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Original article

Recovery assessment scale: Examining the factor structure of the German version (RAS-G) in people with schizophrenia spectrum disorders

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ABSTRACT

Background: The recovery framework has found its way into local and national mental health services and policies around the world, especially in English speaking countries. To promote this process, it is necessary to assess personal recovery validly and reliably. The Recovery Assessment Scale (RAS) is the most established measure in recovery research. The aim of the current study is to examine the factor structure of the German version of the RAS (RAS-G).
Methods: One hundred and fifty-six German-speaking clients with schizophrenia or schizoaffective disorder from a community mental health service completed the RAS-G plus measures of recovery attitudes, self-stigma, psychotic symptoms, depression, and functioning. A confirmatory factor analysis of the original 24-item RAS version was conducted to examine its factor structure, followed by reliability and validity testing of the extracted factors.
Results: The CFA yielded five factors capturing 14 items which showed a substantial overlap with the original subscales Personal Confidence and Hope, Goal and Success Orientation, Willingness to Ask for Help, Reliance on Others, and No Domination by Symptoms. The factors demonstrated mean to excellent reliability (0.59–0.89) and satisfactory criterial validity by positive correlations with measures of recovery attitudes and functioning, and negative correlations with measures of self-stigma, and psychotic and depressive symptoms.
Conclusions: The study results are discussed in the light of other studies examining the factor structure of the RAS. Overall, they support the use of the RAS-G as a means to promote recovery oriented services, policies, and research in German-speaking countries.

1. Introduction

Traditionally, schizophrenia has been regarded as a disorder with an inevitably deteriorating course. This pessimistic view has been challenged by both, longitudinal studies which showed that heterogeneity of outcome rather than complete disability and long-term hospitalization is the signature feature of the disorder [1–5], and personal accounts of individuals with experience of severe mental disorders and mental health services who pointed out that recovery is indeed possible despite the presence of psychiatric symptoms [6–8]. This has led to a controversial debate about the nature of recovery from serious mental disorders. From a clinical point of view, recovery was defined as sustained symptom remission, functional rehabilitation (e.g. cognitive, social, and vocational) and reduced use of medical health services [9]. From consumers' perspective, recovery refers to the personal process of adaptation and development through which the individual overcomes the negative personal and social consequences of mental disorder and regains a self-determined and meaningful life [10]. It includes accepting mental illness, finding hope for the

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future, re-establishing a positive identity, developing meaning in life, taking control of one's life through individual responsibility, spirituality, empowerment, overcoming stigma, and having supportive relationships [11–13]. The consumers' perspective of recovery has begun to modify mental health services [14,15] and policy makers, especially in English speaking countries [16].

In order to promote recovery science and develop and evaluate recovery-oriented interventions and mental health systems, it is necessary to be equipped with a valid and reliable assessment tool [17]. Several measures of personal recovery have been developed during the last years and summarized in narrative reviews [10,18–20]. Although most authors stated that no gold-standard measure of recovery has yet been developed, the Recovery Assessment Scale (RAS) by Corrigan et al. [21] has been favored by researchers' [18,20] and consumers' reviews [10]. The scale was developed by mental health consumers in the mid-1990s from content analyses of narratives of four recovery stories and the feedback of an independent group of 12 consumers. The final version captures 41 items, but only 24 items find entrance into the five subscales identified by factor analysis based on data from more than 1800 respondents with serious mental illnesses: Personal Confidence and Hope (PCH), Willingness to Ask for Help (WAH), Goal and Success Orientation (GSO), Reliance on Others (RO), and No Domination by Symptoms (NDS) [22]. Recently, Salzer and Brusilovskiy [23] presented a review of the quantitative properties of the RAS including 77 studies from 11 countries. They discovered diverse versions of the RAS, including different item numbers (20, 22, 24, 41, 42, 50) and response scales (Likert scale 0–4 or 1–5). They concluded that the RAS-20 and RAS-24 versions have acceptable psychometric properties. In sum, the empirical data suggests that the RAS can be recommended for future clinical assessments, evaluations, and research of personal recovery from serious mental disorders.

The translation of the RAS enables its use for international and cross-cultural comparisons of recovery from severe mental disorders and of innovative mental health systems, policy, and research. In the German speaking parts of Europe (i.e. Germany, Austria, and Switzerland), the recovery movement is still at its beginning and a German version of the RAS may foster this process. Within a larger investigation on service engagement with community mental health services in clients with schizophrenia spectrum disorders, we translated the original English version of the RAS [21] into German. The aim of the current study was to examine the factor structure, reliability, and validity of the German RAS version (RAS-G). We hypothesized that the RAS-G showed the same five factor structure as the original English RAS version [22]. In addition, in line with recent research on construct validity of the RAS [23], we expected the RAS-G factors to correlate positively with measures of recovery attitude and functioning (convergent validity), and negatively with measures of psychopathological symptoms, and self-stigma (discriminant validity).

2. Methods

2.1. Participants and procedure

Between February 2009 and March 2010, consumers of community mental health services in the region of Basel, Switzerland, between 18 years and 65 years of age and diagnosed with schizophrenia or schizoaffective disorder were recruited. Diagnoses were confirmed by the Structured clinical interview for Diagnostic and Statistical Manual of Mental Disorders – IV xis I Disorders [24]. Exclusion criteria were a primary diagnosis of alcohol or substance dependency, an organic syndrome or learning disability, inadequate command of German, and homelessness. After a full explanation of the study aims and procedures, participants provided written informed consent. The assessment consisted of an interview and questionnaires for participants and questionnaires for their therapists, administered at baseline (t_1) and at 12-month follow-up (t_2). Participants received a financial compensation of 40 CHF (Swiss Francs) for the baseline and of 60 CHF for the follow-up assessment. The study was approved by the local ethics committee.

2.2. Measures

The 41-item original version of the RAS [22] was used in the present study. The items were rated on a 5-point Likert scale, ranging from 1 (“strongly disagree”) to 5 (“strongly agree”). As described by the authors of the scale [22], subscale scores, totalling 24 items, were reached by summing up single items, with higher scores indicating higher agreement.

The Recovery Attitudes Questionnaire (RAQ-7; [25]) was developed to compare opinions about recovery in different respondent groups, e.g. clients, professionals, relatives, and the general population. It consists of seven items, each rated on a 5-point Likert scale (“1 = totally disagree” to “5 = totally agree”). A factor analysis revealed two subscales, “recovery is possible and needs faith” and “recovery is difficult and differs among people”, with higher scores indicating higher agreement. Internal consistency proved to be satisfactory for the total scale with Cronbach's alpha coefficients of 0.70 and moderate (0.64 and 0.66) for the subscales [25].

Internalized stigma was assessed by the Self-Stigma of Mental Illness Scale (SSMIS; [26]). This self-report measure consists of four subscales (Stereotype Awareness, Stereotype Agreement, Self-Concurrence and Self-Esteem), each containing 10 items which are rated on a 9-point Likert scale (“1 = strongly disagree” to “9 = strongly agree”). A higher sum score means a higher level of self-stigma. The subscales showed sufficient to very good internal reliability with Cronbach's alpha coefficients between 0.72 and 0.91 [26].

The Calgary Depression Scale for Schizophrenia [CDSS; [27]] is a semi-structured interview to evaluate depressive symptoms independently of negative symptoms in schizophrenia. It comprises eight questions and one interviewer observation, which are all rated on a 4-point Likert scale (0 = “absent” to 3 = “severe”). A higher total sum score indicates a higher level of depression. Reliability of the German version was demonstrated with an intra-class-correlation (ICC) of 0.70 [27].

The Beck Depression Inventory-revised [BDI-II; [28]] is a questionnaire to assess the severity of depressive symptoms in persons with and without a clinical diagnosis of depression. It comprises 21 items, each with four statements indicating increasing severity (4-point Likert scale from 0 to 3). A higher total sum score indicates a more severe depression. The German version of the BDI-II was reliable in clinical and nonclinical samples with Cronbach's alpha coefficients of > 84 [28].

Psychotic symptoms were assessed by the Positive and negative syndrome scale [PANSS; [52]]. This semi-structured interview consists of 30 items based on a 7-point Likert scale (“1 = absent”, “7 = extreme”). By summing up single items, the three subscales Positive Syndrome (7 items), Negative Syndrome (7 items), and General Psychopathology (16 items) are formed, with higher scores indicating more psychopathology. The measure was shown to be reliable with Cronbach's alpha coefficients of 0.73, 0.83, and 0.79.

Role functioning was assessed by the Modified Global Assessment of Functioning [M-GAF; [53]] scale; a global observer measure of psychological, social, and occupational functioning, covering the range from positive mental health to severe