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Screening instruments for mental disorders in primary healthcare: a scoping review protocol (SCREENING-MD)

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ABSTRACT

Introduction When mental disorders go undetected until later stages, they can result in poorer health outcomes for patients. Primary healthcare (PHC) stands as a strategic setting for the early identification and management of these mental disorders, given its role as the primary care environment for health service users. This scoping review has the objective of mapping and assessing screening instruments validated for mental disorders that are applicable in PHC, particularly regarding their measurement properties.

Methods and analysis This scoping review will include studies that have developed and validated screening instruments for mental disorders in the PHC context, irrespective of the age group. Searches will be conducted in MEDLINE, EMBASE, LILACS, CINAHL and PsycInfo without imposing restrictions on publication status, publication year or language. Additionally, we will scrutinise the references cited in the selected studies. Our inclusion criteria encompass studies examining any measurement property recommended by the COnsensus-based Standards for the selection of health Measurement INstruments (COSMIN) taxonomy. The selection process, data extraction and quality assessment of studies will be performed independently by pairs of reviewers. To evaluate the risk of bias within the selected studies, we will employ the COSMIN Risk of Bias 2 tools. The collected data will undergo analysis using descriptive statistics and will be presented in an evidence gap map format for each specific mental disorder.

Ethics and dissemination The findings from this review will be discussed through deliberative dialogue with stakeholders and disseminated through peer-reviewed publications and conference presentations. The project was approved by the Ethics Committee for Research at the University of Sorocaba (number: 66993323.9.0000.5500).

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STRENGTHS AND LIMITATIONS OF THIS STUDY

⇒ This scoping review will employ systematic procedures based on important methodological guidelines such as those provided by the Joanna Briggs Institute and the COnsensus-based Standards for the selection of health Measurement INstruments.
⇒ Stakeholders were involved in the development of this study protocol.
⇒ This review will include only screening instruments for mental disorders that are validated and published in the indexed literature.
⇒ Heterogeneous reporting in psychometric studies and instances of missing data might restrict the outcomes of this study.

INTRODUCTION

One out of every eight individuals worldwide has received a diagnosis of a mental disorder, amounting to 970 million people.[1] In 2020, the estimates surged by over 20%, primarily for anxiety and depressive disorders, due to the impact of the COVID-19 pandemic.[1] Currently, even after the pandemic, statistics on mental disorders remain high.[2] The significant global prevalence of these and other mental disorders, such as eating disorders,[3] substance use disorders[4] and psychotic disorders,[5] has mobilised important research agendas for appropriate screening and identification.[6] Despite the existence of treatment options for these conditions, their recognition remains challenging primarily due to stigma, insufficient professional training and a shortage of validated screening instruments.[7]

Primary healthcare (PHC) serves as the primary entry point into health systems, typically where patients seek care most often, playing a crucial role in ensuring universal healthcare accessible and equitable for the population.[8 9] When it comes to mental health, PHC has been instrumental in reducing the stigma and discrimination associated with mental disorders, enhancing healthcare access, reducing the long-term impact of mental disorders and promoting social integration.[10] As a result, PHC stands as a vital setting for the implementation of mental disorder screening.

Screening for mental disorders in PHC has been encouraged because late identification leads to poorer health outcomes.[11] It is important to note, however, that PHC lacks systematic methods for tracking mental disorders leading to inaccuracies in results primarily due to missed or incorrect diagnoses, owing to the complexity of mental disorders.[12 13] Screening for mental disorders in primary care environments, when conducted, is often done subjectively and without a systematic process, lacking the use of validated instruments and professional training. This observation was made in a qualitative study by Loeb and colleagues based on the perspective of primary care medical professionals. This finding was further corroborated by the study conducted by Rogers and collaborators who also noted the scarcity of systematised screening processes incorporating validated strategies.[12 13] Therefore, implementing suitable instruments is the initial step towards integrating mental disorder screening into the existing PHC services.

Instruments that are validated and consistent are crucial for the implementation of screening in PHC. In recent years, many screening instruments for mental disorders have been developed but little is known about the measurement properties that have been evaluated.[14] Moreover, when it comes to low-income and middle-income countries, there are concerns about whether the development process of these instruments is suitable for this population. A recent systematic review recommended that the instruments designed for screening mental disorders are validated in local contexts and these validations leave gaps in the applicability of these instruments in other countries, particularly those with low and middle incomes.[15]

This scoping review has the objective of both mapping and assessing screening instruments for mental disorders that are applicable in PHC, particularly regarding their measurement properties.

METHODS

Study design and registry

Figure 1 illustrates the steps to be undertaken in this scoping review. Our scoping review will adhere to the guidelines by Joanna Briggs and the COnsensus-based Standards for the selection of health Measurement INstruments (COSMIN) systematic reviews manual.[16 17] The study's protocol is accessible on the Open Science Framework.[18] The protocol was documented following the Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews checklist (adapted for protocol) (online supplemental material 1).[19] This study will begin in July 2024 and end in September 2025.

Eligibility criteria

The research question was structured following the key components typically used in reviews of health measurement instruments,[17] including:

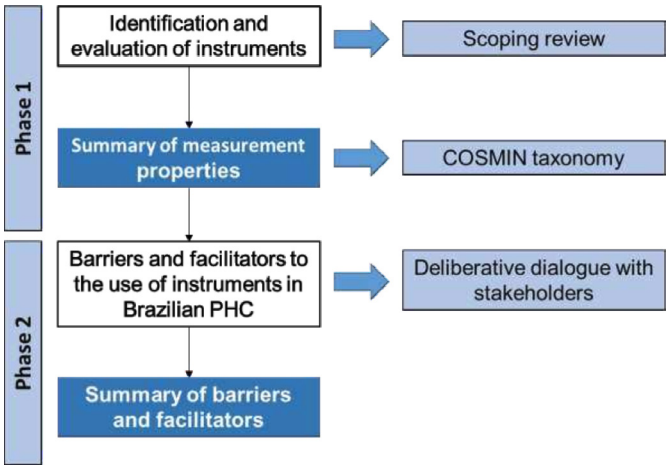

Figure 1 Flow of conducting the scoping review. COSMIN, COnsensus-based Standards for the selection of health Measurement INstruments; PHC, primary healthcare.

Construct

We will consider studies that primarily focus on the screening of specific mental disorders, including eating disorders (International Classification of Diseases (ICD) F50), anxiety disorders (ICD F40–41), mood disorders (ICD F30–39), substance use disorders (ICD F10–19) and psychotic disorders (ICD F20–29). These disorders were selected due to their higher prevalence.

Population

We will include studies involving individuals of various age groups, genders and geographical locations who exhibit one or more risk factors for mental disorders, including eating disorders (ICD F50), anxiety disorders (ICD F40–41), mood disorders (ICD F30–39), substance use disorders (ICD F10–19) and psychotic disorders (ICD F20–29).

Types of instruments and measurement properties of interest

Studies will be considered without restrictions on the specific measurement property under examination or the method of administration. We will only include studies focused on instrument development (methodological studies); studies that just used the instrument will be excluded. Multidimensional instruments will also be eligible for inclusion.

Context

Only studies conducted in PHC settings will be included, considering primary care environments and population health levels.[20] As a result, instruments developed and validated for specialised care or psychiatric inpatient settings will be excluded.

Information sources

The consulted databases will be MEDLINE (via PubMed), EMBASE, LILACS (via Virtual Health Library Portal), PsycInfo and CINAHL. Other information sources will also be consulted, including the reference lists of included studies. No restrictions on language or year of

publication will be applied. If necessary, specialised translation services will be consulted for languages that are not readable by the team.

Search strategy

To validate the search strategy, double-checking will be conducted using Peer Review of Electronic Search Strategies.[21] A specialised librarian will validate it and modifications will be made if necessary. Online supplemental material 2 describes the search strategy for each information source. Given the substantial volume of studies on screening instruments for mental disorders, we applied a developed and validated methodological filter to identify instruments.[22]

Study selection and data extraction

The selection process will involve pairs of reviewers resolving any disagreements through consensus. This process will occur in two stages: Initially screening based on title and abstract followed by the assessment of full-text articles using Rayyan software (step 1) and Microsoft Excel 2016 (step 2).[23] Reviewer calibration will precede the selection process which includes the initial assessment of at least 50 randomly chosen titles and abstracts in the first stage followed by at least 10 full-text articles. This process will continue until the standardisation of included and excluded studies is achieved. The overlapping of articles from the calibration exercise between reviewers will be adopted to assess the reliability of the team.[24 25] A reviewer will be considered qualified if they accurately select at least 75% of the calibration set, as recommended in the manuals.[16]

The data extraction process will similarly involve two independent reviewers and the calibration will follow a process akin to that previously described for selection. At this stage, within an Excel spreadsheet, reviewers will extract the following information:

Part 1. Study characteristics: Author, year, country, number of participants; number and percentage of female participants; average or median age and age range; and whether the instrument was designed for use in primary care (yes/no).

Part 2. Characteristics of the instruments: Name of the instrument; acronym or abbreviation of the instrument; method of administration; administration time; number of items; number of dimensions; whether cross-cultural adaptation was performed (yes/no), if yes, specify the culture.

Part 3. Measurement properties: Studies will be categorised based on the measurement properties outlined in the COSMIN taxonomy.[26] This taxonomy categorises studies according to the following properties: Reliability, validity, responsiveness and interpretability.

Risk of bias

The risk of bias assessment will be conducted using the COSMIN Risk of Bias checklist tool which evaluates instruments based on their measurement properties.[27 28] The COSMIN Risk of Bias checklist tool assesses instruments based on the methodological quality of the psychometric steps conducted in the studies. In other words, when we use the COSMIN Risk of Bias checklist tool to assess studies, we inherently appraise the psychometric properties of the instrument. While it was primarily developed for patient-reported outcome measures, it can also be employed for other psychometric instruments.[27] Two reviewers will independently conduct the assessment and any discrepancies will be resolved through consensus.

Data synthesis

The data will be analysed using descriptive statistics via Stata (V.14.2) software. For better visualisation, the results will be presented in bubble and heatmaps categorising them based on the methodological quality of instrument development and the assessed measurement properties.

Patient and public involvement

We will conduct a deliberative dialogue with stakeholders to discuss barriers and facilitators for implementing screening in PHC. A convenience sample of public health professionals working in primary care, representatives from the Brazilian Ministry of Health and researchers will be recruited via email. The deliberative dialogue will be held virtually following the recommendations outlined in the SUPPORT Tools for evidence-informed health Policymaking.[29]

A plain language summary of the scoping review will be disseminated to interested parties 15 days before the dialogue. The organisation of the deliberative dialogue will be as follows: The initial 15 min of the dialogue will focus on presenting a thorough overview of the scoping review findings. Subsequently, discussions will revolve around barriers, facilitators and the utilisation of screening instruments in PHC in Brazil. After the deliberative dialogue, interested parties will evaluate the scoping review using a checklist developed by Lavis *et al*.[29] This checklist, using both open and closed questions, aims to explore the experience of stakeholders in deliberative dialogue, the knowledge gained and the insights identified from the evidence synthesis. It also evaluates the participants' level of satisfaction with the deliberative dialogue and the evidence summarised in the scoping review.

Ethics and dissemination

The project was approved by the Ethics Committee for Research at the University of Sorocaba (number: 66993323.9.0000.5500). As the deliberative dialogue will involve human participants, a free and informed consent form will be provided in advance and completed by the research participants. This study's preliminary and final results will be presented at conferences related to the topic and at seminars organised by the Brazilian Ministry of Health.

DISCUSSION

This is the first scoping review to chart screening instruments for mental disorders in PHC involving their measurement properties and assessing bias risks. In this context, this work, employing an innovative knowledge translation methodology involving deliberative dialogue, holds the potential to assist healthcare professionals, managers and researchers in making evidence-informed decisions regarding the implementation of validated screening instruments within PHC. Furthermore, our findings will facilitate the identification of limitations in the developed instruments, enabling the proposal of research agendas that prioritise robust psychometric studies on screening instruments for mental disorders, aiming to create instruments beneficial for clinical practice.

Although our work adheres to all methodological guidelines, potential limitations may arise due to the heterogeneity in reporting concerning the development of screening instruments for mental disorders. Consequently, reviewers may need to conduct subjective assessments to evaluate the risk of bias and categorise instruments, aligning with the guidelines outlined in the COSMIN manual.[17] Furthermore, incomplete data, particularly concerning contextual information about these instruments within care settings, can present challenges in data extraction.

Therefore, the methodological rigour of our scoping review, combined with the knowledge translation strategy employing deliberative dialogue, can promote the integration of scientific evidence into clinical practice and the screening of mental disorders in PHC. This will be possible through engaging interested parties and the Brazilian government ensuring that these individuals are sensitised to the process of screening for mental disorders in Brazil's PHC. Moreover, the identified research gaps can serve as a foundation for new studies on these instruments. Additionally, using COSMIN's international taxonomy and methodological recommendations can raise awareness among researchers about the effective utilisation of these validated instruments for measuring outcomes in the healthcare domain.[26]

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Contributors All authors (LPNL, DMdSSdS, JCS, MDGM, CdCB, JHHO and LCL) made substantial intellectual contributions to the development of this protocol. LCL is the guarantor of the study. LPNL is the principal investigator, responsible for writing the draft protocol. The review question was developed by LCL and refined by LPNL and DMdSSdS. LPNL and JCS tested the search strategy. All authors (LPNL, DMdSSdS, JCS, MDGM, CdCB, JHHO and LCL) participated in writing the manuscript, critically reviewed the content, approved the final manuscript and agreed to be responsible for the manuscript, ensuring the accuracy and integrity of the work.

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Competing interests None declared.

Patient and public involvement Patients and/or the public were involved in the design, or conduct, or reporting, or dissemination plans of this research. Refer to the Methods section for further details.

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