.

Strongly Agree | Agree | Neither Agree nor Disagree | Disagree | Strongly Disagree

11. Asking for help is a part of my recovery.

Strongly Agree | Agree | Neither Agree nor Disagree | Disagree | Strongly Disagree

12. I know people who are recovering from problems similar to mine.

Strongly Agree | Agree | Neither Agree nor Disagree | Disagree | Strongly Disagree

13. Recovery means my symptoms will be easier to control.

Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree

14. Recovery means I will be free of symptoms.

Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree

15. Self-help groups are important for my recovery.

Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree

16. Recovery means getting more control of my life.

Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree

17. The cause of my mental illness is not important for my recovery.

Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree

18. At times, treatment against my wishes is necessary for my recovery. For example, involuntary hospitalization, forced medication, or community probate.

Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree

19. Support from a special person, such as a spouse or partner, is important for my recovery.

Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree

20. Recovery means I will not be mentally ill anymore.

Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree

21. I am convinced that medication can help me to recover.

Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree

22. Side effects from my medication make it harder for me to recover.

Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree

23. Recovery involves finding new meaning in my life.

Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree

24. Support from mental health professionals is important for my recovery.

Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree

Appendix D

Demographic Questionnaire

1) What is your gender?
- ☐ Male
- ☐ Female

2) What is your age? _____

3) What is your race?
- ☐ Caucasian
- ☐ African American
- ☐ Asian/Pacific Islander
- ☐ Hispanic/Latin American
- ☐ Native American
- ☐ Other

4) What is your marital status?
- ☐ Single
- ☐ Married
- ☐ Separated/Divorced
- ☐ Widowed

5) What is your diagnosis?
- ☐ Schizophrenia
- ☐ Schizoaffective
- ☐ Bipolar Disorder
- ☐ Major Depression
- ☐ Substance Abuse
- ☐ Personality Disorder
- ☐ Other

6) What is your employment status?
- ☐ Unemployed
- ☐ Employed Part-Time
- ☐ Employed Full-Time
- ☐ Volunteer
- ☐ In School/Vocational Training
- ☐ Other

7) What is your education level?
- ☐ Less than High School
- ☐ High School Diploma
- ☐ Some College
- ☐ Bachelor's Degree
- ☐ Graduate Degree

8) Would you consider yourself…
- ☐ Spiritual
- ☐ Religious
- ☐ Spiritual and Religious
- ☐ Neither Spiritual nor Religious

9) What is your religious preference?
- ☐ Protestant
- ☐ Catholic
- ☐ Jewish
- ☐ No preference
- ☐ Muslim
- ☐ Hindu
- ☐ Buddhist
- ☐ Other

Do you consider yourself to have a mental illness? ☐ yes ☐ no

Do you consider yourself to be recovering?
- ☐ yes
- ☐ sometimes
- ☐ no