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Research Article

Screening and diagnostic tools for depressive disorders used in primary care: an integrative review

Instrumentos de rastreio e diagnóstico de transtornos depressivos utilizados na atenção primária: uma revisão integrativa

Instrumentos de rastreo y diagnóstico de trastornos depresivos utilizados en atención primaria: una revisión integradora

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Abstract

Introduction: The prevalence of depressive disorders in the general population is high, and primary health care (PHC) is essential in dealing with these issues. The introduction of screening and diagnostic tools for these disorders in PHC is one of the suggested strategies to enhance the quality of care. Nevertheless, there is limited understanding regarding their effectiveness. **Objective:** To identify the screening instruments and diagnostic interviews that have been widely used in studies involving users with depressive symptoms seeking help at PHC. **Methods:** This was an integrative literature review. For the period from October to December 2020, searches were conducted in the LILACS and MEDLINE databases. Research articles carried out in PHC that utilized one or more screening and/or diagnostic instruments for depressive disorders were included. At least two researchers analyzed titles, abstracts, and full texts, extracting data using a standardized spreadsheet. The results were presented in a descriptive and narrative manner. **Results:** After using eligibility criteria, 413 articles were selected. There were 22 screening instruments used for screening and diagnosis of depression in studies carried out in PHC. The most cited screening instrument was the *Patient Health Questionnaire,* and the most used diagnostic interview was the *Mini International Neuropsychiatric Interview.* Studies published after 2011, carried out in Europe, with a non-elderly adult population and with the purpose of identifying the prevalence of depression in different social groups predominated. Most studies used long instruments, with complex analytical criteria, without validation/adaptation for PHC, and with restrictions on the analyzed health problems, making them limited for general use in PHC. **Conclusions:** The use of screening and diagnostic instruments for depression in PHC can be a relevant strategy to improve the care provided to this population. Nevertheless, additional research is required to analyze the benefits and harms of this approach, as well as a greater effort to select the best instruments to be used.

Keywords: Patient health questionnaire; Primary health care; Depression; Mass screening; Mental disorders.

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Resumo

Introdução: A prevalência de transtornos depressivos na população em geral é significativa, e a Atenção Primária à Saúde (APS) desempenha um papel crucial na abordagem dessas questões. A implementação de instrumentos de rastreamento e diagnóstico desses transtornos na APS é uma das estratégias propostas para aprimorar a qualidade do atendimento. No entanto, há uma lacuna de conhecimento em relação à eficácia dessas abordagens. **Objetivo:** Identificar os instrumentos de rastreamento e entrevistas diagnósticas mais empregados em pesquisas envolvendo pacientes que procuram assistência em serviços de APS devido a sintomas depressivos. **Métodos:** Este estudo constitui uma revisão integrativa da literatura, que abordou as bases de dados LILACS e MEDLINE no período compreendido entre outubro e dezembro de 2020. A seleção dos artigos incorporou pesquisas realizadas na APS, as quais empregaram um ou mais instrumentos para rastreamento e/ou diagnóstico de transtornos depressivos. A análise dos títulos, resumos e textos completos foi realizada por pelo menos dois pesquisadores, que extraíram os dados por meio de uma planilha padronizada. Os resultados são apresentados de forma descritiva e narrativa. **Resultados:** Após a aplicação dos critérios de elegibilidade, foram selecionados 413 artigos. Foram identificados 22 instrumentos empregados no rastreamento e diagnóstico da depressão em estudos realizados na APS. O instrumento de rastreamento mais mencionado é o *Patient Health Questionnaire* e a entrevista diagnóstica mais utilizada foi a *Mini International Neuropsychiatric Interview*. Predominam os estudos publicados após 2011, realizados na Europa, com população adulta não idosa, visando identificar a prevalência de depressão em diferentes grupos sociais. A maioria dos estudos utilizou instrumentos longos, com critérios analíticos complexos, sem validação e/ou adaptação para a APS, além de apresentarem restrições quanto aos problemas de saúde analisados, tornando-os limitados para uso geral na APS. **Conclusões:** O emprego de instrumentos de rastreamento e diagnóstico para depressão na APS pode representar uma estratégia relevante para aprimorar os cuidados oferecidos a essa população. Contudo, é crucial conduzir pesquisas adicionais a fim de analisar tanto os benefícios quanto as potenciais desvantagens dessa abordagem. Além disso, é imperativo um esforço mais substancial na seleção criteriosa dos instrumentos mais adequados para aplicação.

Palavras-chave: Questionário de saúde do paciente; Atenção primária à saúde; Depressão; Programas de rastreamento; Transtornos mentais.

Resumen

Introducción: La prevalencia de los trastornos depresivos en la población general es alta y la Atención Primaria de Salud (APS) ocupa una posición central en el abordaje de estos problemas. La introducción de instrumentos para el rastreo y diagnóstico de estos trastornos en la APS es una de las estrategias sugeridas para mejorar la calidad de la atención pero poco se sabe sobre su eficacia. **Objetivo:** Identificar los instrumentos de rastreo y entrevistas diagnósticas que más han sido utilizados en estudios con usuarios que buscan atención en los servicios de APS con síntomas depresivos. **Métodos:** Esta es una revisión integradora de la literatura, se realizaron búsquedas en las bases de datos LILACS y MEDLINE de octubre a diciembre de 2020. Se incluyeron artículos de investigación realizados en la APS y que utilizaron uno o más instrumentos para el rastreo y/o diagnóstico de los trastornos depresivos. Al menos dos investigadores analizaron títulos, resúmenes y textos completos, extrayendo datos mediante una hoja de cálculo estandarizada. Los resultados se presentan de forma descriptiva y narrativa. **Resultados:** Después de aplicar los criterios de elegibilidad, se seleccionaron 413 artículos, fueron descritos 22 instrumentos utilizados en el rastreo y diagnóstico de la depresión en estudios realizados en APS. El instrumento de rastreo más utilizado fue el Cuestionario de Salud del Paciente y la entrevista diagnóstica más utilizada fue la Mini Entrevista Neuropsiquiátrica Internacional. Predominan los estudios publicados después de 2011, realizados en Europa, con población adulta no anciana con el propósito de identificar la prevalencia de depresión en diferentes grupos sociales. La mayoría de los estudios utilizaron instrumentos extensos, con criterios analíticos complejos, sin validación y/o adaptación para la APS, y con restricciones sobre los problemas de salud analizados, limitándolos para uso general en la APS. **Conclusiones:** El uso de instrumentos de rastreo y diagnóstico de depresión en la APS puede ser una estrategia relevante para mejorar la atención brindada a esta población. Sin embargo, se necesitan más estudios para analizar los beneficios y dificultades de esta estrategia, así como un mayor esfuerzo para seleccionar los mejores instrumentos a utilizar.

Palabras clave: Cuestionario de salud del paciente; Atención primaria de salud; Depresión; Programas de rastreo; Trastornos mentales.

INTRODUCTION

Depression is the most common mental disorder in the general population, contributing to high mortality and morbidity rates, global disease burden and decreased quality of life in all age groups. People with depression are more exposed to risk behaviors when compared to the general population, such as suicide risk and abuse of alcohol and other drugs. Therefore, depression constitutes a serious public health problem.[1-4]

The lifetime prevalence of depression ranges from 6.6 to 19.2%, being more frequent among high-income countries (mean of 14.8%). In low- and middle-income countries, prevalence ranges from 6.5% in China to 18.4% in Brazil, with an average of 11.1%.[5] Brazil has the second highest point prevalence of

depressive episodes in the Americas, affecting approximately 11.5 million people (equivalent to 5.8% of the population).[1]

Still, depressive disorders are often not diagnosed and/or treated in a timely and appropriate manner, even among physicians trained in family and community medicine (FCM) in the context of primary health care (PHC).[6-8] To address this issue, the literature highlights the importance of strengthening PHC and the psychosocial care network, as well as training the professionals involved. In addition, the implementation of collaborative care approaches between PHC and psychiatry is identified as crucial, including the integration of the Family Health Support Center (NASF) in Brazil. The inclusion of community-based health services in the psychosocial care network is also recommended as a measure to deal with this problem.[9,10]

On the other hand, the use of standardized and validated instruments for screening and diagnosing depression in PHC has been mentioned in the literature as one of the strategies to improve the approach to this problem. Some research suggests that its application can have a positive impact not only on the clinical aspects of the approach to depression, but also on the design of interventions, on the development of public policies in mental health and on research.[11,12]

There are several instruments available for use, especially in epidemiological studies, which can lead to confusion and difficulties in the selection and adoption of this strategy by health teams in PHC. Therefore, this integrative literature review aimed to identify and describe the main screening and diagnostic instruments used in the assessment of depressive symptoms in patients seeking help at PHC. As far as we know, reviews of this nature are uncommon in the literature, which makes this study of interest to professionals and researchers linked to PHC.

METHODS

The guiding question of this review was: “Considering the high prevalence of depression in the general population, what are the screening instruments and diagnostic interviews that have been most used in studies with users who seek care in primary care services with depressive symptoms?”

The search for scientific articles was conducted between October and November 2020, in the Latin American and Caribbean Literature in Health Sciences (LILACS) and Medical Literature Analysis and Retrieval System Online (MEDLINE) databases. The specific search strategy for each database is detailed in Figure 1. No restriction criteria were defined for the language of the articles, texts in Portuguese, English or Spanish were accepted, and there was no limitation regarding the date of publication.

The inclusion criteria were:

1. Studies that used instruments for screening and diagnosing depressive disorders within the scope of PHC
2. The instruments should be cited in the title or abstract of the article
3. Studies that used the instrument for:
    a) identification of the depressive disorder;
    b) validation of the instrument in another language and/or population;
    c) case selection aimed at clinical and therapeutic guidance;
    d) selection of cases for intervention studies/therapeutic clinical trials.

Opinion articles, letters to the editor, literature reviews, editorials, case reports, reviews, book chapters, protocols and research projects were excluded.

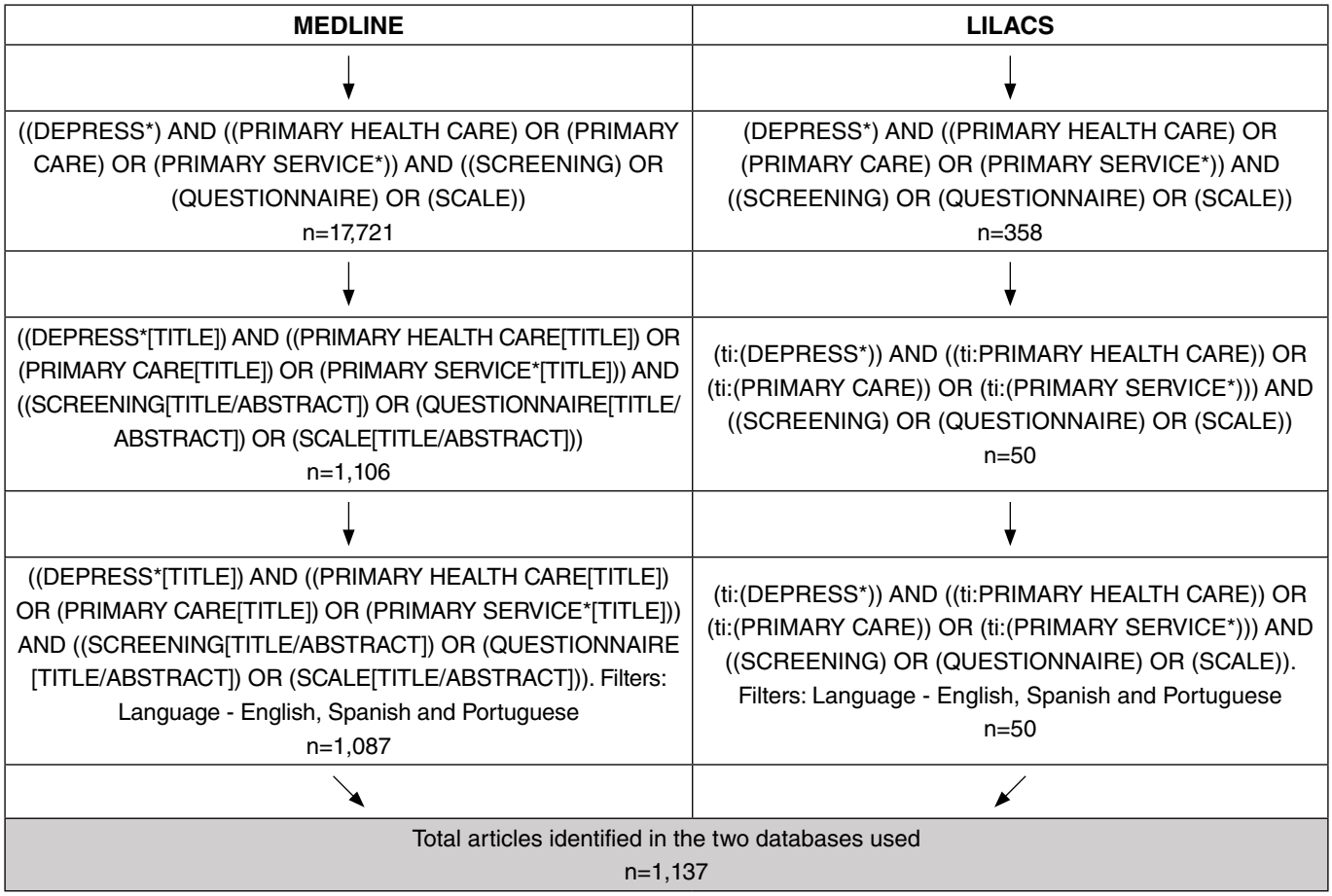


Figure 1. Subject search strategy and Boolean operators used in databases.

After eliminating duplicates, two trained researchers — one a specialist in FCM and the other in psychiatry — analyzed titles, abstracts and full texts, applying inclusion and exclusion criteria. Disagreements in this process were discussed by the researchers and, when necessary, a researcher with extensive experience in the area intervened to resolve the issue.

The extraction of data from publications occurred with the aid of a standardized spreadsheet. The authors, year of publication, screening instrument or diagnostic interview, study location, type of population (whether it was a single or multicenter study) and the main finding were recorded. The presentation of results followed a descriptive and narrative approach, with emphasis on identifying the main instruments used, their application sites and main characteristics, aiming to guide professionals and managers in their practical use.

During the search, a total of 135 different instruments used in the studies were identified. Because of this diversity, it was decided to group different versions of the same instrument or interview, such as reviews or validations in different languages or populations, under the original title of the tool. In this review, only instruments present in five or more publications are discussed (Chart 1). After grouping the different versions, 68 instruments were identified, 22 of which were used in five or more studies, while 46 appeared in less than 5 publications and, therefore, were excluded from the analysis.

Given the descriptive nature of this review and its non-systematic objective, an individual methodological analysis of each article was not performed. In addition, the significant heterogeneity

Chart 1. Characteristics of the instruments most often used by health professionals in primary care in identifying and diagnosing depression, including their different versions and/or variations in name, authors, year of creation, frequency and country of publications

Instrument, author(s)	Versions and/or variations in name*	Countries of publication*	Characterization of instrument
Patient Health Questionnaire (PHQ) Spitzer et al.[15]	Patient Health Questionnaire-9 (PHQ-9) or Brief Patient Health Questionnaire (B-PHQ), PHQ-9 versions China, Russia, Japan and bilingual Chinese (CB-PHQ), PHQ-15), PHQ-10,PHQ-8, PHQ-2), PHQ-Adolescent (PHQ-A).	USA (79); United Kingdom (12); Netherlands (9); Germany (9); China (9); Spain (8); Latvia (5); Saudi Arabia (5); Ethiopia (4); Brazil (4); India (4); Australia (3); Canada (3); Japan (3); Italy (2); Chile (2); Nigeria (2); Colombia (2); South Africa (2); Zimbabwe (2); New Zealand (1); Taiwan (1); Israel (1); Ecuador (1); Switzerland (1); Singapore (1); Malaysia (1); Sri Lanka (1); Qatar (1); Botswana (1); Vietnam (1); Oman (1); Nepal (1); Tunisia (1); Mozambique (1); South Korea (1); Honduras (1); Mexico (1); Country not mentioned (1).	• Self-administered. • Number of questions: 9 items. • Purposes: to identify if the individual is a probable case of depression or not. It can be used to measure the severity of the disorder. • Scoring criteria: each item is evaluated using a Likert scale from 0 to 3 (corresponding to the answers "never", "several days; "half the days" and "almost every day"), considering the frequency of symptoms in both last weeks. The total score ranges from 0 to 27. The cutoff for major depression screening is 10 points. The total score can be used to assess the severity of symptoms: 0–4: no depressive symptoms; 5–9: mild depressive symptoms, 10–14 moderate depressive symptoms, 15–19 moderately severe depressive symptoms, and 20–27 severe depressive symptoms.[16]
Center for Epidemiologic Studies-Depression scale (CES-D) Radloff[17]	CESD-10, CESD-5, CES- Revised (CESD-R).	USA (27); Australia (7); China (4); Brazil (2); Japan (1); Spain (1); Israel (1); Russia (1); Zambia (1); Mexico (1); United Kingdom (1); Nigeria (1); South Africa (1); Canada (1); France (1); Country not mentioned (3).	• Self-administered or administered by interviewer. • Number of questions: 20 items. • Purpose: to assess questions about mood, somatic symptoms, interaction with others and motor functioning. Answers according to the frequency of each symptom in the last week • Scoring criteria: each item is evaluated on a Likert scale of 0–3, corresponding to the answers "rarely or never", "sometimes", "often" and "always". The total score ranges 0–60 and the cutoff used is >16.[17]
Geriatric Depression Scale (GDS) Yesavage et al.[18]	Geriatric Depression Scale (GDS-30 or GDS or Yesavage Geriatric Depression Scale, extended version), GDS-15 versions Germany and China, (GDS-5), (GDS-10), (GDS-4), (GDS-1).	USA (8); Brazil (8); United Kingdom (6); Germany (5); Netherlands (3); Spain (3); China (1); Bosnia and Herzegovina (1); Switzerland (1); Nigeria (1); Greece (1); Mexico (1); Singapore (1).	• Instrument administered by interviewer. • Purpose: intended for the assessment of mood spectrum symptoms in geriatric patients. • Number of questions: original version with 30 points. Dichotomous questions (yes/no). • Scoring criteria: sum of points. Cutoff score 10–11 for GDS-30 and 5–6 for GDS-15.[12]
Mini International Neuro-psychiatric Interview (MINI) Sheehan et al.[19]	MINI-Screen developed for primary care, Malayalam and Japanese MINI version.	Latvia (4); Netherlands (4); Japan (3); Chile (3); India (2); USA (2); Belgium (2); Luxemburg (2); United Kingdom (2); Lithuania (2); Morocco (1); Botswana (1); Iran (1); Colombia (1); Mozambique (1); Spain (1); Uganda (1); Israel (1); Singapore (1); Zambia (1); Mexico (1); France (1).	• Structured interview administered by a trained interviewer. • Number of questions: 19 independent diagnostic modules. The major depressive episode module consists of 5 axes and 11 items. • Purpose: to evaluate 17 DSM-IV Axis I disorders. • Scoring criteria: dichotomous answers (yes/no). Designed to obtain a psychiatric diagnosis in 15–30 minutes by non-specialists who have received formal training.[19]

Continue...

Chart 1. Continuation.

Instrument, author(s)	Versions and/or variations in name*	Countries of publication*	Characterization of instrument
Beck Depression Inventory (BDI) Beck et al.[20]	Beck Depression Inventory (BDI or BDI-I/ BDI-21), BDI-II Arab version, BD-I – Chinese version, Beck Depression Inventory (BDI) version 1A, Beck Depression Inventory (BDI-II), Beck Depression Inventory Primary Care (BDI-PC), BDI-PC version in Spanish/Peruvian.	USA (9); Switzerland (5); India (5); United Kingdom (3); Finland (2); Turkey (2); Brazil (2); Chile (1); Peru (1); Croatia (1); Spain (1); Germany (1); Jordan (1).	• Self-administered. • Number of questions: 21 items. • Purpose: to assess the frequency and intensity of depressive symptoms during the last week. • Scoring criteria: Values from 0 to 3 are assigned, with higher scores indicating greater intensity of symptoms. The total score ranges from 0 to 63 points. From 0–13, minimal depression; 14–19, mild depression; 20–28, moderate depression; 29–63, severe depression.[21]
Structured Clinical Interview (SCID) Spitzer et al.[22]	SCID – I, SCID – II, SCID – III, SCID – IV.	USA (15); Spain (3); China (3); Finland (2); United Kingdom (2); Brazil (2); Netherlands (1); Israel (1); Singapore (1); South Africa (1); Zimbabwe (1); Germany (1); Country not mentioned (1).	• Structured interview to be administered by an experienced clinician. • Number of questions: Includes an introductory overview followed by 9 modules. • Purpose: to evaluate the main diagnoses of Axis I of the DSM (version III-R when it was developed). The SCID provides diagnoses for current (last month) and past lifetime disorders.[22] • Scoring criteria: items evaluated by the presence or absence of the symptom (yes/ no) and, if so, questions such as duration and intensity are asked, so that the clinician can decide whether the diagnostic criterion was met.
Hamilton Depression Rating Scale (HDRS) Hamilton[23]	Hamilton Depression Rating Scale (HDRS or HAM-D), HAM-D 24, HRS-D, HDRS Italian version.	USA (15); United Kingdom (5); Italy (2); Germany (2); Chile (2); Taiwan (1); Netherlands (1); China (1); Kenya (1); India (1); Finland (1); Country not mentioned (1).	• Administered by trained professional with clinical experience. • Number of questions: original version composed of 17 items. • Purpose: to assess depressive symptoms in the last week. • Scoring criteria: scored 0–2, 0–3 or 0–4, depending on the severity of symptoms, with a total score of 50 points. It has no specific cutoff point. Above 23 points, classified as very severe depression; 19–22 severe; 14–8 moderate; 8–13 mild and less than 7 no depression.[24]
Edinburgh Postpartum Depression Scale (EPDS) Cox et al.[25]	EPDS or Edinburgh Depression Scale (EDS), EPDS version in Zimbabwe.	United Kingdom (5); Chile (4); Netherlands (3); Australia (3); Saudi Arabia (2); Turkey (2); USA (2); Peru (2); South Africa (1); Syria (1); Oman (1); Iran (1); Italy (1); Zimbabwe (1); Brazil (1); Canada (1).	• Self-administered. • Number of questions: Composed of 10 items. • Purpose: to assess the presence and intensity of depressive symptoms in the last 7 days. • Scoring criteria: divided into four graduations (0 to 3) with a total score of 30 points.[25]

Continue...

Chart 1. Continuation.

Instrument, author(s)	Versions and/or variations in name*	Countries of publication*	Characterization of instrument
Escala Hospitalar de Ansiedade e Depressão (HADS) Zigmond and Snaith[26]	HADS or HAD, HADS-D - Hospital Anxiety and Depression Scale Depression Subscale, HADS – Arab version and German version.	United Kingdom (12); Switzerland (3); United Arab Emirates (2); Netherlands (2); Lithuania (2); Germany (2); Italy (1); France (1); Colombia (1); Ireland (1); Qatar (1); Canada (1); Portugal (1).	• Self-administered. • Number of questions: 14 items subdivided into 2 subscales: anxiety and depression, with 7 items each. • Purpose: to assess anxiety and depression symptoms in the last week. • Scoring criteria: scores 0–7 points: unlikely diagnosis; 8–11 points: possible; and 12–21 points: probable diagnosis.[26]
Composite International Diagnostic Interview (CIDI) Robins et al.[27]	CIDI-PHC, CIDI-12, M-CIDI (Munich version), Composite International Diagnostic Interview (CIDI-S) with 19 items.	Netherlands (6); USA (6); Germany (4); Australia (2); Spain (2); Brazil (2); Estonia (1); New Zealand (1); Malaysia (1); Israel (1); Russia (1); Norway (1); Canada (1); Denmark (1).	• Structured diagnostic interview, administered by a trained and certified non-clinical interviewer. • Number of questions: composed of 41 clinical e non-clinical modules. • Purpose: to identify mental and behavioral disorders in epidemiological studies. It estimates the prevalence rate of various mental disorders over a lifetime, in the last 12 months and in the last 30 days. It describes the symptomatic profile and the history of the illness, severity, level of disability and treatment of each evaluated disorder. CIDI 3.0 has been extended and expanded for use in World Mental Health Surveys.[27] • Scoring criteria: diagnosis generated from algorithms to responses based on the definitions and diagnostic criteria of the International Classification of Diseases (ICD), World Health Organization and DSM-IV.
General Health Questionnaire (GHQ) Goldberg and Williams[28]	GHQ-60, GHQ-12, GHQ-30, GHQ-28.	United Kingdom (6); USA (4); Italy (2); Germany (2); France (2); Australia (1); Netherlands (1); Qatar (1); Ecuador (1).	• Self-administered. • Number of questions: original version with 60 items. Available in versions of 60, 30, 28, 20 and 12 items. • Purpose: to identify cases of common mental disorders or minor psychiatric morbidities based on the symptoms described in the last two weeks. • Scoring criteria: answered items are rated from “less than usual” to “much more than usual” on a 1–4 point scale. To calculate the total score, values are assigned to each item; the two most commonly used scoring methods are dichotomous (0-0-1-1) or Likert-type (0-1-2-3).[28]

Continue...

Chart 1. Continuation.

Instrument, author(s)	Versions and/or variations in name*	Countries of publication*	Characterization of instrument
Primary Care Evaluation of Mental Disorders (PRIME-MD) Spitzer et al.[29]	PRIME-MD Patient Questionnaire (PQ)[1], PRIME-MD Clinician Evaluation Guide (CEG).	USA (10); Netherlands (2); Finland (1); Switzerland (4); Country not mentioned (2)	• PRIME-MD PQ: Self-administered. • Purpose: to assess five general groups of common mental disorders with symptoms in the last month. • Number of questions and scoring criteria: consisting of 26 questions, 25 of which are dichotomous (yes/no) and one question about the patient's global health with five possible answers (Excellent, Very good, Good, Fair or Poor). • PRIME-MD CEG: structured interview. • Composed of 5 modules. • Purpose: to assess depressive, anxious, somatoform, eating and alcohol abuse/dependence symptoms. • Question numbers and scoring criteria: specific modules are applied on the basis of positive responses to screening questions in PRIME-MD PQ.[29]
Clinical Interview Schedule-Revised (CIS-R) Lewis et al.[30]	CIS, CIS-Revised (CIS-R).	USA (3); Spain (2); Greece (2); Japan (1); Croatia (1); China (1); Netherlands (1); New Zealand (1); Country not mentioned (1).	• Structured diagnostic interview administered by a trained interviewer. • Number of questions: 14 modules, with 2 mandatory screening questions in each module, investigating the occurrence of symptoms in the last 30 days, followed by 4 questions assessing symptoms in the last 7 days, in case of a positive answer to the first 2 (totaling 84 questions). • Purpose: CIS-R is derived from its original CIS version, used by clinical interviewers, for the assessment of non-psychotic mental disorders.[30] • Scoring criteria: items are scored from 0 to 4 (or 5) depending on severity and frequency of symptoms. Total score from 0 to 57 points. Diagnosis performed from the application of algorithms, based on ICD-10.
Zung Self-Rating Depression Scale of Distress (ZSDS) Zung[31]	Zung Self-Rating Depression Scale of Distress and Risk Assessment Method (SDS-Zung or ZSDS or SDS), ZSDS Chinese version and Japanese version.	United Kingdom (7); Brazil (1), China (1), Mexico (1); Pakistan (1); Kenya (1); United Arab Emirates (1); India (1).	• Self-administered. • Number of questions: 20 items. • Purpose: to assess affective, psychological and somatic symptoms in the last few days. • Scoring criteria: Likert scale ranges from 1 (small part of the time) to 4 (most of the time). The maximum score is 80 points; <50 points: normal; 50–59 mild depression, 60–69 moderate depression and over 70 points severe depression.[32]
Montgomery-Åsberg Depression Rating Scale (MADRS) Montgomery and Åsberg[33]	MADRS–Self-Rated version (MADRS-S).	Switzerland (9); China (1); France (1).	• Administered by interviewer. • Number of questions: 10 items, where 9 are based on the patient's report and 1 item on the examiner's observation. • Purpose: assesses depressive symptoms on the basis of behavior over the past week. • Scoring criteria: sum of points ranging 0–60 points.[33]

Continue...

Chart 1. Continuation.

Instrument, author(s)	Versions and/or variations in name*	Countries of publication*	Characterization of instrument
Hopkins Symptom Checklist (HSCL) Derogatis et al.[34]	Hopkins Symptom Checklist Depression Scale (HSCL-D), Hopkins Symptom Checklist Depression Scale- 90 items (HSCL-90 or SCL-90-R), Hopkins Symptom Checklist Depression Scale- 20 items (HSCL – 20), Hopkins Symptom Checklist-10 (HSCL-10).	USA (4); Switzerland (1); United Kingdom (1); Norway (1); Country not mentioned (1).	• Self-administered. • Number of questions: 25 items, where 10 items assess anxiety symptoms and 15 items. • Purpose: to assess depressive symptoms in the last month. • Scoring criteria: Likert scale 1–4 (1=not at all, 2=a little, 3=quite a bit, and 4=extremely). Scores are calculated for the 10 anxiety items and the 15 depression items. The total score (average of all 25 items) is also calculated.[34]
Self-Reporting Questionnaire Harding et al.[35]	SRQ – 20, SRQ-20 Arab version, SRQ –25.	Brazil (2); Ethiopia (1); Vietnam (1); Kenya (1); United Arab United Arab Emirates (1); Uganda (1); India (1).	• Self-administered. • Number of questions: original instrument with 30 items (20 for screening of non-psychotic mental disorders, five for alcohol-related disorders, and four for psychotic symptoms.[35] • Purpose: screening for mental disorders with occurrence of symptoms in the last 30 days. • Scoring criteria: sum of dichotomous responses (yes/no).
Diagnostic Interview Schedule's (DIS) Robins et al.[36]	DIS- Revised (DIS-R)	USA (5); Canada (1); Country not mentioned (1).	• Structured interview administered by trained interviewers. • Purpose: diagnosis was performed based on three criteria: DSM-III, Feighner's Criteria and the Research Diagnostic Criteria (RDC). Covers over 30 mental disorders, through algorithms. • Scoring criteria: results provide a total point count based on symptoms (lifetime, past two weeks, past month, past six months, past year and currently) for each of the three systems.[36]
Major Depression Inventory (MDI) Bech and Wermuth[37]	MDI -3 items (MDI-3)	Denmark (5); Israel (1); Croatia (1).	• Self-administered. • Number of questions: 10 items, with 8 and10 having two subitems. • Purpose: to assess the frequency of depression symptoms presenting in the last two weeks[37] on the basis of the ICD-10 and DSM-IV, in addition to estimating the severity of the symptoms. • Scoring criteria: 0–5 point Likert scale, with 0 being "none of the time" and 5 "all of the time". Total score 0–50; cutoff score of 26 points.
Children's Depression Rating Scale Poznanski et al.[38]	Children's Depression Rating Scale-Revised (CDRS-R)	USA (2); India (4).	• Semi-structured interview administered through a clinical interviewer through an interview with the child and parents. • Purpose: diagnosis of depression in childhood/ adolescence. • Number of questions: 17 items, with subitems varying 1–5 or 1–7. • Scoring criteria: total from 17 to 113 points, where ≥40 is indicative of depression; ≤28 points is often used to define remission.[39]

Continue...

Chart 1. Continuation.

Instrument, author(s)	Versions and/or variations in name*	Countries of publication*	Characterization of instrument
Kiddie-Schedule for Affective Disorders and Schizophrenia Present and Lifetime Version (K-SADS-PL) Kaufman et al.[40]	No versions were presented in the studies evaluated	USA (2); India (3); United Kingdom (1).	• Semi-structured interview administered by a clinical interviewer with experience in child and adolescent psychopathology, in children/adolescents and in parents. • Purpose: to evaluate 20 diagnostic categories, investigating current and lifetime symptoms. Consisting of (1) introductory part; (2) session tracking; (3) Diagnostic Supplement and (4) Children's Global Rating Scales. • Scoring criteria: most K-SADS-PL items are scored on a 0–3 point scale.[40]
K10 Kessler Scale Kessler et al.[41]	K10 Kessler Scale (K10), K6 Kessler Scale (K6).	Ethiopia (2); Netherlands (2); Mexico (1).	• Self-administered. • Number of questions: K10 is composed of 10 items, while K6 is a subset using only items 2, 4, 5, 8, 9 and 10. • Purpose: The K10 and K6 scales assess behavioral, emotional and cognitive aspects, indicating non-specific psychological distress in the last 30 days. • Scoring criteria: Likert scale ranging from 1 to 5, with 1 being "never" and 5 "all the time". Total score of 6-50 (K10) points and 6-30 (K6)[41,42]

Source: authors
Legend: * The article may have cited two or more instruments, versions/variations and country.

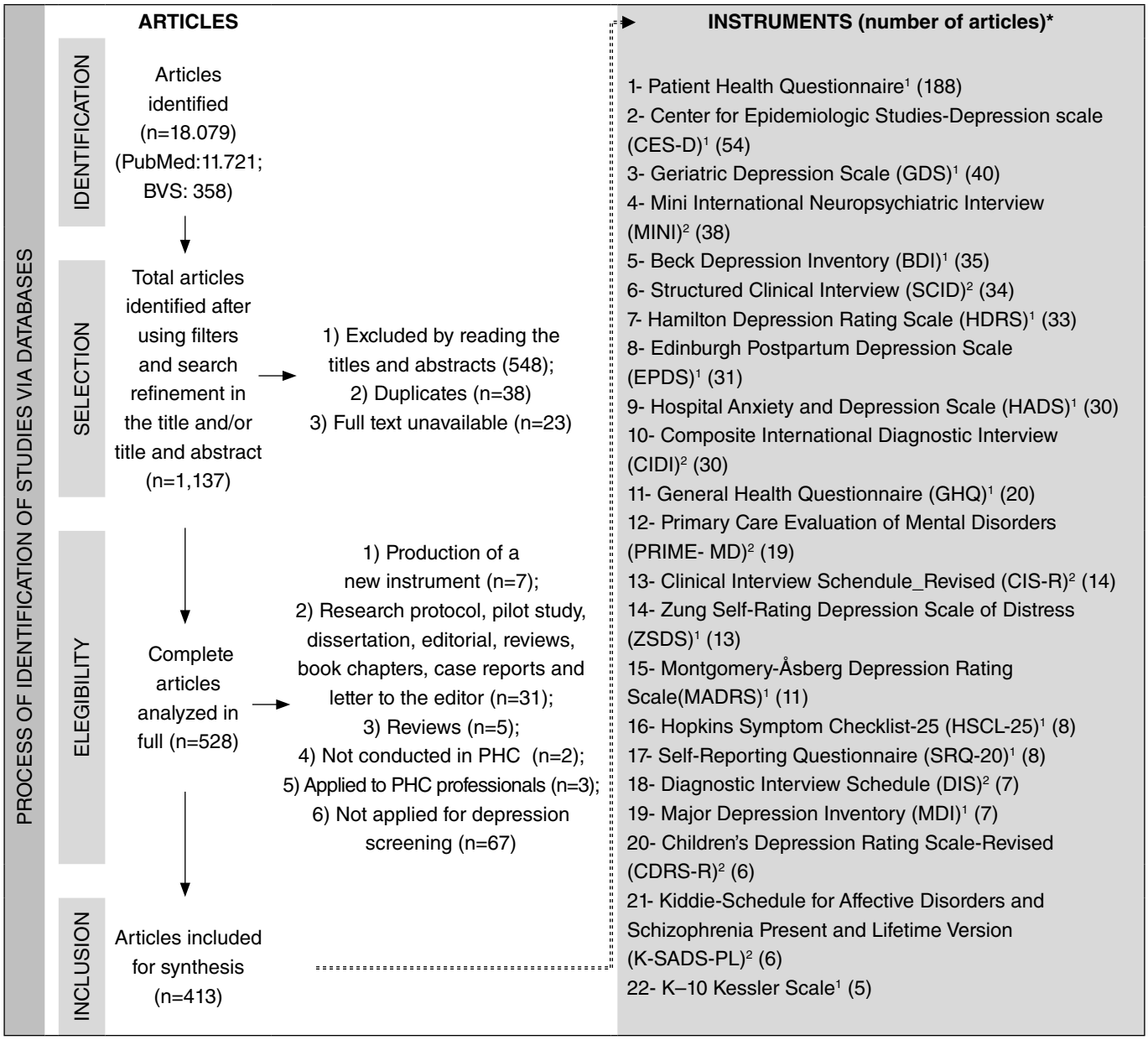
between the studies in terms of objectives, methodology, research scenario and presentation of results did not make this analysis feasible.

The differentiation between screening instruments and diagnostic interviews was based on consolidated knowledge in the area of epidemiology of mental disorders. This field has a well-established and clear categorization regarding the objectives of each instrument in the literature, whether for screening or diagnosis.

RESULTS

Characterization of studies

The search strategy resulted in the identification of a total of 18,079 publications, of which 17,721 were obtained from the MEDLINE database and 358 from LILACS. After applying language filters and evaluating titles and abstracts, 1,137 relevant articles remained. Subsequently, articles that did not align with the theme (totaling 548), duplicates (38) and studies with full text unavailable (23) were excluded, which resulted in 528 studies to be read in full. After this detailed reading, 413 articles were considered for analysis, as shown in Figure 2.[13,14]



Source: authors, adapted from Page et al.[14]
Legend: *The article may have one or more instruments cited: 1. Screening tool. 2. Diagnostic interview.
Figure 2. Flowchart of the selection process for articles included and instruments evaluated in the integrative review adapted from Preferred Reporting Items for Systematic Review and Met-Analyses (PRISMA).[13]

Of the included studies, 49 were published between 1985 and 2000, 135 between 2001 and 2010, and 229 between 2011 and 2021, demonstrating an annual average of 11 articles and a progressive increase in publications on the subject.

Regarding the research objectives, the following categories were observed: description of the prevalence and/or incidence of depression in a given population (164); instrument validation in a new language or population (128); investigation of the correlation between depression and other conditions, such as diabetes, neoplasms, arterial hypertension and HIV (77); evaluation of therapeutic interventions in patients with depression (50); and analysis of physicians' ability to diagnose depression (16).

The studies involved participants from 68 countries. In continental terms, publications from European countries predominated (155), with emphasis on the United Kingdom (45) and the Netherlands (20), followed by North America (134), with 124 articles originating in the United States. In Asia, 61 articles were published, with emphasis on China (13) and India (10). In South America, 29 publications were included, with 16 from Brazil and eight from Chile. Africa contributed 20 publications, Oceania 15 and Central America only one publication. Finally, in nine articles, the place where the study was carried out was not mentioned.

Regarding sample size, studies with more than 500 participants (200) prevailed, while 83 articles evaluated a population of less than 199 participants. As for the age range, the studies exclusively included non-elderly adults (186); only the elderly population (70); seniors and adults together (135); or just teenagers aged 11 to 17 (22). Some studies focused on sex, with 41 aimed at the female population and only one at adult males.

In addition, studies aimed at specific populations or groups, such as individuals with diabetes mellitus (18), cardiovascular diseases (7), pregnant women (14) and postpartum women (19), deserve to be highlighted. Studies with immigrants, military veterans, and adults from diverse ethnic backgrounds were also identified.

Instruments identified

As previously mentioned, 22 instruments were identified that were used in five or more publications. Simultaneous use of two or more instruments was observed in 198 studies, often with the purpose of control or diagnostic comparison (Chart 1).[15-42]

The Patient Health Questionnaire (PHQ) stood out as the most used screening instrument (in 188 studies), followed by the Center for Epidemiologic Studies-Depression Scale (CES-D) (in 54 studies). Eight diagnostic interviews were used in the studies, the Mini International Neuropsychiatric Interview (MINI) being the most frequent, used in 38 studies.

DISCUSSION

This review aims to address the need to improve the care offered in PHC for individuals with depressive disorders, due to their high prevalence. The focus is on identifying the most used screening and diagnostic tools in studies involving users at this level of care.

However, it is essential to distinguish between the use of screening instruments through rapid scales, which aim to increase the early detection of suspected cases, and the importance of clinical evaluation through structured diagnostic interviews. These interviews are intended to reduce heterogeneity in the collection and interpretation of symptoms, resulting in diagnoses established by algorithms based on predefined criteria.

Despite the need for more studies, especially those dedicated to systematically analyzing the benefits and challenges of incorporating these instruments in the daily practice of PHC professionals, such tools can contribute to a more effective detection of individuals with depression, allowing a complete approach in timely. Considering that the literature emphasizes the difficulties still present in PHC to make accurate diagnoses in mental health and provide adequate treatment to large segments of the population, this strategy deserves a deeper analysis in the context of primary

care. However, it is also important to consider the potential risk of overdiagnosis and overtreatment (quaternary prevention).[43,44]

Some of the most commonly used screening instruments in PHC research, such as the PHQ-9, CES-D and SRQ, have characteristics that make them potentially advantageous for the clinical context of this level of care. They are easy to use and have a low cost, in addition to having a high discriminatory capacity in distinguishing between cases and non-cases. In addition, these instruments have a reduced number of questions, which means that their application requires less time and does not require specialized training. They are also free to access, self-administering and already have a wide global experience in their use. In addition to addressing more than one disorder, such as eating disorders, their psychometric properties have already been evaluated in different populations.[45] In some circumstances, especially in regions with a shortage of health professionals and high social vulnerability, the incorporation of some of these instruments in the routine of community health workers could be viable, provided that the necessary referrals and access to appropriate treatment are ensured.

However, some of the identified screening instruments may pose challenges for their daily application in PHC. For example, some instruments may not be available for public use (such as the Beck Inventory) or may contain too many questions (such as the longer versions of the HSCL and GHQ), which require more time to administer. In addition, these instruments may have less experience of use in PHC, have not been validated for the language or care context in question, have complex and impractical scoring systems and positivity criteria for the everyday environment, be directed only to certain groups populations (such as the elderly), or focus on specific groups (for example, puerperal women), but do not assess aspects relevant to PHC, as is the case with the EPDS, which does not consider specific experiences of motherhood and mother-baby interaction. Additionally, the results of these instruments can be strongly influenced by clinical characteristics of patients, such as fatigue or sleep disorders, which can result in distortions and difficulties in evaluating results in a diverse clinical environment such as PHC.[46,47]

Accordingly, it is noteworthy that, in Brazil, the screening instruments PHQ-9,[48] SRQ,[49] CES-D,[50] GDS,[51] HAD,[52] Beck Inventory, [21] GHQ[53] and MDI[54] were validated. K6 was translated into Portuguese, but there is still a lack of studies on its psychometric properties for the Brazilian population.[45]

As for diagnostic interviews, the challenges in integrating them into PHC are similar to those of screening instruments. The practical application of these diagnostic instruments in the clinical scenario of PHC can be complex, especially due to the need for training, which may include training in psychiatry, or even the requirement of experience in child psychiatry, depending on the public under analysis.[45,55] The time greater application can also be a hindrance to its implementation in contexts overloaded with excessive demand for service. On the other hand, there are few diagnostic interviews validated in PHC, as is the case with *MINI* and *CIS-R*.[30-56] Therefore, additional studies are needed for a complete assessment of the implementation of these tools in PHC, taking into account the various socioeconomic and cultural variations.

From the totality of works identified in this integrative review, some gaps and the need for greater emphasis on some aspects are perceived. As it turned out, studies are predominantly concentrated in Europe and North America. The Global South has a much smaller presence in the studies, although it is strongly affected by the problem of mental disorders, especially depression. This applies to the case of Brazil, although this is the country with the highest number of studies in Latin America. This fact has a significant impact when it comes to designing, validating, translating and adapting instruments for screening and diagnosing health conditions that are so sensitive to cultural and social aspects, such as depression.

Still in relation to Brazil, there is also a concentration of these studies in the Southeast region, especially in Rio de Janeiro and São Paulo, which can raise questions related to cross-cultural adequacy, also linked to internal factors of the countries.[45]

Another important aspect refers to the care scenario in which the instruments were validated, translated and adapted. Some instruments used in PHC studies have not been validated at this level of care or in the general population, and this is more common in the hospital environment. This is evident in studies that use the HADS, a hospital-based scale.[26] An effort is needed to ensure that the instruments used in PHC are adequate from a semantic point of view (ensuring the meaning of words), idiomatic (considering expressions), experiential (ensuring the equivalence of everyday facts experienced) and conceptual, as well as from the care point of view.

It is also evident the lack of studies in certain populations that are of great relevance for PHC, as is the case of the children's group. PHC offers comprehensive and longitudinal care to all ages and social groups, without distinction. However, depressive disorders are common in the entire population, and the problem of underdiagnosis and failure to implement the most appropriate treatment in a timely manner affects all groups. In this sense, it is crucial to seek to avoid perpetuating inequalities and inequities in access to care through the adoption of strategies to improve the care provided, such as the use of screening instruments and diagnostic interviews.

As for the limitations of this review, it is important to mention that not all procedures recommended for a systematic literature review were performed, which could have resulted in the omission of relevant studies for the purpose of the article. In addition, the selection of studies was based on criteria that required the mention of the instrument in the title and/or abstract of the article, which may have led to some limitations and the loss of relevant studies. However, several procedures were adopted to improve this integrative review, such as the absence of period restriction for the search, the search in robust databases (including one specific for the Latin American context) and the analysis of the articles by at least two researchers.

On the other hand, specific quality analyzes were not conducted for each selected article, which could provide information about the instruments frequently used in high-quality studies in the area. Given the nature of the review and the established objective, the diversity of studies turns out to be beneficial in providing a broad view of the field and identifying gaps to be filled in the literature, especially those of greater interest to PHC and the socioeconomic context of the population.

In this perspective, the use of screening instruments and diagnostic interviews widely used in epidemiological studies, generally administered by trained lay interviewers or trained health professionals, offers standardized estimates and the possibility of increasing the detection and early treatment of depressive disorders in the adult population.[8,15,16]

Considering the strategic position that PHC occupies as a model of care in the health system, organizing its services based on attributes such as access, comprehensiveness and continuous care over time, functioning as the preferred gateway to the health system for new individual and family problems, as well as crises of chronic problems, it is the responsibility of the PHC to conduct the filtering process and early identification of depressive symptoms.[57]

Given the high prevalence rate of depression and the crucial role played by PHC in the screening and diagnosis of mental disorders, the aim of this study was to identify and describe, through a literature review, the main screening instruments and diagnostic interviews used in the assessment of depressive symptoms in patients seeking attention in PHC. This could have a positive impact on clinical practice, facilitating the identification of cases of depression, the detection of higher risk groups, the planning,

implementation and monitoring of therapeutic interventions, as well as the proposition of strategies to guide public policies related to care. to mental health.

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CONFLICT OF INTERESTS

Nothing to declare.

AUTHORS' CONTRIBUTIONS

MVB: Project administration, Formal analysis, Data curation, Writing – original draft, Writing – review & editing, Investigation, Methodology, Validation. TFP: Investigation. MLP: Investigation. TCL: Investigation. ESP: Investigation. KCC: Investigation. TDS: Project administration, Formal analysis, Writing – review & editing, Methodology, Supervision. MCV: Project administration, Formal analysis, Writing – review & editing, Methodology, Funding acquisition, Supervision.

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