

Patient-reported outcome measures for rehabilitation hospitals: a scoping review

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Patient-reported outcome measures for rehabilitation hospitals: a scoping review

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ABSTRACT

Purpose: Patient-Reported Outcome Measures (PROMs) aim to facilitate patient-centred care by objectively measuring consumer views of their health and well-being in addition to monitoring patient outcomes. This review sought to identify PROMs suitable for adults receiving inpatient rehabilitation to guide clinical practice and consumer engagement in healthcare.

Material and methods: The scoping review methodology was guided by PRISMA-ScR and JBI guidelines. Seven electronic databases (Medline, Embase, CINAHL, PsycInfo, Cochrane CENTRAL, Cochrane Reviews, Scopus) and grey literature were searched from January 2000 to October 2022. Two reviewers independently screened the articles. Data were extracted and summarised thematically to derive clinical implications.

Results: Of 9096 records retrieved, 51 articles were included for analysis. Fifty-nine key PROMs were identified in the rehabilitation literature. The Euro-QOL 5D was reported for more than one-third of the studies. There were numerous condition-specific PROMs pertaining to health conditions such as arthritis, stroke and cardiac failure or symptoms such as pain, depression, fatigue and weakness. Most rehabilitation trials reported using PROMs before therapy and after discharge to monitor within-admission changes.

Conclusions: PROMs are frequently used in rehabilitation research and have the potential to yield helpful data for the evaluation of clinical services.

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KEYWORDS

Patient-reported outcomes; rehabilitation; hospital; consumer; nursing; allied health

Introduction


Patient-reported outcome measures (PROMs) are an integral part of evidence-based clinical practice in rehabilitation hospitals worldwide [1–4]. They enable consumers to report their health and well-being over time, which fosters patient-centred care and consumer engagement in healthcare delivery [5]. PROMs are also a useful tool for nurses, doctors, allied health professionals and other members of the multidisciplinary team to monitor rehabilitation progress, alongside therapy outcome measures [6] and objective tests of performance [7–9]. PROMs improve safety and quality by incorporating the views of care recipients about which elements of rehabilitation should be prioritised [10,11].

Although PROMs are well embedded in acute hospital settings [12], emergency departments [13] and outpatient settings [14–16], PROMs used for inpatient rehabilitation are less well understood and

there is variable implementation into routine care [17]. Many rehabilitation PROMs are available, yet uptake appears fragmented. There are ‘generic’ PROMs which can be used across multiple rehabilitation presentations and can encompass multiple dimensions of health, such as the EuroQOL-5D-5L [18–20] or the Short Form-36 [21,22]. There are also ‘condition specific’ PROMs for consumers that relate to a diagnosis such as arthritis, stroke or Parkinson’s disease or are focused on symptoms such as pain, fatigue, anxiety, depression and disability [23]. There is a growing body of global literature regarding condition-specific PROMs for use in rehabilitation hospitals, especially in relation to PROMs for stroke survivors [24,25], people with hip or knee joint replacements [26–29], Parkinson’s disease [30,31], spinal cord injury [32] or low back pain [33].

Nurses and other health professionals within the multidisciplinary rehabilitation team can use generic

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and condition-specific PROMs to support shared decision making and to facilitate hospital discharge planning [34–36]. PROMs can also be used to assist patients to reflect on their own health priorities and progress [37–39]. They can facilitate communication between patients and health professionals, and help to identify barriers to good health [9,14]. Philpot et al. (2018) noted that barriers sometimes exist to implementing PROMs in rehabilitation practice [40]. Select PROMs were considered by some people to be time consuming and complex to follow. Health professionals sometimes reported consumer health literacy as a barrier, compounded by presentation of most PROMs in English alone [40]. Facilitators to PROM uptake included the ability to track patient views over time, co-decision making and streamlining of patient consultations when PROMs were shared across the multidisciplinary team [40,41].

For health professionals to be able to select the best tool to use in clinical practice, it is helpful to summarise the main generic and condition-specific PROMs for inpatient rehabilitation hospitals, the clinical populations and symptoms they apply to and how they are scored. The aim of this scoping review is to address these needs. The research questions are: (1) what generic PROMs have been in the scientific literature for inpatient rehabilitation (2) what condition-specific PROMs are typically used for particular diagnoses or symptoms (3) what are the main scale characteristics of inpatient rehabilitation PROMs?

Methods

This review has been co-designed and co-authored with consumer representatives who assisted in the development of the research question, evidence synthesis and manuscript. We used the scoping review methodology to explore the breadth of this topic, map the available literature, identify key concepts in the literature and identify areas of emerging evidence to inform clinical practice [42–46]. Scoping reviews have an a priori protocol, involve extensive database searching, and have documented transparent and reproducible steps [47]. They can also be used to determine whether a systematic review is required or warranted [44–46,48].

Identifying relevant studies

Eligibility criteria were guided by expert opinions, the research team and Joanna Briggs Institute guidelines to develop the population, concept and context for the review [49]. The population of interest was adults (18 years and older) in rehabilitation

hospitals. To be included, PROMs had to report patient views of individual health, wellbeing or quality of life, not patient satisfaction or patient experience [50]. PROMs could be completed by the patient independently or with support, but not by proxy. Included journal articles were accessible as full text, peer-reviewed publications and written in English. Only articles that reported primary, quantitative research within inpatient rehabilitation settings were included. Articles were excluded if PROMs were not collected during the reported inpatient rehabilitation trial, except for elective joint arthroplasty surgery patients participating in inpatient rehabilitation for whom PROMs are routinely collected prior to surgery, then three and six months after surgery [51]. Research conducted in non-rehabilitation settings were also excluded, e.g. acute hospitals, community settings, mental health or palliative care.

Search strategy

The search strategy developed for this review was an iterative approach with consultation between the reviewers and a health sciences librarian who executed the searches. The final comprehensive search was conducted across MEDLINE, EMBASE, CINAHL, Cochrane, PsycInfo, Scopus and grey literature including Google Scholar and clinical trial registries. These databases were searched for literature published from 2000 until October 2022, with an example of the search strategy for MEDLINE found in [Appendix](#). Keywords within the search were derived the major categories of ‘patient-reported outcome measure’ and ‘rehabilitation’. Reference lists of the included studies, and of relevant systematic reviews, were examined for relevant additional sources.

Selection of studies

The studies identified in the search were upload to Covidence [52]. Two reviewers independently screened studies by title and abstract, who then independently screened full texts and identified studies meeting the review criteria. At each stage, the reviewers resolved conflicts by discussion to consensus, with consultation by a third reviewer if necessary.

Data charting

Data from eligible studies were independently extracted by two reviewers in a chart designed specifically for this review. This captured key characteristics of studies, including design and methods, population, intervention overview, average inpatient

admission length, PROMs utilised and any available detail of the PROM. Where sufficient detail of the PROM properties was not described in the study, this was sought through internet searching. PROM detail included a number of items within the tool, scoring range, direction of scales and interpretation of scores.

Synthesis of Results

The final dataset was synthesised by an iterative process as demonstrated by McKercher (2022) [5], with the focus on accessibility of the data for health professionals seeking to use PROMs in rehabilitation practice. Subsequently, PROMs were separated into generic and condition-specific categories. Data were mapped in tabular and descriptive format, with the number of items within each PROM additionally graphically illustrated. Further detail included study characteristics (e.g. country of origin, year), setting, major domains measured in the PROM (i.e. physical, psychological, social), tool design, number of items and specific domains within the tools [49,53]. A narrative summary of the results was completed in text format including the overall findings and how these results may influence further research or clinical practice [53].

Results

Following the removal of duplicates, 9096 records were retrieved from the seven databases, with an

additional 12 from grey literature. Figure 1 illustrates the results of the search strategy within the PRISMA flow diagram [54]. A review of title and abstracts identified 8821 records that did not meet eligibility criteria. A total of 275 full texts were sought for review, with 68 identified as conference abstracts or proceedings. The remaining 207 full texts were assessed for eligibility, with 156 excluded. Often manuscripts were excluded because the study design did not match the research question ($n=35$); studies were only in outpatient settings ($n=70$); or PROM use did not occur during an inpatient rehabilitation admission ($n=13$). The final review included 51 articles.

Supporting Information Table A outlines the characteristics of included rehabilitation studies, such as study design, type of inpatient rehabilitation facility and the country where the study was conducted. Most studies ($n=35$, 68.6%) were published within the last five years. The most prominent health condition studied was arthritic diseases [55–63], followed by neurological conditions such as Parkinson's disease [30,31,64–66], multiple sclerosis [67,68], stroke [24,25,69–75] and spinal cord injury [76–78], then, cardiopulmonary conditions [79–84]. Sample sizes ranged from 10 to 16,966 participants in a three-year, retrospective controlled clinical trial using medical history audits, where collection of a single quality of life PROM, the EQ-5D-5L, was previously embedded in usual care [85]. The average reported inpatient rehabilitation admission length ranged from 14 days in a joint arthroplasty study to

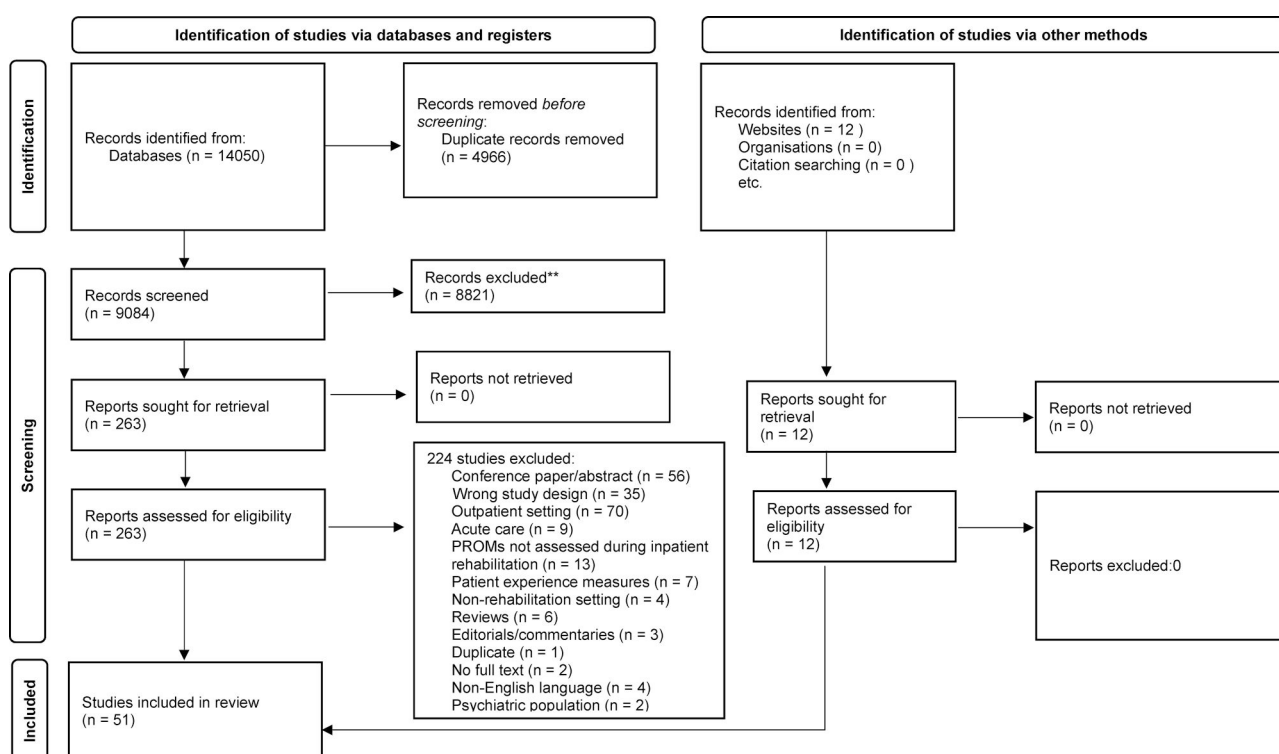


Figure 1. PRISMA diagram of scoping review results for PROMs for inpatient rehabilitation.

172 days in a spinal cord injury study [76]. Several studies ($n = 18$, 35.2%) did not report rehabilitation length of stay. Most studies ($n = 43$, 84.3%) utilised three or less PROMs. The use of six PROMs was the highest reported and occurred in two studies of neurological patients [72,77]. The timepoints of PROM use were most often at baseline and at discharge from inpatient rehabilitation, with 31 studies (60.7%) reporting at least these two timepoints. Use of PROMs between baseline and discharge was reported in two studies [71,79], with daily use of the Multidimensional Mood Questionnaire implemented in a study of stroke patients [71]. Nearly half of the studies ($n = 25$) included long-term follow-up, ranging from six weeks to 36 months post-discharge.

A total of 59 PROMs were identified within these research articles, 32 of which were condition-specific, encompassing musculoskeletal, cardiopulmonary and neurological conditions. An additional 18 PROMs reported specific symptoms, with seven (39%) pertaining to pain and four (22%) to anxiety or depression. The remaining 10 were classified as generic and able to be applied across any person receiving inpatient rehabilitation. Figure 2 illustrates the number of questions within each PROM, ranging from a single question to 328 (average 27 questions/PROM).

Table 1 summarises the broad constructs measured by the condition-specific PROMs, with the tools encapsulating psychological (anxiety, behaviour, emotions, fatigue, etc.), physical (symptoms, activities of daily living, mobility, gait, hand function, etc.) and social (communication, supports, community links, etc.) aspects of self-reported individual health. The assessment of arthritic diseases (both osteoarthritis and rheumatoid conditions) was addressed by many

PROMs, with nine separate tools identified (Table 1). Aside from the Arthritis Self Efficacy Scale which addressed psychological issues of arthritis, the other tools were concerned with only physical constructs or falls risk assessment and prevention [94]. This contrasts with the tools specific to neurological conditions such as stroke, Parkinson's disease and multiple sclerosis, where physical, psychological and social domains were usually examined.

Supporting Information Table B details tool structure and scoring interpretation for each condition-specific PROM, in addition to the more detailed domains relevant for the conditions. For example, the Prosthesis Evaluation Questionnaire examines issues of prosthetic use (appearance, sounds, ambulation, etc.), whereas the Burn Specific Health and Anxiety Scales quantify emotional, physical and functional issues related to burn affected skin. This table highlights that most condition-specific PROMs ($n = 8$, 89%) included examination of physical components of health, such as the impact of pain and joint stiffness on the ability to participate in functional and social or leisure activities.

Also highlighted in Supporting Information Table B is the variability in number of questions within each condition-specific PROM, with numbers ranging from two to 328 (average 38.5/PROM). This average is skewed by the Stoke Mandeville Spinal Needs Assessment Checklist, with 328 questions specific to people receiving rehabilitation for spinal cord injuries [95], with the next highest number of questions found in the St George Respiratory Questionnaire-A being a total of 76 [96]. Whilst most condition-specific PROMs exclusively used Likert-type scales, several tools [76,97–103] used other methods of scoring such

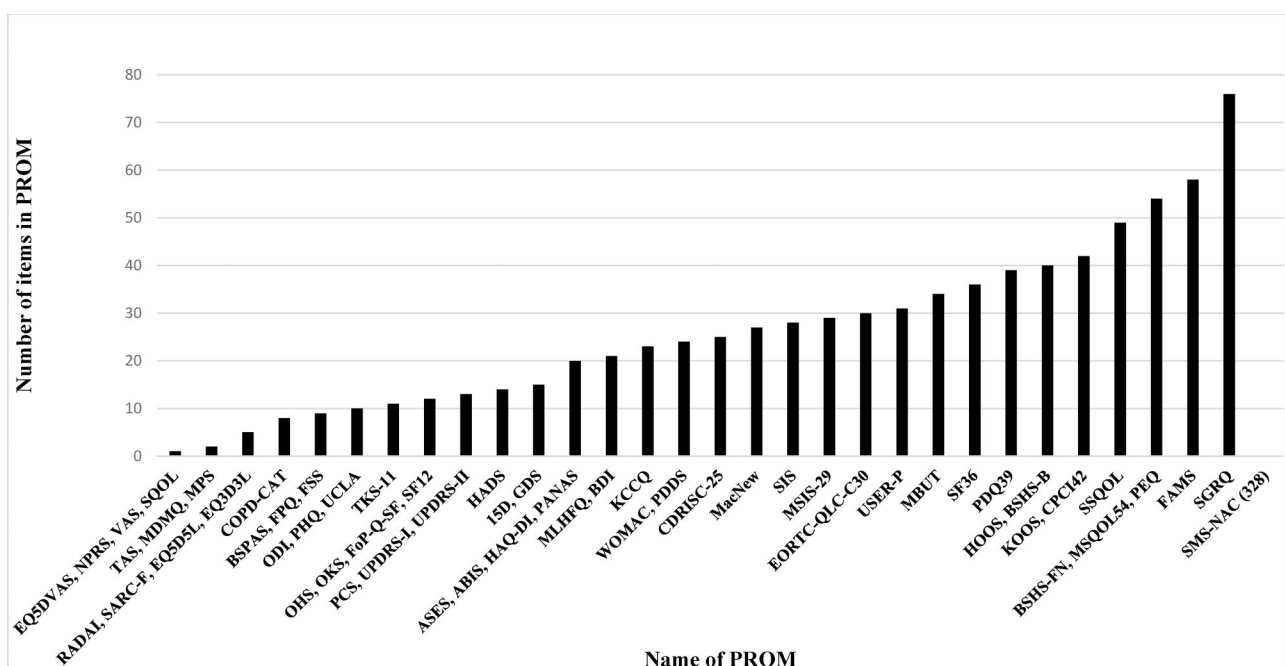


Figure 2. Number of items in PROMs.

Table 1. Condition-specific patient-reported outcome measures (PROMs) used for inpatient rehabilitation.

| Condition | PROM (Abbreviated) | PROM (Full name) | Major domains measured | Reference |
|--|---------------------|--|---|-------------------------|
| Amputee | ABIS | Amputee Body Image Scale | Psychological | [86] |
| | PEQ | Prosthesis Evaluation Questionnaire | Physical, prosthesis-specific, psychological, social | [86] |
| Burns | BSHS-B | Burn Specific Health Scale-Brief | Physical, psychological | [87,88] |
| | BSHS-FN | Burn Specific Health Scale for Face and Neck | Physical, psychological | [89] |
| Cancer | BSPAS | Burn Specific Pain Anxiety Scale | Psychological | [88] |
| | EORTC QLQ-C30 | European Organization for Research and Treatment of Cancer Quality of Life Questionnaire Core 30 | Physical, psychological, social | [2,90–93] |
| Cardiac failure | MLHFQ | Minnesota Living with Heart Failure Questionnaire | Physical, psychological | [82] |
| COPD | COPD CAT | Chronic Obstructive Pulmonary Disease Common Assessment Test | Physical | [81] |
| Coronary artery disease | SGRQ | St George's Respiratory Questionnaire | Physical, global health rating | [81] |
| | MacNew | MacNew Heart Disease health related quality of life questionnaire | Psychological, physical, social, global health rating | [79,83] |
| Low back pain | ODI | Oswestry Disability Index | Physical, social | [33] |
| Multiple sclerosis | FAMS | Functional Assessment of Multiple Sclerosis questionnaire | Physical, psychological, social | [67] |
| | MSIS-29 | Multiple Sclerosis Impact Scale-29 | Physical, psychological | [67] |
| | MSQOL-54 | Multiple Sclerosis Quality of Life 54 | Physical, psychological, social, global health rating | [68] |
| | | | | |
| Osteoarthritis, inflammatory rheumatoid diseases | ASES | Arthritis Self-Efficacy Scale | Psychological | [63] |
| | HOOS | Hip Osteoarthritis and Outcome Score | Physical | [57] |
| | KOOS | Knee Osteoarthritis and Outcome Score | Physical | [55,57] |
| | OKS | Oxford Knee Score | Physical | [55,58,60,61] |
| | RADAI | Rheumatoid Arthritis Disease Activity Index | Physical | [63] |
| | OHS | Oxford Hip Score | Physical | [60] |
| | TAS | Tegner Activity Scale | Physical | [61] |
| | UCLA | UCLA Activity Score, University of California Los Angeles Activity Score | Physical | [56] |
| | WOMAC | Western Ontario and McMaster Universities Osteoarthritis Index | Physical | [56,59,62] |
| | Parkinson's disease | UPDRS I | Unified Parkinson's Disease Rating Scale Section I | Psychological, physical |
| UPDRS II | | Unified Parkinson's Disease Rating Scale Section II | Physical | [30,31,65,66] |
| PDDS | | Parkinson's Disease Disability Scale | Physical, social | [31] |
| PDQ39 | | Parkinson's Disease Questionnaire 39 | Physical, psychological, social | [30,64] |
| Spinal cord injury | SMS-NAC | Stoke Mandeville Spinal Needs Assessment Checklist | Physical, social, psychological | [76] |
| Stroke | SAQOL-39NL | Stroke and Aphasia quality of life scale | Social, physical | [72] |
| | SIS | Stroke Impact Scale V.3 | Social, physical, psychological | [72] |
| | SS-QOL | Stroke Specific Quality Of Life | Physical, social, psychological | [74] |

ADLs: activities of daily living; COPD: chronic obstructive pulmonary disease; PROM: patient-reported outcome measure.

as the Multiple Sclerosis Quality of Life questionnaire where a mix of Likert-type scales in addition to yes/no questions generates physical health and mental health summary scores [104].

Table 2 outlines the symptom-specific PROMs identified within the rehabilitation research literature, with tools concerned with more distinctive domains. Psychological aspects of health including anxiety, depression, self-esteem and mood were addressed in most symptom-specific PROMs ($n = 13$, 72%), with physical domains of health examined in 11 (61%) tools and social aspects explored in 3 (17%) of tools. The symptom of pain was the focus within the majority of symptom-specific PROMs, with seven (39%) using scales or questionnaires to assess subjective levels of pain that may occur in many conditions.

Supporting Information Table C details the score ranges and interpretation of each symptom-specific PROM, with all tools utilising Likert-type scales

[78,100,109–121] aside from the Geriatric Depression Scale [122] where respondents answer yes/no to questions regarding their mental health. Of note, the Hospital and Anxiety Depression Scale (HADS) [123] was reported in nine of the studies in this review (Supporting Information Table A). This symptom-specific PROM contains 14 questions, with each scaled from absence to extreme presence of psychological symptoms of anxiety and depression. This tool was designed for ease of application and for screening purposes only, and not to be used for definitive diagnoses [123].

The 10 generic PROMs identified within this review covered a broad range of physical, psychological and social constructs (Table 3). Evaluation of physical ($n = 7$, 70%) and/or psychological ($n = 8$, 80%) domains were included in most generic PROMs. The number of questions within each PROM ranged from 1 to 36, with an average of 14.6 per PROM (see Supporting Information Table D).

Table 2. Examples of symptom specific patient-reported outcome measures in the rehabilitation research literature.

| Symptom | PROM (Abbreviated) | PROM (Full name) | Major domains measured | Reference |
|---------------------------|----------------------|--|--|-------------------------|
| Anxiety and/or depression | BDI | Beck Depression Inventory | Psychological, social, physical | [68,78] |
| | GDS | Geriatric Depression Scale | Psychological | [105] |
| | HADS | Hospital Anxiety and Depression Scale | Psychological | [1,24,72,79,93,106–108] |
| | PHQ | Patient Health Questionnaire; anxiety and depression subscales | Psychological | [92] |
| Emotional disturbance | CD-RISC-25 | Connor Davidson Resilience Scale 25 | Psychological | [56] |
| | FoP-Q-SF | Fear of Progression Questionnaire Short Form | Social, physical, psychological | [92] |
| | MBUT | Modified Body Uneasiness Test | Physical, psychological | [78] |
| | MMDM | Multidimensional Mood Questionnaire | Psychological | [71] |
| Fatigue Pain | RSES | Rosenberg Self-Esteem Scale | Psychological | [105] |
| | FSS | Fatigue Severity Scale | Physical | [68,72] |
| | CPCI-42 | Chronic Pain Coping Inventory 42 | Psychological, physical, social | [77] |
| | FPQ | Fear of Pain Questionnaire | Physical, psychological | [77] |
| | MPS | Musculoskeletal Pain Survey | Physical | [77] |
| | NPRS | Numeric Pain Rating Scale | Physical | [33,90] |
| | PCS | Pain Catastrophizing Scale | Psychological | [77] |
| | TKS-11 | Tampa Kinesiophobia Scale | Physical, psychological | [77] |
| | VAS | Visual Analogue Scale | Physical | [61,63] |
| | Sarcopenia /weakness | SARC-F | Strength Assistance Rise Climb Falls Questionnaire | Physical |

Table 3. Generic patient-reported outcome measures used for inpatient rehabilitation.

| PROM (Abbreviated) | PROM | Major domains measured | Reference |
|--------------------|--|--|---|
| 15D | 15-Dimensional instrument | Physical, social, psychological | [67] |
| EQ-5D-3L | EuroQOL-5D-3L | Physical, psychological | [69,84] |
| EQ-5D-5L | EuroQOL-5D-5L | Physical, psychological | [25,55,58,60,67,70,72,73,80,85,105,124] |
| EQ-5D-VAS | EuroQOL-5D-5L Visual Analogue Scale | Global health rating | [33,55,75,105,108] |
| HAQ-DI | Health Assessment Questionnaire Disability Index | Physical | [33,63] |
| PANAS | Positive And Negative Affect Schedule | Psychological | [125] |
| SF-12 | Short Form 12 | Physical, social, psychological, global health | [78] |
| SF-36 | Short Form 36 | Physical, social, psychological, global health | [24,59,62,63,82–84,106,107] |
| SQOL | Subjective Quality of Life Questionnaire | Psychological, social | [77] |
| USER-P | Utrecht Scale for Evaluation of Rehabilitation-Participation | Physical, psychological | [72] |

ADLs: activities of daily living.

Aside from the EQ-5D-5L-VAS [126] that utilises a single visual analogue scale to quantify an individuals' own view of overall health, the other generic PROMs identified in the rehabilitation research literature use Likert-type scales for scoring. The EQ-5D-5L was the most frequently utilised PROM, with over a third of the studies in this review reporting scores (Supporting Information Table A). Score ranges and interpretation for each PROM are summarised in Supporting Information Table D.

Discussion

An analysis of the global literature showed the use of PROMs for people participating in inpatient rehabilitation to be variable, despite the availability and usefulness of these tools [17,32,127,128]. In countries such as the United States there is a movement towards adopting value-based payment models that incorporate patient-centred outcomes together with therapy outcome measures, whilst in Australia there is consideration that PROMs may be utilised to optimise care quality, safety and patient satisfaction [6,17]. At the same time, multidisciplinary teams seek clarity on

which generic PROMs and condition-specific PROMs are best suited for use in rehabilitation hospitals [32].

This review of papers on rehabilitation research trials found 59 PROMs used with rehabilitation inpatients. The EuroQol-5D-5L and Short Form-36 were the most frequently used generic PROMs for rehabilitation services and programs. According to Groeneveld (2019), the EuroQol-5D-5L is particularly helpful for showing changes in general health and quality of life over the course of rehabilitation [72]. Whether or not the tool is sensitive enough to demonstrate specific changes remains open to question, especially when applied alone. A wide range of condition-specific PROMs were also reported. These varied greatly in length, complexity and suitability for clinical application, especially considering pressures on patient length of stay. Aligned with the International Consortium for Health Outcomes Measurement (ICHOM) recommendations [23], we found that condition-specific PROMs give insights into a patient's perspective of their physical capabilities, as well as views on changes over the course of rehabilitation in their psychological status and perceived social limitations. This is important to

rehabilitation therapists who seek to report outcomes across several functional domains that reflect the patients' lived experiences.

The review supports the value add of partnering with consumers to measure their perceptions of change over the course of their rehabilitation stay. As noted by Heath et al. (2021) [129], rehabilitation teams can benefit from sharing PROMs data to monitor patient progress. Generic PROMs are particularly helpful in this regard, to monitor changes in cohorts over time. This can be reported at a system level when all patients at a given service complete the same generic PROM. Working as teams, clinicians can select, apply and share the findings of PROMs when collaborating towards common rehabilitation goals. Interdisciplinary rehabilitation approaches can therefore benefit from team decisions incorporating PROMs data across physical, psychological and social domains [128,130]. However, the importance of understanding a patient's perspective and experience of rehabilitation goes beyond the direct clinical team. As highlighted by Kayes and Papadimitriou (2023) [131], for patient-centred practice to be embedded in health services, key stakeholders at the level of funders, insurers and policymakers need to consider and prioritise patient views, which may be derived in part from the use of PROMs.

There were several limitations of this review. First, the analysis was restricted to what was reported in the published research literature and the review might not have captured every PROM suitable for rehabilitation inpatients. Second, the review only included papers published in English and the findings are not necessarily representative of all global regions, ethnicities or cultures. It was beyond the scope of the current review to evaluate the impact of different cultures, countries and languages on the reliability and validity of the rehabilitation PROMS examined. This is an important consideration for future trials. We did not specifically examine the effects of implementing electronic health record-based PROMs, which has already been examined by Heinemann et al. (2022) [32]. Simple Likert-type scales were used by the vast majority of PROMs and the psychometric properties of rehabilitation PROMs awaits further analysis and verification. As noted by Terwee et al. (2021) [130], there can sometimes be an overlap in PROMs definitions, and wide variation in terminology and scoring differences for rehabilitation PROMs. It would be beneficial to develop a specific inpatient rehabilitation PROM, whereby clinicians can access tools known to be valid for application in the rehabilitation context. Most of the studies analysed in this review were from research trials and there may be a difference between the use of PROM in daily practice as compared to in a

research design. There is also potentially a research-practice gap between the findings and recommendations of researchers and the implementation of PROMS into everyday clinical practice.

Conclusion

Rehabilitation PROMs aim to facilitate consumer engagement in the design, delivery and evaluation of services. Although a range of PROMS have been identified for research use, there remains a need for consensus on a minimum set of PROMS to be implemented clinically in rehabilitation hospitals. There is arguably a need to design new rehabilitation PROMS that are both reliable and more patient-centred.

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





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Appendix

Database(s): Ovid MEDLINE(R) ALL 1946 to 31 October 2022.

| Search ID# | Search terms |
|------------|---|
| 1 | Patient-reported outcome measures/ |
| 2 | (PROM or PROMs).mp. |
| 3 | (patient* adj4 report* adj4 (outcome* or measure* or instrument* or survey* or assessment* or scale* or tool* or questionnaire* or score or scoring or index or rating or rate*)).mp. |
| 4 | ('patient report*' and (outcome measure* or health care survey* or health index or health status)).mp. |
| 5 | Functional status questionnaire*.mp. |
| 6 | Health status questionnaire*.mp. |
| 7 | Self-report questionnaire*.mp. |
| 8 | Self-administered questionnaire*.mp. |
| 9 | Self-rating scale*.mp. |
| 10 | Self-rating questionnaire*.mp. |
| 11 | (patient adj4 report*).mp. and ('quality of life'.mp. or 'quality of life'/ or QOL.mp.) |
| 12 | ((('quality of life' or qol) adj3 (measure* or instrument* or survey* or assessment* or scale* or tool* or questionnaire* or score or scoring or index or rating or rate*)).mp. |
| 13 | or/1-12 |
| 14 | exp Rehabilitation/ |
| 15 | rehabilitat*.tw,kw. |
| 16 | subacute.mp. |
| 17 | 14 or 15 or 16 |
| 18 | exp Hospitals/ |
| 19 | hospital*.tw,kw. |
| 20 | Inpatients/ |
| 21 | inpatient*.mp. |
| 22 | or/18-21 |
| 23 | 13 and 17 and 22 |
| 24 | ('rehabilitation centre*' or 'rehabilitation center*').mp. |
| 25 | 13 and 24 |
| 26 | 23 or 25 |
| 27 | limit 26 to english language |
| 28 | limit 27 to yr='2000 -Current' |

Note: [mp = title, abstract, original title, name of substance word, subject heading word, floating subheading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms].