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PERSONAL RECOVERY MEASUREMENT INSTRUMENTS FOR PEOPLE WITH SCHIZOPHRENIA SPECTRUM DISORDER: A SCOPING REVIEW

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ABSTRACT
Personal recovery is an important dimension in the recovery of individuals with schizophrenia that cannot be fully captured through the measurement of clinical symptoms. Various instruments have been used, but their characteristics, domains, measurement properties, and contexts of use vary. This study aimed to map instruments for measuring personal recovery in individuals with schizophrenia and schizophrenia spectrum disorders, including domains, psychometric evidence, intended use, service context, and cultural adaptation. We conducted a scoping review in accordance with PRISMA-ScR. We searched PubMed, Scopus, and EBSCOhost for English-language publications from 2016 to 2026. Primary studies involving adults with schizophrenia or schizophrenia spectrum disorders that evaluated personal recovery instruments were included. Data were analyzed through descriptive mapping and narrative synthesis. Of the 261 records, 8 studies met the inclusion criteria and identified 8 instruments: SubRAS, RAS-DS, RAS, QPR/QPR-15-SP, MHRM, NEL, I.ROC, and RAS-G. Measurement properties vary across instruments. The MHRM demonstrates more balanced coverage of the CHIME dimensions than the RAS and NEL; the QPR focuses on the recovery experience; and the I.ROC is used for routine outcome assessment.ROC is used for routine outcome assessment.ROC is used for routine outcome assessment.ROC is used for routine outcome assessment.ROC is used for routine outcome assessment. The I.ROC is used for routine outcome assessment. No single instrument is universally the most appropriate. Instrument selection should consider the purpose of measurement, the domains of personal recovery, population characteristics, psychometric evidence, the service context, and cultural appropriateness.

Keywords: measuring instruments; personal recovery; schizophrenia; schizophrenia spectrum disorders; scoping review

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INTRODUCTION

Schizophrenia and schizophrenia spectrum disorders are severe mental disorders that can have a far-reaching impact on various aspects of an individual's life, including social functioning, interpersonal relationships, independence, and the ability to perform daily activities and fulfill daily roles (Best et al., 2020; Roosenschoon et al., 2019). In the evolution

of mental health care, recovery from schizophrenia is no longer understood solely as a reduction or remission of symptoms, but as a process that encompasses the dimensions of clinical recovery, functional recovery, and personal recovery (Best et al., 2020; Dubreucq et al., 2021; Van Eck et al., 2018). Clinical recovery emphasizes the improvement or remission of clinical symptoms. In contrast, functional recovery relates to an individual's ability to perform daily living functions, including household activities, self-care, work, and interpersonal relationships (Best et al., 2020). Meanwhile, personal recovery focuses on the individual's subjective process of building hope, identity, life meaning, empowerment, and a meaningful life—which does not always require the absence of symptoms or the attainment of optimal social functioning (Best et al., 2020; Leendertse et al., 2021; Van Eck et al., 2018). This distinction is important because the relationship between clinical symptoms and personal recovery is only weak to moderate, whereas symptomatic, functional, and personal recovery exhibit different patterns of association; therefore, all three should be considered as distinct dimensions of recovery (Best et al., 2020; Dubreucq et al., 2021; Van Eck et al., 2018).

The concept of personal recovery is becoming increasingly important in mental health care because it places the individual's subjective experience at the center of recovery and views it as highly individualized and multidimensional (Leendertse et al., 2021; Panadevo et al., 2024). This approach aligns with the principles of recovery-oriented care, which views individuals not merely as service recipients, but as individuals with goals, values, strengths, and hopes in their lives (Leamy et al., 2023; Thongsalab, 2023). In individuals with schizophrenia spectrum disorders, the relationship between clinical symptoms and personal recovery is reported to be only mild to moderate; therefore, measures focused solely on symptoms cannot fully capture the recovery process (Dubreucq et al., 2021; Van Eck et al., 2018). Personal recovery is also associated with various psychosocial and CHIME aspects—particularly hope, life meaning, empowerment, connectedness, and identity—as well as with social factors such as support, employment, and functioning (Leendertse et al., 2021). In mental health nursing, the recovery-oriented approach places nurses in a critical role in supporting an individual-centered recovery process, including fostering hope and meaning, supporting functional recovery and community reintegration, and providing care that takes into account the individual's characteristics and context (Thongsalab, 2023). Therefore, measuring personal recovery can complement clinical assessments by capturing the patient's perspective on their recovery experience and process, thereby supporting individualized care planning and the evaluation of recovery-oriented service outcomes (Felix et al., 2024; Thongsalab, 2023). Consequently, a valid and reliable instrument is needed to measure personal recovery in individuals with schizophrenia spectrum disorders accurately (Felix et al., 2024).

Various instruments have been developed to measure personal recovery, including the Recovery Assessment Scale (RAS), the Questionnaire about the Process of Recovery (QPR), the Mental Health Recovery Measure (MHRM), the Stages of Recovery Instrument (STORI), the Recovery Assessment Scale –Domains and Stages (RAS-DS), and the Individual Recovery Outcomes Counter (I.ROC), including various cross-culturally adapted versions (Felix et al., 2024). Among the available instruments, the Recovery Assessment Scale (RAS) is widely used to measure personal recovery and has demonstrated robust psychometric properties; however, evidence regarding its sensitivity to change remains limited (Pelgrim et al., 2026). Although various instruments are available, the psychometric evidence supporting them still varies across measurement properties. Further evidence indicates that this heterogeneity persists. Vogel et al. (2020) compared the RAS, MHRM, and NEL based on CHIME-based content validity, convergent validity, internal consistency, floor and ceiling effects, item interpretability, and ease of administration; MHRM showed the best overall results, but the differences between instruments were relatively small, and cultural and linguistic factors limit generalizability (Vogel et al., 2020). A more recent systematic review indicates that, of 91 studies evaluating 25 PROMs, evidence on most measurement

properties remains low quality. In contrast, evidence on cross-cultural validity, measurement invariance, measurement error, and criterion validity is very limited (Felix et al., 2024). Thus, evidence on measures of personal recovery indicates extensive instrument development, yet constructs, domains, and the strength of psychometric evidence vary across instruments.

Although previous research and reviews have provided an important foundation for understanding and measuring personal recovery, the available evidence varies in focus and scope. Various studies have examined the psychometric characteristics of individual personal recovery instruments among people with schizophrenia spectrum disorders, including the validation of the Individual Recovery Outcomes Counter (I.ROC) (Sportel et al., 2023). Other comparative studies have examined differences in the extent to which personal recovery instruments represent the CHIME domains and their measurement characteristics (Vogel et al., 2020). Recently, Felix et al. (2024) presented a systematic synthesis of the measurement properties of self-report instruments for personal recovery in populations with serious mental disorders, encompassing 25 PROMs from 91 studies. Overall, these studies provide evidence regarding the validation of individual instruments, differences in domain coverage and measurement characteristics, and the overall quality of the available evidence on measurement properties.

The available evidence regarding instruments for measuring personal recovery in individuals with schizophrenia and schizophrenia spectrum disorders has not yet been comprehensively mapped by linking instrument characteristics, domains measured, psychometric evidence, population characteristics, purposes and contexts of use, and cultural adaptation. This gap is significant because personal recovery is a multidimensional process that social and cultural contexts can influence, whereas instrument selection must take into account the purpose of measurement, user characteristics, and the service context (Felix et al., 2024; Panadevo et al., 2024; Ramesh et al., 2024). Therefore, a scoping review was chosen to map the scope and characteristics of the heterogeneous evidence in this field. The novelty of this review lies in providing an integrated evidence map that links the characteristics of personal recovery measurement instruments, the domains measured, psychometric evidence, population characteristics, purposes and contexts of use, and cultural adaptations for individuals with schizophrenia and schizophrenia spectrum disorders. Thus, this scoping review aims to map personal recovery measurement instruments used for individuals with schizophrenia and schizophrenia spectrum disorders, including the domains measured, psychometric evidence, population characteristics, purposes and contexts of use, and cultural adaptations.

METHODS

Study Design

This review employed a scoping review design and was reported in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses Extension for Scoping Reviews (PRISMA-ScR) (Tricco et al., 2018). The scoping review design was chosen because evidence on instruments for measuring personal recovery in people with schizophrenia spectrum disorders remains diverse in instrument type, purpose of use, study design, population characteristics, mental health service context, and reported psychometric properties.

Protocols and Registration

This scoping review protocol was not prospectively registered or published in any protocol registry or repository before the review. The review followed the objectives, eligibility criteria, and search strategy established by the researchers before screening and data extraction.

PCC Framework

Table 1: Population, concept, context (PCC) Framework

Component	Determinants
Population	Adults with schizophrenia and schizophrenia spectrum disorders
Concept	Validated, adapted, compared, or used instruments for measuring personal recovery during the 2016–2026 period, including the domains measured and psychometric properties
Context	Mental health/psychiatric services: inpatient, outpatient, community-based, and other relevant service or research settings; without restrictions based on country or health system

Search Strategy

The literature search was conducted in July 2026 using PubMed, Scopus, and EBSCOhost. On EBSCOhost, the search was conducted in Academic Search Premier, Library, Information Science & Technology Abstracts (LISTA), and the eBook Collection. The search strategy was developed based on three main concepts: population, personal recovery, and measurement instruments. Each concept utilized free-text terms and relevant synonyms. Synonyms within each concept were combined using the Boolean operator OR, while the three concepts were combined using the AND operator.

Searches of the three databases used free-text terms, with syntax tailored to each database's characteristics. The search was limited to English-language publications released between 2016 and 2026. This time frame focused the review on relatively recent empirical evidence on the validation, adaptation, comparison, and use of personal recovery instruments, including developments in psychometric properties and their application across various cultural and service contexts. We checked the availability of full-text articles during the eligibility assessment phase and did not use it as an initial search filter. The complete search strings used in each database, including database-specific syntax, search terms, and Boolean operators, are presented in Table 2.

Table 2. Exact Search Strings Used for Each Database

Database	Exact Search String
PubMed	("schizophrenia"[Title/Abstract] OR "schizophrenia spectrum disorder"[Title/Abstract] OR "schizophrenia spectrum disorders"[Title/Abstract] OR "schizoaffective"[Title/Abstract] OR "schizoaffective disorder"[Title/Abstract]) AND ("personal recovery"[Title/Abstract] OR "subjective recovery"[Title/Abstract] OR "recovery process"[Title/Abstract] OR "mental health recovery"[Title/Abstract]) AND ("instrument"[Title/Abstract] OR "measure"[Title/Abstract] OR "scale"[Title/Abstract] OR "questionnaire"[Title/Abstract] OR "assessment tool"[Title/Abstract] OR "patient-reported outcome measure"[Title/Abstract] OR "PROM"[Title/Abstract] OR "psychometric"[Title/Abstract] OR "validity"[Title/Abstract] OR "reliability"[Title/Abstract])
Scopus	TITLE-ABS-KEY("schizophrenia" OR "schizophrenia spectrum disorder" OR "schizophrenia spectrum disorders" OR "schizoaffective" OR "schizoaffective disorder") AND TITLE-ABS-KEY("personal recovery" OR "subjective recovery" OR "recovery process" OR "mental health recovery") AND TITLE-ABS-KEY("instrument" OR "measure" OR "scale" OR "questionnaire" OR "assessment tool" OR "patient-reported outcome measure" OR "PROM" OR "psychometric" OR "validity" OR "reliability")
EBSCOhost	TX("schizophrenia" OR "schizophrenia spectrum disorder" OR "schizophrenia spectrum disorders" OR "schizoaffective" OR "schizoaffective disorder") AND TX("personal recovery" OR "subjective recovery" OR "recovery process" OR "mental health recovery") AND TX("instrument" OR "measure" OR "scale" OR "questionnaire" OR "assessment tool" OR "patient-reported outcome measure" OR "PROM" OR "psychometric" OR "validity" OR "reliability")

Inclusion and Exclusion Criteria

Studies that meet the inclusion criteria are primary studies involving adults with schizophrenia or schizophrenia spectrum disorders that evaluate a validated, adapted, compared, or used personal recovery measurement instrument in this population during the period 2016–2026. Studies using quantitative, qualitative, or mixed-methods designs may be considered if they provide relevant information regarding the instrument or its use in measuring personal recovery. Included articles must be written in English and published between 2016 and 2026. Studies from various countries and service or research settings may be included to map contextual variations and cultural adaptations of the instruments.

Studies were excluded if they did not involve individuals with schizophrenia or schizophrenia spectrum disorders; did not measure or discuss personal recovery instruments as constructs relevant to the review's objectives; measured only clinical recovery, psychotic symptoms, social functioning, quality of life, self-efficacy, or empowerment without using or evaluating measures of personal recovery; only discuss recovery-oriented services or recovery interventions without evaluating personal recovery measurement instruments; or are non-primary articles, such as systematic reviews, scoping reviews, narrative reviews, editorials, commentaries, letters to the editor, protocols, conference abstracts without complete research data, or other publications that do not present relevant primary data.

Study Selection and Screening

The first author conducted the study selection and screening process in stages, beginning with screening titles and abstracts and continuing with evaluation of full texts against predetermined inclusion and exclusion criteria. Multiple reviewers did not perform screening independently; the first author carried out the entire screening process. All decisions regarding study eligibility were documented throughout the selection process. The other two authors, who are the principal investigator's supervisors, reviewed the selection decisions, particularly for studies that were unclear or required further consideration. If the authors disagreed on a study's eligibility, they discussed the decision together until they reached consensus.

Data Extraction

The first author performed data extraction manually using a standardized data extraction form developed from the scoping review's objectives and the integrated evidence map framework. The extracted data included authors, year of publication, country, research objectives, study design, sample characteristics and size, population characteristics, and the study setting or context. For each personal recovery instrument, we extracted the instrument name, purpose of use, number of items, domains or constructs of personal recovery measured, administration method, and target population. When available, we also extracted information on psychometric properties, including validity, reliability, factor structure, internal consistency, test–retest reliability, convergent validity, discriminant validity, criterion validity, measurement error, measurement invariance, and cross-cultural validity. In addition, the study recorded data on the process of linguistic or cultural adaptation, the country or culture in which the instrument was used, and the service or research context to identify variations in its use across contexts. The study also extracted key findings on the instrument's characteristics and use. Two other authors, who served as supervisors to the lead researcher, reviewed the extracted results, particularly when information was unclear or required further interpretation. All extracted data were then organized into tables to support the systematic mapping of instrument types, domains of personal recovery, psychometric evidence, population characteristics, purposes of use, service contexts, and cultural adaptations.

Quality Appraisal

This scoping review did not include a methodological quality assessment or critical appraisal. This decision was based on the review's primary objective: to map the breadth,

characteristics, and distribution of evidence on personal recovery measurement instruments, rather than to assess risk of bias, determine overall study quality, or produce pooled estimates for a specific measurement property. Furthermore, the mapped evidence encompasses various types of studies, instruments, populations, contexts of use, and types of psychometric evidence; thus, the review focuses on identifying and mapping the characteristics of widely available evidence. Omitting a critical appraisal is acceptable in a scoping review when it aligns with mapping the evidence.

Data Analysis and Mapping

Data analysis used descriptive mapping and narrative synthesis. All articles that met the inclusion criteria were read in full, and the extracted data were grouped by the characteristics of the personal recovery measurement instruments, the domains measured, population characteristics, the purpose of using the instruments, the service context or setting, research design, and the reported psychometric evidence. Personal recovery instruments were then mapped by instrument name, number of items, measurement format, assessed domains, administration method, intended use, and target population characteristics.

Psychometric evidence is mapped based on the measurement properties reported in the studies, including validity, reliability, factor structure, internal consistency, test–retest reliability, convergent validity, discriminant validity, criterion validity, measurement error, measurement invariance, and cross-cultural validity, when available. In addition, the mapping includes validation, linguistic or cultural adaptation, comparisons, and instrument use, including the country or cultural context in which the instruments are used. Variations in instrument use across mental health care settings or research contexts are also mapped to assess the instruments' suitability for their intended contexts.

The mapping results were then synthesized narratively to describe the scope and distribution of the evidence, instrument characteristics, the domains of personal recovery measured, the strengths and limitations of the psychometric evidence, population characteristics, the purpose and context of use, and variations in cultural adaptation. This synthesis was also used to identify gaps in the evidence and areas that still require further research regarding the measurement of personal recovery in individuals with schizophrenia and schizophrenia spectrum disorders.

RESULTS

The scoping review results are presented through descriptive mapping and narrative synthesis. The mapping focuses on study characteristics, types of personal recovery measurement instruments, psychometric properties, and key findings in people with schizophrenia or schizophrenia spectrum disorders. The results present the study selection, article characteristics, and mapping of personal recovery instruments.

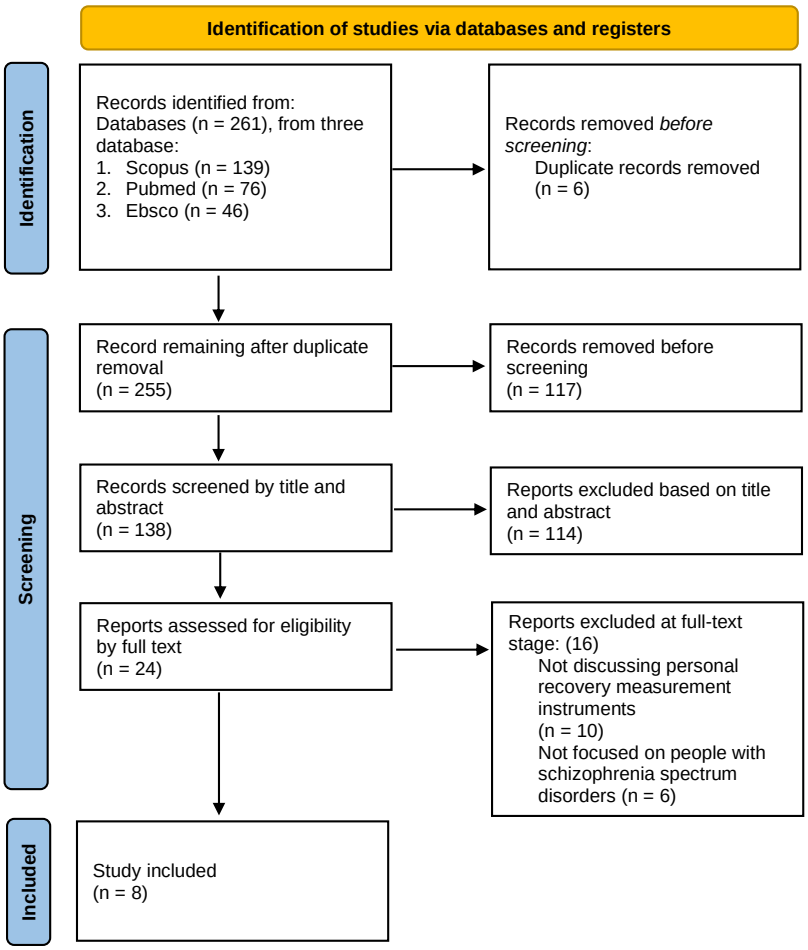


Figure. 1 PRISMA flow diagram

STUDY SELECTION

The literature search yielded 261 records from three electronic databases: Scopus, PubMed, and EBSCOhost. After removing 6 duplicate records, 255 records remained. Before title and abstract screening, 117 records were excluded based on the initial eligibility criteria, including publication language and publication period, leaving 138 records for title and abstract screening. Following title and abstract screening, 114 reports were excluded because they did not address the review's focus. The remaining 24 reports were assessed for eligibility through full-text review. Sixteen reports were subsequently excluded because they did not discuss personal recovery measurement instruments (n = 10) or did not focus on people with schizophrenia or schizophrenia spectrum disorders (n = 6). Finally, 8 studies met the inclusion criteria and were included in this scoping review. The study selection process is presented in the PRISMA-ScR flow diagram (Figure 1).

CHARACTERISTICS OF THE STUDIES INCLUDED

A total of 8 included studies examined instruments for measuring personal recovery in people with schizophrenia or schizophrenia spectrum disorders. These studies were conducted in Turkey, Russia, Italy, Spain, Thailand, the Netherlands, and Switzerland. Sample sizes ranged from 52 to 326 participants. The research designs used included psychometric validation studies, multicenter psychometric validation studies, comparative psychometric evaluations, and cross-sectional studies. The identified personal recovery instruments included the Subjective Recovery Assessment Scale (SubRAS), the Recovery Assessment Scale –Domains and Stages (RAS-DS), Recovery Assessment Scale (RAS), Questionnaire about the Process of Recovery (QPR/QPR-15-SP), Mental Health Recovery

Measure (MHRM), Netherlands Empowerment List (NEL), Individual Recovery Outcomes Counter (I.ROC), and Recovery Assessment Scale–German version (RAS-G). Table 3 summarizes data from each study.

Table 1. Summary analysis of selected articles

Author, Year	Country	Objective	Design	Sample	Measurement	Main Findings
(Yildiz et al., 2018) https://doi.org/10.1080/24750573.2017.1405579	Turkey	Developing and validating the Subjective Recovery Assessment Scale (SubRAS) to assess subjective recovery in patients with schizophrenia	Psychometric study	127 patients	Subjective Recovery Assessment Scale (SubRAS), 17-item, self-report. Assessed using PANSS, CGI-S, GAF, and QLS.	The SubRAS scale was valid and reliable. Cronbach's alpha was very high at 0.987, the test–retest correlation was r = 0.981, and the one-factor structure explained 83.04% of the variance. SubRAS scores were positively correlated with GAF and QLS scores and negatively correlated with PANSS and CGI-S scores.
(Chinarev et al., 2026) https://doi.org/10.18413/2658-6533-2026-12-1-1-0	Rusia	Adapting and validating the Russian version of the Recovery Assessment Scale–Domains and Stages (RAS-DS) to assess recovery following a first psychotic episode.	Psychometric validation study	129 patients	RAS-DS was validated using PANSS, PSP, SFS, BHS, and GAF.	The Russian version of the RAS-DS is both valid and reliable. Cronbach's alpha for the total scale and domains was >0.90, and CFA results indicated a good model fit (RMSEA = 0.0474, CFI = 0.969, TLI = 0.945). The RAS-DS correlated positively with the GAF, SFS, and PSP and negatively with the PANSS and BHS.
(Boggian et al., 2020) https://doi.org/10.3389/fpsyt.2019.01000	Italy	Validating the Italian version of the Recovery Assessment Scale (RAS) to assess recovery in patients with psychosis.	Multicenter psychometric validation study	219 patients	Recovery Assessment Scale (RAS), 41 items, self-report; compared with the Rosenberg Self-Esteem Scale, the Empowerment Scale,	The Italian version of the RAS has good psychometric properties. Overall reliability was very good, with a Cronbach's alpha of 0.93, and the subscales ranged from

Author, Year	Country	Objective	Design	Sample	Measurement	Main Findings
					MANSA, HoNOS, and the UCLA recovery criteria.	acceptable to good. The RAS can distinguish between patients "in recovery" and those "not in recovery"; the optimal cutoff is 158, with a sensitivity of 78.5% and specificity of 61.2%.
(Goodman-Casanova et al., 2023) https://doi.org/10.3389/fpsyg.2023.1178341	Spain	Testing the psychometric properties of the 15-item Spanish version of the Questionnaire about the Process of Recovery (QPR-15-SP).	Multicenter psychometric validation study	104 pasien	QPR-15-SP, 15 items, self-report; divalidasi dengan CORE-OM, VNRS, STORI, dan DUKE-UNC.	The QPR-15-SP had very good internal reliability, with a Cronbach's alpha of 0.92 and McDonald's omega of 0.93. Convergent validity was fairly good for the CORE-OM, VNRS, and STORI. The CFA indicates that the one-factor model is reasonably acceptable, although the RMSEA remains high.
(Thongyu et al., 2025) https://doi.org/10.60099/prijnr.2025.273106	Thailand	Testing a causal model of the factors influencing personal recovery in people with schizophrenia.	Cross-sectional study	315 patients	Questionnaire on the Process of Recovery (QPR) to measure personal recovery. The other instruments included the RSES, HADS, BCIS, CSES, MSPSS, and PSP.	The QPR is used to measure personal recovery in patients with schizophrenia. Personal recovery was moderate. The final model explained 50% of the variance in personal recovery, with self-esteem as the strongest factor, whereas negative emotions reduced the explained variance.
(Vogel et al., 2020) https://doi.org/10.1111/inm.12711	Netherlands	A Comparison of Three CHIME-Based Personal	Comparative psychometric evaluation	52 patients	RAS, MHRM, and NEL.	The MHRM had the best overall results because it provided the most balanced coverage of the

Author, Year	Country	Objective	Design	Sample	Measurement	Main Findings
		Recovery Instruments in Patients with Psychotic Disorders: RAS, MHRM, and NEL.				CHIME domains. MHRM and NEL showed moderate convergent validity for social support. None of the instruments exhibited floor or ceiling effects; however, the differences between the instruments were small.
(Sportel et al., 2023) https://doi.org/10.1186/s12888-023-04763-3	Netherlands	Validating the Individual Recovery Outcomes Counter (I.ROC) in participants with schizophrenia spectrum disorder.	Psychometric validation dalam routine outcome assessment	326 participants	I. ROC, 12 items; compared with the PANSS, HoNOS, FR tool, MANSA, and RAS.	The I.ROC is valid and reliable. It has good internal consistency (α = 0.88) and good test–retest reliability (r = 0.85), and it correlates negatively with the PANSS and HoNOS and positively with the MANSA and RAS. I. ROC scores increased significantly over time, but the changes were small.
(Cavelti et al., 2017) https://doi.org/10.1016/j.eurpsy.2016.10.006	Switzerland	Testing the factor structure, reliability, and validity of the German version of the Recovery Assessment Scale (RAS-G) in people with schizophrenia spectrum disorders.	Psychometric validation study	156 clients	Recovery Assessment Scale–German version (RAS-G). Instrumenpembanding meliputi Recovery Attitudes Questionnaire/ RAQ-7, Self-Stigma of Mental Illness Scale/SSMIS, Calgary Depression Scale for Schizophrenia/ CDSS, Beck Depression Inventory-II/BDI-II, Positive and Negative	The original 24-item RAS model did not demonstrate adequate fit. After modification, a 14-item RAS-G version was obtained with five factors: Personal Confidence and Hope, Goal and Success Orientation, Willingness to Ask for Help, Reliance on Others, and No Domination by Symptoms. The 14-item model showed a good fit at baseline, with CFI = 0.95, TLI = 0.94, and RMSEA

Author, Year	Country	Objective	Design	Sample	Measurement	Main Findings
					Syndrome Scale/PANSS, dan Modified Global Assessment of Functioning/M-GAF.	= 0.059. The factor reliability ranged from moderate to very good, with values of approximately 0.59–0.89. Criterion validity was supported by positive correlations with recovery attitudes and functioning, as well as negative correlations with self-stigma, psychotic symptoms, and depressive symptoms.

Analytical Findings Results

The results of the scoping review of these 8 articles can be categorized into four main categories:

1. Various Personal Recovery Tools.
   The analyzed articles identified several instruments, namely SubRAS, RAS-DS, RAS, QPR/QPR-15-SP, MHRM, NEL, I.ROC, and RAS-G. These instruments were examined for cross-cultural adaptation, psychometric validation, instrument comparison, and use as measures of personal recovery in clinical or research settings.
2. Psychometric Properties of the Instruments
   Psychometric findings varied across instruments and measurement properties. The SubRAS demonstrated high internal consistency; the RAS-DS showed a good-fitting CFA model and high internal consistency; the QPR-15-SP demonstrated high internal consistency; the I.ROC demonstrated good internal consistency and test–retest reliability; and the RAS-G demonstrated a five-factor structure in its 14-item version with evidence of validity.
3. Measured Personal Recovery Domain
   The identified instruments measured multiple domains of personal recovery, including hope, self-confidence, life purpose, meaning in life, empowerment, the ability to ask for help, social support, and reduced symptom dominance in daily life. Among studies applying the CHIME framework, the MHRM covered the CHIME domains more comprehensively than the RAS and NEL.
4. Applications in Mental Health Services
   The included studies reported using personal recovery instruments across research and mental health service contexts. The I.ROC was reported as an instrument for assessing recovery outcomes in routine mental health care. In contrast, the QPR was used to examine personal recovery and its associations with factors such as self-esteem, negative emotions, cognitive insight, coping self-efficacy, and social support

DISCUSSION

The main findings of this review indicate that measuring personal recovery in individuals with schizophrenia and schizophrenia spectrum disorders remains heterogeneous in the types of instruments, the domains measured, the properties of the measurements, the purposes of

use, and the contexts of application. The eight identified instruments indicate that personal recovery is not yet represented by a single, uniform operational construct but rather through various measurement approaches that emphasize different aspects of the recovery experience. These findings align with the systematic review by Felix et al. (2024), which indicates that self-report instruments for measuring personal recovery in individuals with serious mental disorders vary in scope and the strength of evidence regarding their measurement properties. In line with the latest evidence, recent research has focused on validating and psychometrically adapting individual personal recovery instruments within specific population and cultural contexts, including cross-cultural adaptations of the Questionnaire about the Process of Recovery (QPR) (Elhilali et al., 2023; Munuera et al., 2024). While these studies provide evidence regarding the performance and application of individual instruments, Felix et al. (2024) systematically evaluated the measurement properties of self-report instruments in populations with serious mental disorders; this review has a different focus, specifically mapping instruments for measuring personal recovery in individuals with schizophrenia and schizophrenia spectrum disorders. This mapping integrates instrument characteristics, measured domains, psychometric evidence, population characteristics, purposes and contexts of use, and cultural adaptations.

The diversity of the identified instruments indicates that no single instrument is optimal for all purposes of measuring personal recovery. Differences in the number of items, factor structure, domains, and intended uses suggest that the available instruments capture different aspects of the recovery experience. This finding is consistent with recent psychometric evidence showing that the strength of measurement properties varies across instruments and across measurement aspects (Felix et al., 2024). Therefore, an instrument's popularity cannot be the sole basis for its selection, as an instrument's suitability depends on the alignment between the instrument's characteristics, the domain of personal recovery to be measured, and the available psychometric evidence.

Variations are also evident in the domains of personal recovery these instruments measure. Some instruments emphasize subjective experiences and individual recovery processes, such as the SubRAS, which was developed to measure subjective recovery in patients with schizophrenia, and the QPR, which is used to assess personal recovery as an individual's experience of recovery (Thongyu et al., 2025; Yildiz et al., 2018). In contrast, the RAS-G covers more specific domains, namely personal confidence and hope, goal and success orientation, willingness to ask for help, reliance on others, and freedom from symptom domination (Cavelti et al., 2017). Furthermore, a comparison of the RAS, MHRM, and NEL reveals differences in the scope of personal recovery domains, with the MHRM exhibiting the most balanced distribution of CHIME domains (Vogel et al., 2020). These differences indicate that the available instruments do not fully operationalize personal recovery through the same domains. Therefore, instrument selection must consider the alignment between the domains covered by the instrument and the aspects of personal recovery to be assessed.

Population characteristics also emerged as an important aspect of this review. Although all studies focused on individuals with schizophrenia, psychosis, a first psychotic episode, or schizophrenia spectrum disorders, there was variation in the population groups on which the instrument evaluations were based. Some instruments were specifically developed, validated, or used in patients with schizophrenia, such as the SubRAS and QPR. In contrast, others were evaluated in broader populations, including patients with psychotic disorders or individuals with schizophrenia spectrum disorders (Boggian et al., 2020; Cavelti et al., 2017; Sportel et al., 2023; Thongyu et al., 2025; Vogel et al., 2020; Yildiz et al., 2018). In addition, the Russian version of the RAS-DS was evaluated in the context of recovery following a first psychotic episode, indicating that the stage or clinical characteristics of the population can also shape the context for using the instrument (Chinarev et al., 2026). This population variation indicates that psychometric evidence and instrument use do not stem from a single, completely homogeneous clinical group. Therefore, population characteristics must be

considered when interpreting measurement results and selecting instruments, particularly when validity evidence for an instrument is derived from specific diagnostic groups or clinical characteristics.

These differences have practical implications for using these instruments in various assessment situations. The available instruments differ not only in their psychometric characteristics but also in the scope and aspects of personal recovery they measure. Recent research continues to evaluate the validity and applicability of personal recovery instruments across different populations and cultural contexts. For example, the QPR has undergone psychometric evaluation in German and French versions, highlighting the importance of assessing an instrument's validity when applied in different linguistic and cultural contexts (Elhilali et al., 2023; Munuera et al., 2024)—meanwhile, the I.ROC has unique characteristics because it has been evaluated in the context of routine outcome assessment for individuals with schizophrenia spectrum disorders. With 12 items and evidence of good internal consistency and test–retest reliability, the I.can be a relevant option for periodic assessment and monitoring of changes in recovery within mental health services (Sportel et al., 2023).

Clinically, these findings suggest that personal recovery instruments can be used not only in research but also to complement assessments in mental health nursing practice by incorporating individuals' subjective perspectives on the recovery process. Several instruments in this review have been used in mental health services, including the I.ROC, which was evaluated in routine outcome assessments of individuals with schizophrenia spectrum disorder (Sportel et al., 2023). Measuring aspects such as hope, life goals, empowerment, social relationships, and subjective experiences can complement clinical assessments that primarily focus on symptoms. However, the findings of this review do not support the universal use of a single instrument. Instrument selection must be tailored to the assessment objectives, the domains of personal recovery to be assessed, the characteristics of the population, and the feasibility of implementation within the service setting.

Cultural aspects represent another important finding. This review identified several instruments adapted or validated across different linguistic and cultural contexts, including the Russian version of the RAS-DS, the Spanish version of the QPR-15-SP, the Italian version of the RAS, and the German version of the RAS-G. These adaptations demonstrate that personal recovery instruments have been used in diverse cultural contexts, but the adaptation process cannot be understood merely as a matter of language translation. Panadevo et al. (2025) This shows that the meaning of personal recovery is influenced by cultural context, including the role of family, social relationships, religion, spirituality, and collective values. Thus, cross-cultural adaptation must consider the equivalence of construct meaning and the relevance of the domains being measured, not merely linguistic equivalence. This implication becomes crucial when an instrument developed in one cultural context is applied to populations with different social and cultural characteristics. In this context, the application of personal recovery instruments requires an evaluation of construct validity, cultural equivalence, and measurement invariance—not merely linguistic translation (Felix et al., 2024).

Overall, gaps remain in the available evidence. Measurement properties have not been evaluated uniformly across all instruments, and evidence for some aspects of measurement remains limited, particularly regarding cross-cultural validity, measurement invariance, measurement error, and criterion validity (Felix et al., 2024). Furthermore, although the I.ROC has been evaluated in the context of routine outcome assessment in mental health services, evidence regarding the broader application of personal recovery instruments in routine psychiatric practice remains limited. Future research needs to strengthen the evidence regarding how measurement results can be optimally integrated into personal recovery assessments and evaluations. In a cross-cultural context, future research needs to evaluate the construct equivalence and measurement properties of the instruments in

populations with different cultural backgrounds. This matters because family, social relationships, religion, spirituality, and collective values can influence the experience of personal recovery (Panadevo et al., 2024).

IMPLICATION AND LIMITATIONS

Implications

The findings of this review have implications for mental health nursing research and practice. In clinical practice, measures of personal recovery can complement symptom-focused assessments by providing information about an individual's subjective experiences, including hopes, identity, life meaning, empowerment, and social connectedness. The choice of instrument should be tailored to the purpose of its use. Consider the QPR when the focus is on the experience and process of personal recovery; the RAS when a more structured measurement of recovery aspects is needed; the MHRM when the multidimensional scope of CHIME is a priority; and the I.ROC when measurements are conducted routinely to monitor changes in recovery over time. Thus, personal recovery instruments should be viewed as part of a recovery-oriented care approach, not as a substitute for clinical assessment.

Future research needs a more comprehensive psychometric evaluation of the personal recovery instrument, particularly regarding measurement invariance, cross-cultural validity, and responsiveness. Research also needs to expand the validation of the instrument to underrepresented populations and cultural contexts, including low- and middle-income countries. Developing or adapting the instrument to local contexts must consider construct equivalence and the relevance of the personal recovery domains, so measurement is equivalent not only linguistically but also conceptually and culturally.

Limitations

This review has several limitations. First, the review protocol was not registered in a prospective review registry before the search and selection process. This may reduce transparency regarding the initial review plan and allow for procedural changes during the research process. Second, this review did not conduct a formal quality appraisal or critical appraisal of the included studies. Therefore, the review results map the instruments and measurement properties reported in the primary studies, without providing an overall assessment of each study's methodological quality. Third, the number of studies meeting the inclusion criteria is relatively limited eight studies, so the breadth of the evidence that can be mapped remains limited. Furthermore, heterogeneity in study designs, population characteristics, instruments, and the measurement properties reported means direct comparisons between instruments must be made with caution. These limitations should be considered when interpreting the results and determining the implications for selecting personal recovery instruments.

CONCLUSION

This review shows that the measurement of personal recovery in individuals with schizophrenia and schizophrenia spectrum disorders employs various instruments with different characteristics, domains, measurement properties, and contexts of use. The eight included studies identified eight instruments: SubRAS, RAS-DS, RAS, QPR/QPR-15-SP, MHRM, NEL, I.ROC, and RAS-G. These instruments demonstrate adequate psychometric evidence for several measurement properties, but the comprehensiveness and strength of the evidence vary across instruments. Differences in domain coverage—including the dimensions of Connectedness, Hope and Optimism, Identity, Meaning and Purpose, and Empowerment—indicate that no single instrument is universally the most suitable for all measurement purposes. Therefore, instrument selection must consider the measurement objectives, the personal recovery domains to be assessed, population characteristics, psychometric evidence, service context, and cultural appropriateness. This review provides an integrated overview of personal recovery instruments for populations with schizophrenia and schizophrenia spectrum disorders, which can serve as a foundation for instrument

selection, the development of further psychometric research, and the strengthening of recovery-oriented care approaches in psychiatric nursing.

SUGESTION

Based on the review findings, future research should expand the evaluation of the personal recovery instrument's measurement properties, particularly measurement invariance, cross-cultural validity, and responsiveness. Research also needs to strengthen the instrument's validation and adaptation across populations with diverse cultural backgrounds, particularly in low- and middle-income countries, to ensure construct equivalence and the relevance of personal recovery in different cultural contexts. Additionally, longitudinal studies are needed to evaluate the instrument's ability to detect changes in personal recovery over time and to determine how meaningful score changes should be interpreted.

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DECLARATION OF INTEREST

The authors declare no conflicts of interest regarding the preparation and publication of this scoping review.

AUTHOR CONTRIBUTION

The author is responsible for all stages of conducting the scoping review, including formulating the research question, developing the literature search strategy, data selection and extraction, data analysis and mapping, interpretation of results, and drafting and revising the manuscript. The author is also responsible for approving the final version of the manuscript and is accountable for the entire content of the article.

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