

A Comparison of Personal Recovery in Adults With Early Psychosis and Prolonged Schizophrenia

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Abstract

Background: We aimed to investigate whether personal recovery levels differ between those in early vs prolonged phases of psychosis and if there are different associations with objective outcomes of recovery (i.e., symptom severity and level of functioning). **Method:** Participants included 131 patients with early psychosis and 83 patients with prolonged psychosis. The Recovery Assessment Scale was used to assess personal recovery in both samples. The MIRECC-GAF and the CGI-S were used as measures of objective recovery in the early psychosis group. The PANSS and QoL scales were used as measures of objective recovery in the prolonged psychosis group. **Results:** People with early psychosis reported better personal recovery scores in all domains, except willingness to ask for help, compared to individuals with prolonged psychosis. Markers of objective recovery were not correlated with personal recovery in the early psychosis sample but were significantly correlated in the prolonged sample. Depressive symptoms were negatively correlated with personal recovery in the prolonged psychosis group. **Conclusions:** The relationship between personal and objective recovery may change over time and be dependent on the phase of an individual's illness. In addition, as individuals experience dysfunction over time, they may be more likely to become demoralized and experience lesser degrees of personal recovery.

Keywords: Hope, recovery, prolonged psychosis, schizophrenia, first episode psychosis.

Resumen

Comparación de la Recuperación Personal de Adultos con Psicosis Temprana y Prolongada. Antecedentes: nuestro objetivo fue investigar si los niveles de recuperación personal difieren entre pacientes que se encuentran en la fase temprana y prolongada de la psicosis y si existen diferentes asociaciones con medidas de recuperación objetiva. **Método:** 131 pacientes con psicosis temprana y 83 pacientes con psicosis prolongada. La escala RAS fue utilizada para evaluar la recuperación personal en ambas muestras. El MIRECC-GAF y el CGI-S fueron las medidas de recuperación objetiva en el grupo de psicosis temprana. Las escalas PANSS y QoL fueron las medidas de recuperación objetiva en el grupo de psicosis prolongada. **Resultados:** las personas con psicosis temprana informaron mejores puntuaciones de recuperación personal en todos los dominios, excepto en la disposición a pedir ayuda, comparados el grupo de psicosis prolongada. Los marcadores de recuperación objetiva no se correlacionaron con la recuperación personal en la muestra de psicosis temprana. Los síntomas depresivos se correlacionaron negativamente con la recuperación personal en el grupo de psicosis prolongada. **Conclusiones:** la relación entre recuperación personal y objetiva puede cambiar con el tiempo y depender de la fase del trastorno psicótico. A medida que las personas experimentan disfunción con el tiempo es más probable que se desmoralicen y experimenten un menor grado de recuperación personal.

Palabras clave: psicosis prolongada, esquizofrenia, psicosis temprana.

Personal recovery has become an increasingly important priority in mental health services worldwide (Slade, Williams, Bird, Leamy, & Boutillier, 2012). Personal recovery is defined as the attainment of a fulfilling life irrespective of symptom severity and functioning impairments (Bird et al., 2014). It is often contrasted with clinical recovery, which is concerned with symptom remission, and functional recovery, which is concerned with independent living and social functioning. Personal recovery has further been characterized as subjective in nature

in contrast to clinical and functional recovery which have been grouped together as forms of objective recovery (Leonhardt et al., 2017).

The idea of personal recovery has emerged from exploration of consumers' accounts of their recovery and involves multiple domains, including becoming empowered and taking responsibility for self-managing mental health; developing hope and optimism; establishing a sense of identity that is accepting of but not defined by illness; establishing new meaning and life goals; and developing a sense of connectedness with others (Bird et al., 2014; Corrigan et al., 1999). The relationship between personal recovery and objective outcomes is complex, however. Some researchers consider them semi-independent and others as directly or indirectly related (Kukla et al., 2014; O'Keeffe et al., 2019; Roe et al., 2011). In prolonged psychosis, personal recovery tends to be weakly related to positive symptoms, but has

stronger associations with depression and levels of social support (Roosenschoon et al., 2019; Van Eck et al., 2018) and duration of illness (Bourdeau et al., 2015; Windell et al., 2012). To date most research concerning personal recovery has been done in prolonged psychosis samples. For instance, a recent meta-analysis (Van Eck et al., 2018) included mostly patients with a relatively longer course of illness, with only one study out of 37 focused on early psychosis patients (Norman et al., 2013). A recent review in early psychosis showed that research in personal recovery within this population is still minimal and largely exploratory (Hancock et al., 2020).

Aim

Taken together with the background, the present study aims to cover the knowledge gaps presented. This work moves one step forward in the literature, by providing a more complete characterization of the experience of personal recovery in people with early psychosis. First, it remains unknown whether levels of personal recovery are equivalent among persons in earlier versus later phases of disorder. In this line, this would be the first study to compare levels of personal recovery between people with early psychosis and prolonged schizophrenia. Second, it is also unknown whether personal recovery has similar correlates with other aspects of recovery, including objective recovery, according to the phase of the disorder. As a secondary aim, we explored the relationship between levels of personal recovery with different assessments of objective recovery separately in each sample. Addressing these issues is essential to understand the potentially different needs of persons with psychosis in different phases of the disorder.

Method

Participants

Participants were drawn from two groups. The early psychosis (EP) sample was drawn from a group of persons entering treatment less than 5 years after the onset of a primary psychotic illness. The prolonged psychosis (PP) sample was drawn from the baseline data of a study of persons with more than 5 years since the onset of a primary psychotic illness enrolled in an outpatient clinic of a Veterans Affairs Medical Center (VAMC) who were enrolled in a clinical trial of a vocational rehabilitation program. Both clinics were located in a medium-sized city in Indiana (United States). All measures included in this study were completed at baseline, prior to interventions, although participants were receiving outpatient treatment as usual. Regarding inclusion criteria, the EP sample consisted of individuals between 16 and 30 years and the PP sample included only adults (>18 years old), both samples had diagnoses of schizophrenia-spectrum disorders, were in non-acute phases of illness, and were in outpatient settings. Exclusion criteria were signs of organic brain disease, diagnosis of severe personality disorders, intellectual (IQ < 70) or developmental disability, as determined through either chart-review or observation during the clinical interview. Before participation all patients completed institutional review board approved consent. Basic demographic information is listed in Table 1.

Instruments

The Recovery Assessment Scale (RAS; Corrigan et al., 1999; Corrigan et al., 2004) is a self-report instrument of 41 items that

Table 1
 Descriptors and comparison of levels of personal recovery between people with early psychosis and people with prolonged psychosis

| | Early psychosis (n = 131) Mean (SD) | Prolonged psychosis (n = 83) Mean (SD) | Statistical difference | p | Effect size |
|--------------------------------|--|---|------------------------|-------|-------------|
| Gender (n, % female) | 22 (16.8 %) | 4 (4.8%) | chi sq = 6.83 | .009 | V = -0.179 |
| Race (n, % African American) | 64 (48.9 %) | 46 (55.4%) | chi sq = 3.96 | .140 | V = 0.135 |
| Diagnosis (n, % Schizophrenia) | 67 (52.3 %) | 57 (69.5 %) | chi sq = 57.6 | <.001 | V = 0.524 |
| Age | 22.6 (4.75) | 49.7 (10.7) | t = -25.3 | <.001 | d = -3.56 |
| Antipsychotic dose, mg/d | | 363.64 (416.09) | | | |
| Personal confidence and hope | 4.06 (0.65) | 3.71 (0.69) | t = 3.629 | <.001 | d = 0.5161 |
| Willingness to ask for help | 4.09 (0.80) | 4.08 (0.63) | t = 0.123 | .902 | d = 0.0173 |
| Goal orientation and success | 4.23 (0.68) | 3.95 (0.77) | t = 2.767 | .006 | d = 0.3893 |
| Reliance on others | 4.11 (0.69) | 3.77 (0.66) | t = 3.487 | <.001 | d = 0.4929 |
| No domination by symptoms | 3.47 (0.82) | 3.00 (0.88) | t = 3.916 | <.001 | d = 0.5548 |
| CGI-S | 4.72 (1.17) | | | | |
| MIRECC Social | 53.6 (15.9) | | | | |
| MIRECC Occupational | 36.6 (22.2) | | | | |
| PANSS Positive | | 17.77 (5.15) | | | |
| PANSS Negative | | 19.96 (5.07) | | | |
| PANSS Cognitive | | 16.97 (3.77) | | | |
| PANSS Hostility | | 7.3 (3.10) | | | |
| PANSS Depressive | | 11.82 (3.83) | | | |
| QoL social composite | | 45.4 (13.2) | | | |
| QoL instrumental | | 4.56 (4.41) | | | |

Note: Antipsychotic dose are expressed as chlorpromazine equivalence; CGI-S: Clinical Global Impression-Severity scale; MIRECC: The Mental Illness Research, Education, and Clinical Center version of the Global Assessment of Functioning scale, PANSS: Positive and Negative Symptoms Scale, QoL: Quality of Life Scale

assesses the self-perception of psychological recovery from severe mental illness and includes five domains: Personal confidence and hope, Willingness to ask for help, Goal and success orientation, Reliance on others, and No domination by symptoms. The RAS has showed good test-retest reliability (over a 14-day interval, $r = .88$), internal consistency ($\alpha = .93$), and correlations with measures of self-esteem and empowerment.

The Clinical Global Impression – Severity (CGI-S; Busner & Targum, 2007) is a one item rating scale of illness severity completed by a trained rater following a clinical interview. The CGI-S has demonstrated good psychometric properties, utility for clinical practice and strong overlap with measurements of core symptoms of psychosis (Rabinowitz et al., 2006).

The Positive and Negative Symptom Scale (PANSS; Kay et al., 1987) is a 30 item rating scale completed by a trained rater following a clinical interview. In this study we used the five factor analytically derived components of Bell and colleagues. (Bell et al., 1994). The positive factor was composed of five items: unusual thoughts, delusions, suspiciousness, grandiosity, and hallucinations. The negative factor was composed of six items: passive withdrawal, emotional withdrawal, blunted affect, lack of spontaneity, poor rapport, motor retardation. The cognitive factor was composed of seven items: difficulty in abstract thinking, stereotyped thinking, conceptual disorganization, lack of judgment and insight, poor attention, tension, and mannerisms and posturing. The hostility factor was composed of four items: hostility, poor impulse control, uncooperativeness, and excitement. The depressive factor was composed of three items: anxiety, depression, guilt. For this study, assessment of inter-rater reliability was found to be high, with intraclass correlations for blind raters reaching .85.

The Mental Illness Research, Education, and Clinical Center version of the Global Assessment of Functioning scale (MIRECC-GAF; Niv et al., 2007) is scale composed of 3 subscales completed by a trained rater following a clinical interview. For this study, we used the social and occupational functioning scales. The symptom functioning scale was not used due to its strong overlap with the CGI-S. The MIRECC-GAF can be scored reliably and has shown good concurrent and predictive validity (Niv et al., 2007).

The Quality of Life Scale (QOL; Heinrichs et al., 1984) is a rating scale of social function completed by a trained rater following a clinical interview. In this study we used the four subscales “Interpersonal Relations”, which measures the frequency of recent social contacts; “Intrapsychic Foundations”, which measures qualitative aspects of interpersonal relationships and includes assessments, for example, of empathy for others; and “Common Objects”, which reflects community participation and includes the assessment of participation in common community activities. These three subscales were grouped into a common factor of social function. The fourth subscale is “Instrumental Function”, which assesses work function. Good to excellent inter-rater reliability was found for the QOL factor scores, with intraclass correlations ranging from .88 to .93.

Procedure

The study was approved by the Indiana University Internal Review Board (protocol number 1009001639). Regarding study design, this is a cross-sectional study in which two groups are compared. Patients of both groups were recruited using convenience procedures. Both samples had a diagnosis of a schizophrenia

spectrum disorder confirmed by the Structured Clinical Interview for the Diagnostic Statistical Manual-IV (SCID) (First et al., 1995). Assessments were completed by well-trained research assistants that had a minimum of a master’s degree in clinical psychology and similar years of clinical experience. The EP sample completed the assessments as part of a routine evaluation of outcomes for a Coordinated Specialty Care Program. The participants from the PP sample completed the informed consent process in the context of the research study. In both samples, we included participants enrolled in treatment with complete data of the baseline measures. All the measures were collected at baseline, prior to any experimental intervention, when both groups of participants were receiving treatment as usual. All participants were administered the RAS. Participants in the EP group were administered the CGI-S and MIRECC-GAF. Participants in the PP group were administered the PANSS and QOLS.

Data analysis

Analyses were performed in three phases. First, descriptors of demographics and variables of our study were obtained. Second, t-tests on personal recovery domains between the two groups were performed, in addition to calculating Cohen’s d effect sizes. Finally, correlational analyses were conducted to explore potential relationships between personal recovery domains and measures of objective recovery in each sample. All analysis were done using jamovi 1.0 (The jamovi project, 2021).

Results

RAS scores, as shown in Table 1, indicated that patients with EP presented significantly higher scores in personal confidence and hope, goal and success orientation, reliance on others and no domination by symptoms than those with PP. When we compared personal recovery with objective recovery in the EP sample we found, as shown in Table 2, that RAS scores were unrelated to GCI-S and MIRECC-GAF scores. By contrast, as revealed in Table 3, all personal recovery domains for the PP group, except willingness to ask for help, were related to depressive symptoms. This result was maintained after controlling for negative symptoms. Reliance on others was also negatively associated with positive and hostility symptoms. Reliance on others and goal success and orientation were also associated with better social functioning. There was no relationship between work functioning and any personal recovery domain in this group. Age did not correlate with any domain of personal recovery in either sample.

Discussion

This study had two aims. Our main aim was to compare levels of personal recovery of persons with early psychosis versus prolonged schizophrenia. We found that people with EP reported greater levels of personal confidence and hope, goal and success orientation, reliance on others, and no domination by symptoms. No differences were found in willingness to ask for help.

Our secondary aim was to examine whether personal recovery in EP and PP were related to assessments of objective recovery. Here we found no relationships in the EP group between personal recovery and global assessments of symptoms or social function. For the prolonged group, which included more nuanced

Table 2
Correlations of personal recovery domains with symptomatology and functioning in the EP sample

| | Personal confidence | Willingness to ask for help | Goal and success orientation | Reliance on others | No domination by symptoms |
|-------------------------|---------------------|-----------------------------|------------------------------|--------------------|---------------------------|
| CGI-S | -.031 | -.086 | -.013 | -.053 | -.076 |
| <i>p</i> | .737 | .335 | .883 | .554 | .396 |
| MIRECC-GAF Social | -.156 | .008 | -.097 | .061 | .067 |
| <i>p</i> | .086 | .933 | .279 | .497 | .452 |
| MIRECC-GAF Occupational | .009 | .021 | .071 | .048 | .155 |
| <i>p</i> | .923 | .817 | .430 | .590 | .080 |

Note: EP: Early Psychosis; CGI-S: Clinical Global Impression-Severity scale; MIRECC-GAF: The Mental Illness Research, Education, and Clinical Center version of the Global Assessment of Functioning scale

Table 3
Correlations of personal recovery domains with symptomatology and functioning in the PP sample

| | Personal confidence | Willingness to ask for help | Goal and success orientation | Reliance on others | No domination by symptoms |
|-------------------------------|---------------------|-----------------------------|------------------------------|--------------------|---------------------------|
| PANSS Positive | -.197 | -.118 | -.170 | -.310 | -.091 |
| <i>p</i> | .093 | .319 | .144 | .008 | .444 |
| PANSS Negative | -.151 | -.168 | -.164 | -.169 | -.068 |
| <i>p</i> | .199 | .153 | .161 | .152 | .570 |
| PANSS Cognitive | .161 | .059 | .028 | -.170 | .207 |
| <i>p</i> | .170 | .619 | .810 | .152 | .078 |
| PANSS Hostility | -.029 | -.048 | -.027 | .244 | -.131 |
| <i>p</i> | .808 | .685 | .816 | .038 | .269 |
| PANSS Depression | -.415 | -.195 | -.331 | -.250 | -.244 |
| <i>p</i> | <.001 | .096 | .004 | .033 | .037 |
| QoL Social function composite | .204 | .209 | .235 | .269 | -.114 |
| <i>p</i> | .082 | .075 | .043 | .022 | .38 |
| QoL Instrumental function | -.086 | -.01 | .041 | -.19 | -.017 |
| <i>p</i> | .465 | .933 | .729 | .107 | .885 |

Note: PP: Prolonged psychosis; PANSS: Positive and Negative Symptoms Scale, QoL: Quality of Life Scale

assessments of symptoms and social functioning, we found greater levels of depressive symptoms and poorer social functioning were related in general to lower levels of personal recovery, findings congruent with previous studies on prolonged psychosis (Van Eck et al., 2018; Yu et al., 2020).

While the cross-sectional nature of this study precludes drawing any causal conclusions, results pose several possibilities for future research. First, it may be that with the persistence of illness, personal recovery declines in psychosis. It is also possible that higher levels of personal recovery in the EP group reflect the possibility that many individuals in this group were actively recovering and if followed longitudinally would not develop prolonged schizophrenia. The link between depressive symptoms and social functioning in the prolonged group might suggest that future research may uncover links between specific forms of symptoms with personal recovery in EP. It is also possible that with prolonged psychosis persons experience both reductions in mood and personal recovery, or the more hopeless individuals feel, the less likely they are to experience personal recovery, which may also lead to increased social isolation (Buckley-Walker et al., 2010; Law et al., 2016).

There are limitations. Our assessments of symptoms were cross-sectional and differed in content between the two groups, thus a direct comparison of the relationship of personal recovery to these other domains cannot be offered with confidence. Samples were also modest and only included persons who accepted treatment, completed all the relevant baseline measures and were in a post-acute phase of illness. It is unknown whether similar results apply to individuals not engaged in treatment, an inpatient population, or people in acute phases of illness. Future longitudinal work is needed to explore the course of personal recovery over time in more diverse samples. We could also not control for relevant factors in both samples that may influence recovery outcomes, such as years of evolution of the disorder or antipsychotic dose. The role of medication in recovery should be unraveled in future studies, since even with demonstrated heterogeneity in course and outcome, prophylactic antipsychotic maintenance therapy remains the prominent practice, especially for prolonged stages of the disorder, and its effect on outcomes have shown conflicting results in previous studies (Goff et al., 2017; Harrow et al., 2021) This is particularly important for studies of subjective recovery, since up to 57% of patients prescribed antipsychotics report subjective negative

experiences of their side effects (Read & Sacia, 2020). We also had a limited array of assessments and future work is needed to assess both objective and subjective elements of recovery more broadly.

With replication there may be some clinical implications. For example, it may be that as individuals experience dysfunction over time, they may be more likely to feel demoralized and experience less personal recovery. It may be that individuals with EP are less connected to an illness identity and more in touch with aspects of their lives and identities that promote personal recovery, thus making symptomatology less of an issue. For instance, they could give more importance to relational aspects, such as feeling valued by significant others (Norman et al., 2013) and a sense of belonging (Bonnnett et al., 2018). By contrast, individuals with PP may be more demoralized on account of having experienced a mental illness for longer, which may intensify the impact of symptoms.

This suggests the importance of promoting hope and meaning-oriented and phase-specific treatment (Moritz et al., 2019; Windell et al., 2015; Vohs et al., 2018) in addition to promoting agency and social connection in the early treatment of psychosis (Bjornestad et al., 2017; Lysaker & Leonhardt, 2012) to hopefully stave off the potentially deleterious effects of becoming demoralized during the illness progression.

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