http://dx.doi.org/10.18623/rvd.v23.n4.4838

MITIGATION OF DIAGNOSTIC UNCERTAINTY IN PSYCHIATRY AND MENTAL HEALTH IN PRIMARY CARE: A SCOPING REVIEW

MITIGAÇÃO DA INCERTEZA DIAGNÓSTICA NA PSIQUIATRIA E SAÚDE MENTAL NA ATENÇÃO PRIMÁRIA: UMA REVISÃO DE ESCOPO

Article received on: 10/9/2025
Article accepted on: 1/9/2026

Nelson Pinto Gomes*
*Université Catholique de Louvain (UCL), Belgium
Orcid: https://orcid.org/0009-0000-2549-7402
npgomes5@hotmail.com

Sadi Antonio Pezzi Junior**
**Universidade Federal do Ceará, Fortaleza, Ceará, Brazil
Lattes: http://lattes.cnpq.br/0215626932799555
Orcid: https://orcid.org/0000-0001-6606-5112
juniorlpezzi0@gmail.com

Elisabete Soares de Santana***
***Universidade Federal de Pernambuco, Recife, Pernambuco, Brazil
Lattes: https://lattes.cnpq.br/1149505575311414
Orcid: https://orcid.org/0009-0000-5773-3879
elisabetesoares349@gmail.com

Beatriz Souza Leal****
****Pontifícia Universidade Católica de Campinas, São Paulo, São Paulo, Brazil
Lattes: https://lattes.cnpq.br/7267544582154512
Orcid: https://orcid.org/0009-0009-6022-5993
beatriz.sl2@puccampinas.edu.br

Alexandre Edu Rassy*****
*****Universidade de Santo Amaro, Santana de Parnaíba, São Paulo, Brazil
Lattes: http://lattes.cnpq.br/0506634748656329
Orcid: https://orcid.org/0009-0002-9470-8335
alexandrerassy@hotmail.com

João Vitor Gomes Braga******
******Pontifícia Universidade Católica de Goiás (PUC-GO), Goiânia, Goiás, Brazil
Orcid: https://orcid.org/0009-0008-1086-9267
j.vitin2124@gmail.com

Milena Fernandes da Silveira*******
*******Centro Universitário Max Planck (UNIMAX), Indaiatuba, Indaiatuba, São Paulo, Brazil
Orcid: https://orcid.org/0009-0002-2061-9129
silveiramilenaf@gmail.com

Daniel Gomes Fialho********
********Universidade de Mogi das Cruzes (UMC), Mogi das Cruzes, São Paulo, Brazil
Orcid: https://orcid.org/0009-0005-2249-0658
danfialho@hotmail.com

Ticiano Magalhães Dantas*********
*********Universidade Regional do Cariri, Crato, Ceará, Brazil
Lattes: http://lattes.cnpq.br/6713061946804946
Orcid: https://orcid.org/0000-0002-9527-5722
ticianotmd@hotmail.com

Pedro Ernesto Teles Barbosa********
**********Universidade Federal Fluminense, Belo Horizonte, Minas Gerais, Brazil
Orcid: https://orcid.org/0009-0006-3466-4982
pedrinhoteles@gmail.com

Islandia Maria Rodrigues Silva********
**********Secretaria de Saúde do Estado do Piauí (SESAPI), Rio de Janeiro, Rio de Janeiro, Brazil
Lattes: http://lattes.cnpq.br/4370487896972880
Orcid: https://orcid.org/0000-0002-2451-4749
islaenf@hotmail.com

João Paulo Lopes da Silva********
**********Universidade Federal da Paraíba, São José de Princesa, Paraíba, Brazil
Orcid: https://orcid.org/0000-0003-0018-9897
joaolopespb@gmail.com

Renata Trindade Gonçalves********
**********Universidade Federal de Juiz de Fora, Brasília, Distrito Federal, Brazil
Lattes: http://lattes.cnpq.br/9019326663898510
Orcid: https://orcid.org/0000-0001-8748-1238
tatinhatg@gmail.com

The authors declare that there is no conflict of interest

Abstract
OBJECTIVE: To map and analyze recent scientific evidence on the mitigation of diagnostic uncertainty in psychiatry as a core element of clinical decision-making in primary mental health care, identifying diagnostic strategies, care practices, and organizational approaches. METHODS: Scoping review conducted between December 2025 and January 2026, following Joanna Briggs Institute recommendations and reported according to PRISMA-ScR. The research question was structured using the PCC framework. Studies published in the last five years, in any language, addressing diagnostic uncertainty in primary mental health care were included. Searches were performed in PubMed, Medline, Scopus, Embase, and Cochrane Library, with complementary searches in Google Scholar. Data selection and extraction were performed independently by two reviewers. RESULTS AND DISCUSSION: Twelve studies were included. Findings indicate that mitigating diagnostic uncertainty relies on integrating diagnostic tools, collaborative and measurement-based care practices, and organizational strategies. Care practices predominated, while organizational interventions were less frequently addressed, highlighting important gaps. CONCLUSION: Reducing diagnostic uncertainty in primary mental health care requires sustained, integrated strategies combining longitudinal follow-up, structured communication, standardized assessment tools,

Resumo
OBJETIVO: Mapear e analisar evidências científicas recentes sobre a mitigação da incerteza diagnóstica em psiquiatria como elemento central da tomada de decisão clínica na atenção primária à saúde mental, identificando estratégias diagnósticas, práticas de atendimento e abordagens organizacionais. MÉTODOS: Revisão exploratória realizada entre dezembro de 2025 e janeiro de 2026, seguindo as recomendações do Joanna Briggs Institute e relatada de acordo com o PRISMA-ScR. A questão de pesquisa foi estruturada usando a estrutura PCC. Foram incluídos estudos publicados nos últimos cinco anos, em qualquer idioma, que abordassem a incerteza diagnóstica na atenção primária à saúde mental. As pesquisas foram realizadas no PubMed, Medline, Scopus, Embase e Cochrane Library, com pesquisas complementares no Google Scholar. A seleção e extração de dados foram realizadas de forma independente por dois revisores. RESULTADOS E DISCUSSÃO: Doze estudos foram incluídos. Os resultados indicam que a mitigação da incerteza diagnóstica depende da integração de ferramentas diagnósticas, práticas de atendimento colaborativas e baseadas em medidas e estratégias organizacionais. As práticas de atendimento predominaram, enquanto as intervenções organizacionais foram abordadas com menos frequência, destacando lacunas importantes. CONCLUSÃO: A redução da incerteza diagnóstica na atenção primária à saúde mental requer estratégias sustentadas e

and collaborative care models to improve clinical decision-making and diagnostic safety.

Keywords: Diagnostic Uncertainty. Mental Health. Primary Health Care. Clinical Decision-Making. Psychiatry.

integradas que combinem acompanhamento longitudinal, comunicação estruturada, ferramentas de avaliação padronizadas e modelos de atendimento colaborativo para melhorar a tomada de decisões clínicas e a segurança diagnóstica.

Palavras-chave: *Incerteza diagnóstica. Saúde mental. Cuidados de saúde primários. Tomada de decisão clínica. Psiquiatria.*

1 INTRODUCTION

Diagnostic uncertainty arises from the probabilistic nature of signs and symptoms, variability in clinical expression, and limitations of assessment instruments, requiring the primary clinician to adopt a cognitive framework that combines provisional hypotheses with active monitoring. This epistemological condition implies that the diagnostic process should be conceived as an iterative sequence of inferences and risk-controlled tests rather than a definitive judgment at the first consultation, particularly in conditions with dynamic evolution and variable response to initial interventions (Dahm *et al*., 2023).

In primary care settings, the simultaneous presence of multimorbidity, somatic comorbidities, and subclinical symptomatology increases diagnostic ambiguity in mental health, making the systematic use of screening tools, standardized scores, and follow-up measures necessary to transform uncertainties into measurable signals over time. This strategy enables the distinction between transient fluctuations and persistent clinical patterns, thereby qualifying longitudinal decision-making (Zhou *et al*., 2022).

Explicit communication about uncertainty, including explaining knowledge limitations and follow-up plans, functions as an epistemo-kinetic component of clinical decision-making because it alters expectations, facilitates shared responsibility with the patient, and creates space for temporal reassessments that reduce diagnostic risk and error. By legitimizing uncertainty as part of care, the therapeutic alliance and adherence to proposed monitoring plans are strengthened (Patel *et al*., 2024).

Organizational strategies such as integrated care models and collaborative care mitigate uncertainty by providing second-opinion consultations, psychiatric supervision, and indicator-based monitoring, transforming individual uncertainty into a temporal and

system-level problem that can be managed through workflows and clinical escalation tools. In this way, decisions no longer depend exclusively on the isolated judgment of a single professional, reducing undesirable variability (Reist *et al*., 2022).

The clinician's individual tolerance for uncertainty influences diagnostic and therapeutic choices; therefore, training practices that develop clinical metacognition, bias recognition, and the judicious use of heuristics contribute to more calibrated decisions in the face of ambiguity. Such refinement reduces both excessive interventions and clinical inertia when confronting uncertain signs (Scott *et al*., 2023).

In mental health, mitigating uncertainty involves integrating symptom measures through measurement-based care and self-report instruments that allow the quantification of clinical trajectories, operationalizing response and non-response criteria and thereby guiding stepped decisions in brief cycles of evaluation and therapeutic adjustment. This approach supports more responsive, data-driven interventions even in scenarios of imprecise initial diagnosis (Isaacs *et al*., 2024).

The development of management plans that explicitly define warning signs, timeframes, and concrete actions, often termed safety-netting, constitutes a practical tactic for managing the inherent "what ifs" of the initial presentation, protecting against harm and aligning clinical follow-up with observable short- and medium-term triggers. These plans increase predictability and safety for both clinician and patient (Cox *et al*., 2024).

Digital technologies and decision-support tools may reduce uncertainty by synthesizing longitudinal data, suggesting diagnostic probabilities, and prompting follow-ups; however, their adoption requires contextual validation and clinical integration that preserves the therapeutic relationship and enables critical interpretation of algorithmic outputs. Without such clinical mediation, there is a risk of uncritical automation of diagnostic judgment (Russell *et al*., 2024).

Patient-centered approaches, including shared decision-making and personalized decision support, transform uncertainty into a negotiated process that prioritizes values and preferences as complementary criteria to clinical probability, strengthening adherence and joint monitoring of initial diagnostic hypotheses. This alignment favors more sustainable choices throughout follow-up (Hormazábal-Salgado *et al*., 2024).

In summary, mitigating diagnostic uncertainty in primary mental health care is a multifactorial construct that requires communicative competencies, integrated care structures, continuous measurement instruments, and safety-netting practices. Conceived in this way, clinical decision-making becomes an adaptive, reversible, and signal-oriented process over time, shifting the focus from immediate certainty toward safety and progressive clinical learning (Gurfinkel *et al*., 2024).

In this context, the present study aims to map and analyze the most recent scientific evidence on the mitigation of diagnostic uncertainty in psychiatry as a core axis of clinical decision-making in primary mental health care, identifying diagnostic strategies, care practices, and organizational approaches at this level of care.

2 METHODOLOGY

Scoping review study conducted between December 2025 and January 2026, following the methodological recommendations of the Joanna Briggs Institute (Peters *et al*., 2022). The study was structured according to a rigorous design, ensuring traceability, transparency, and reproducibility at all stages, with prior protocol registration on the Open Science Framework (OSF) platform, in line with open science principles <https://doi.org/10.17605/OSF.IO/PBYSM> (Galvão, Pansani and Harrad, 2015; Tricco *et al*., 2018).

In accordance with JBI recommendations for scoping reviews, the methodological framework was designed to integrate consolidated references of scientific rigor. Initially, the guidelines proposed by Peters *et al*. (2020) were adopted, which guide scoping reviews aimed at broadly mapping evidence, identifying key concepts, and analyzing knowledge gaps in complex and multifactorial phenomena. Subsequently, the recommendations of the PRISMA-ScR checklist, updated by Tricco *et al*. (2018), were incorporated, ensuring standardization in reporting, clarity in selection flows, and methodological transparency.

The protocol proposed by Galvão, Pansani and Harrad (2015) was then adopted as an operational instrument for implementing international guidelines, providing practical applicability and contextualization within the field of primary health care. The convergence of the proposals of Peters (2020), Tricco (2018), and Galvão (2015) resulted

in a robust methodological structure organized into five sequential stages: (1) formulation of the research question according to the PCC strategy; (2) identification of relevant studies in indexed databases; (3) selection according to eligibility criteria; (4) systematic extraction of pertinent information; and (5) synthesis and mapping of findings.

In the first stage, the PCC strategy (Population, Concept, and Context) was used to define the scope of the review. P (Population): professionals and teams working in primary health care; C (Concept): strategies for mitigating diagnostic uncertainty in mental health; C (Context): primary mental health care. The guiding research question formulated was: "Which diagnostic strategies, care practices, and organizational approaches have been used to mitigate diagnostic uncertainty in psychiatry within primary care, and what evidence exists regarding their impact on clinical decision-making in mental health?"

In the second stage, the search was conducted in the PubMed, Medline, Scopus, Embase, and Cochrane Library databases. To develop the search strategies, DeCS/MeSH terms were consulted through the Virtual Health Library (VHL), considering the study objective and guiding question. After adjustments and testing, English descriptors combined with Boolean operators were applied: (Diagnostic Uncertainty OR Diagnostic Error OR Clinical Uncertainty) AND (Primary Health Care OR Primary Care) AND (Mental Health OR Mental Disorders) AND (Clinical Decision Making OR Decision Support OR Care Management).

Complementary searches in the gray literature were conducted using Google Scholar. Considering the inherent limitations of this platform, such as low specificity of results and absence of refined methodological filters, the first 100 records ordered by relevance were analyzed, as commonly adopted in scoping review methodology. The same inclusion and exclusion criteria defined for indexed databases were applied, considering publication period, study type, thematic adherence, and direct relation to the guiding question. Duplicate studies, non–peer-reviewed publications, studies without adequate methodological description, or those not pertinent to the review scope were excluded, while acknowledging the limitations of this source regarding evidence robustness.

In the third stage, following the PRISMA-ScR flowchart adapted from Tricco *et al*. (2018) (Figure 1), study search, screening, and selection were conducted in four sub-

stages. During Identification, records retrieved from databases and complementary searches were exported, organized, and submitted to duplicate removal by two reviewers. In the Selection phase, titles and abstracts were screened, excluding studies that did not address diagnostic uncertainty, mental health, or the primary care context.

In the Eligibility sub-stage, full texts were analyzed according to previously defined criteria, considering adherence to the central concept of the review, clarity of described strategies, and relevance to the primary mental health care context. Disagreements between reviewers were resolved by consensus. In the Inclusion phase, studies meeting the criteria were incorporated into the final scope of the review, coded, and forwarded to the data extraction stage, composing the flowchart presented in Figure 1.

In the fourth stage, complete studies published within the last five years, with open access and in all languages, addressing strategies to mitigate diagnostic uncertainty in mental health within primary care—covering clinical, organizational, and decision-support dimensions—were included. Empirical studies, qualitative studies, intervention studies, analyses of care processes, implementation studies, and literature reviews were considered. Studies not referring to primary care or not explicitly discussing diagnostic uncertainty were excluded.

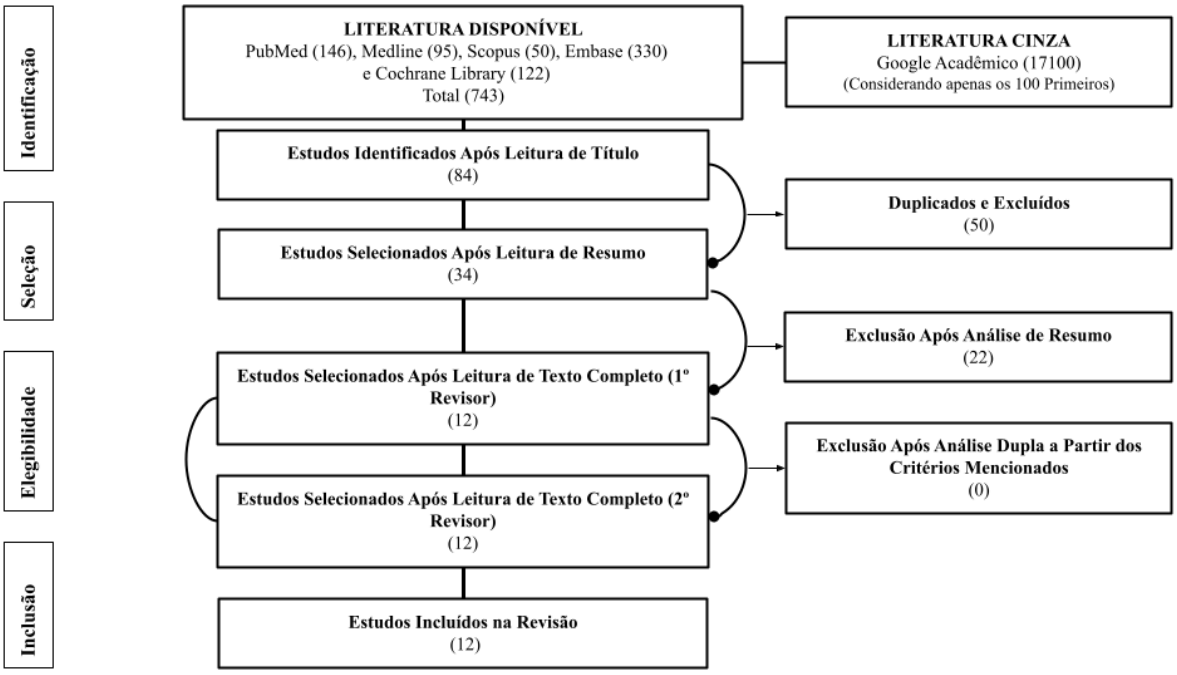
In the fifth stage, data from the selected studies were systematically extracted, blindly analyzed, and organized into a structured spreadsheet within the Rayyan tool by two reviewers, optimizing the analytical process and enabling consistent integration of results from different studies. In accordance with Kellermeyer, Harnke, and Knight (2018), a detailed data analysis was performed through full reading of the selected articles. Results were presented through a study selection and extraction flowchart, as illustrated in Figure 1.

After the extraction process, each study was included in tables (1, 2, and 3), organized using a unique code composed of the abbreviation “Cod” followed by a numerical sequence for each Study (E), arranged as (E + sequential number: E1, E2, E3…). Extracted information was organized as follows: Table 1 – title, authors, year of publication, and Level of Evidence (LoE), according to the Oxford Centre for Evidence-Based Medicine classification (2024); Table 2 – objective, study type, and population/sample.

3 RESULTS

The study selection process systematically followed PRISMA stages. Initially, 743 records were identified in the available literature, retrieved from PubMed (146), Medline (95), Scopus (50), Embase (330), and the Cochrane Library (122), in addition to 17,100 records from gray literature in Google Scholar, considering only the first 100 results. After title screening, 84 studies were considered potentially relevant, with 50 excluded due to duplication or failure to meet eligibility criteria. During the selection phase, 34 studies had their abstracts assessed, resulting in the exclusion of 22. Subsequently, 12 studies were evaluated in full text by the first reviewer, with no exclusions after double assessment. Finally, the 12 studies confirmed by the second reviewer were included in the review.

Figure 1. Study Selection Process for the Scoping Review



Source: Authors, 2026.

Table 1 – "General Information of Each Study" organizes the basic data of the included studies. Each row is assigned a code (E-study + number) to facilitate referencing throughout the work. The columns include: "Cod" (study code), "Title" (full name of the research), "Author(s)" (responsible authorship), "Year" (year of publication), and "LoE"

(level of evidence according to the Oxford Classification, 2024). The table provides an overall view of the sources, enabling rapid identification and comparison among the studies.

Table 1 – General Information of Each Study

Cod	Title	Author(s)	Year	NE
E1	**Telepsychiatry and Artificial Intelligence: A Structured Review of Emerging Approaches to Accessible Psychiatric Care**	**Bobkov *et al.***	**2025**	**4**
E2	**Communication of Diagnostic Uncertainty in Primary Care and Its Impact on Patient Experience**	**Dahm *et al.***	**2022**	**4**
E3	**Enhancing Provider Mental Health Screening in Primary Care: A Quality Improvement Project**	**D'Amico *et al.***	**2023**	**4**
E4	**The implementation challenge of computerised clinical decision support systems for the detection of disease in primary care**	**Derksen *et al.***	**2025**	**1**
E5	**Collaborative care models for mental health in low- and middle-income countries**	**Faisal *et al.***	**2024**	**2**
E6	**Diagnostic Prediction Models for Primary Care, Based on AI and Electronic Health Records**	**Hunik *et al.***	**2025**	**1**
E7	**Measurement-Based Care to Enhance Antidepressant Treatment Outcomes in Major Depressive Disorder**	**Husain *et al.***	**2025**	**1**
E8	**Harnessing big data and predictive analytics for mental health detection in primary care**	**Islam *et al.***	**2024**	**4**
E9	**Effectiveness of Community Mental Health Nurses in an Integrated Primary Care Service**	**Kenwright *et al.***	**2024**	**3**
E10	**Clinical psychiatric care models in primary care settings**	**Kolding *et al.***	**2024**	**3**
E11	**Screening tools assessing mental illness in primary care: A systematic review**	**Neulinger *et al.***	**2024**	**1**
E12	**Transdiagnostic interventions for common mental disorders in primary care**	**Vogel *et al.***	**2024**	**1**

Source: Authors, 2026.

Table 2 – "Specific Methodological Information of Each Study" aims to systematically present the main methodological aspects of the analyzed studies. Each row represents a study, corresponding to the same study listed in Table 1, thereby enabling coherence and traceability between the information. This table allows comparative analysis among the methods used in the studies, supporting the assessment of the consistency, quality, and applicability of the presented evidence.

The columns are organized as follows: “Cod,” indicating the study code; “Objective,” describing the main purpose of the research; “Study Type,” specifying the adopted methodological design (such as case study, cross-sectional, qualitative, quantitative, etc.); and finally, “Population/Sample,” detailing the participant group or number of investigated elements.

Table 2 – Specific Methodological Information of Each Study

Cod	Objective	Study Type	Population/Sample
E1	**Analyze the use of telepsychiatry and artificial intelligence to expand access to mental health care**	**Structured systematic review**	**Secondary studies**
E2	**Assess the impacts of communicating diagnostic uncertainty on patient experience**	**Integrative review**	**Secondary studies**
E3	**Qualify the screening of mental disorders performed by primary health care professionals**	**Implementation study**	**Primary care professionals and adult patients**
E4	**Analyze implementation challenges of computerized clinical decision-support systems**	**Systematic review**	**Secondary studies**
E5	**Evaluate the effectiveness of collaborative care models in mental health**	**Observational study**	**Adult primary care patients**
E6	**Assess artificial intelligence–based predictive models applied to diagnosis in primary care**	**Systematic review**	**Electronic health records**
E7	**Evaluate the impact of measurement-based care on major depression outcomes**	**Randomized clinical trial**	**Adult patients with depression**
E8	**Analyze opportunities and challenges of big data use in primary mental health care**	**Observational analytical study**	**Health systems and databases**
E9	**Evaluate the effectiveness of mental health nurses’ roles in integrated services**	**Observational study**	**Adult patients and primary care professionals**
E10	**Analyze clinical models of psychiatric care in primary care**	**Observational study**	**Adult primary care patients**
E11	**Map mental disorder screening instruments used in primary care**	**Systematic review**	**Secondary studies**

E12	**Evaluate transdiagnostic interventions for common mental disorders in primary care**	**Systematic review and meta-analysis**	**Secondary studies**

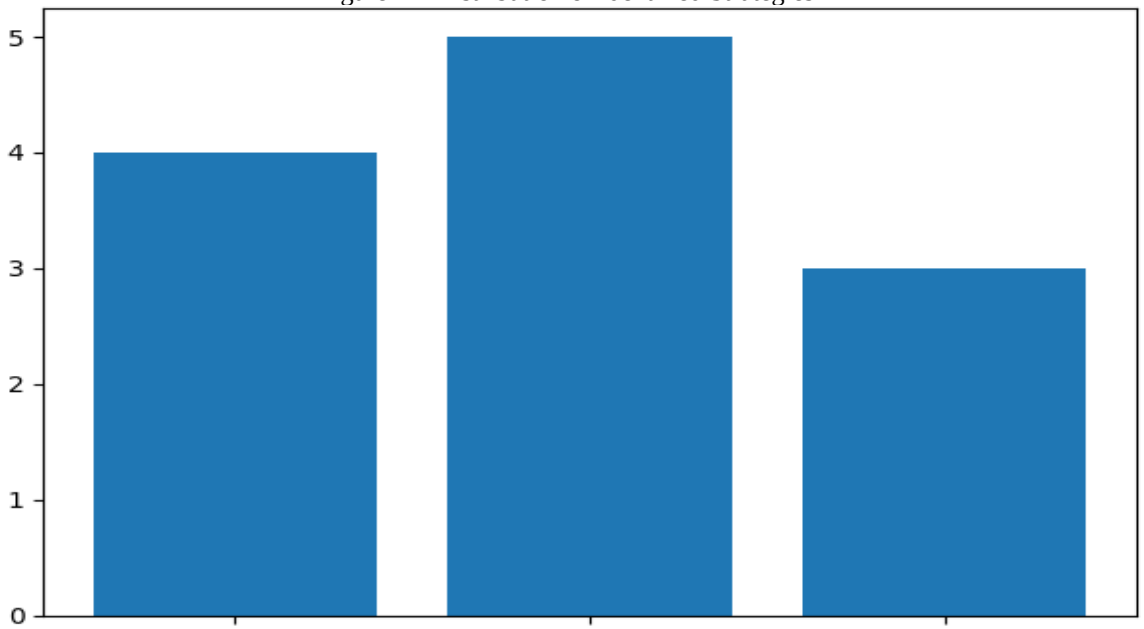
Source: Authors, 2026.

The findings of the studies indicate that the qualification of mental health care in primary care depends on the integration of digital technologies, collaborative models, and measurement-based clinical practices. Reviews and clinical studies show that telepsychiatry, artificial intelligence, big data, and decision-support systems expand access, improve screening, and support the management of diagnostic uncertainty, especially when integrated into interdisciplinary teams.

The studies further indicate that measurement-based care and collaborative care are associated with reductions in depressive symptoms and improvements in clinical outcomes, including in low- and middle-income settings. The role of mental health nursing emerges as strategic within integrated primary care, strengthening continuity of care and clinical coordination. Despite this potential, the studies highlight implementation challenges such as system integration, professional training, and ethical data use, indicating that the greatest benefits occur when technological innovations are aligned with consolidated, patient-centered clinical models.

Figure 2 presents the “Distribution of Identified Strategies” in the included studies, organized into three analytical axes—“diagnostic strategies, care practices, and organizational approaches”—based on the methodological synthesis of Table 2. The quantitative representation allows visualization of the hierarchy of approaches employed to address diagnostic uncertainty in mental health within primary care.

Figure 2 – Distribution of Identified Strategies



Source: Authors, 2026.

A predominance of care practices is observed, concentrating the largest number of studies and indicating greater investment in interventions directly linked to clinical care, such as collaborative models, systematic symptom monitoring, and expanded access through digital technologies. Diagnostic strategies occupy an intermediate position, reflecting the use of screening instruments, predictive models, and clinical decision-support systems as tools to assist professional decision-making. Organizational approaches appear in smaller proportion, highlighting a gap in the scientific literature regarding structural and service reorganization interventions, despite their relevance to the sustainability and integration of mental health care in primary care settings.

4 DISCUSSION

The systematic review by Dahm *et al*. (2022) identifies as a consolidated trend the recognition of structured communication of diagnostic uncertainty as a central component of care in primary care settings. However, a relevant gap is observed regarding the conceptual standardization of these strategies and the measurement of their specific effects on cognitive outcomes of clinical reasoning in mental health, indicating the need for experimental studies capable of isolating explanatory mechanisms.

The qualitative study by Russell *et al*. (2024) reinforces the trend of understanding mental health diagnosis as a longitudinal and negotiated process. Nevertheless, the methodological operationalization of this progressive diagnosis remains underexplored, particularly concerning temporal criteria, decision points, and transition markers between acceptable uncertainty and the need for diagnostic redefinition, thereby outlining a clear agenda for longitudinal research.

The scoping review by Gardner *et al*. (2024) highlights growing academic interest in learning to manage clinical uncertainty, emphasizing structured reflection and supervision as key elements. Still, the literature lacks evaluation of the impact of these educational strategies on measurable diagnostic performance, especially in mental health, suggesting the need for studies linking training, clinical cognition, and diagnostic outcomes.

Kohrt's (2025) conceptual article articulates a critical trend regarding the excessive use of screening scales, pointing to the epistemological limits of these tools. Despite this, empirical investigations systematically comparing diagnostic trajectories predominantly based on scales versus integrated approaches are lacking, representing an underexplored area for comparative and mixed-methods studies.

The systematic review by Neulinger *et al*. (2024) indicates progress in the use of transdiagnostic instruments as a response to symptomatic overlap in mental health. However, the literature remains limited regarding validation of these instruments as effective reducers of diagnostic uncertainty over time, pointing to the need for prospective studies evaluating their utility beyond initial screening.

The review by Habtamu *et al*. (2023) demonstrates a trend toward integrating professional training, screening, and case management to improve diagnostic accuracy. Nonetheless, a gap persists in identifying which components of these interventions exert the greatest influence on reducing uncertainty, suggesting the need for research that disaggregates complex interventions into their constituent elements.

The trial by Jayashri *et al*. (2025) reinforces the role of supervised training in improving diagnostic concordance, highlighting continuing education as a structural axis. Even so, it remains insufficiently explored how these gains are sustained over time and across different contexts, indicating demand for follow-up studies and replication in diverse primary care systems.

Scott's (2023) narrative review evidences the growing use of simulations and complex case analysis as strategies to address clinical uncertainty. However, the literature lacks robust evaluations directly linking these methodologies to the reduction of specific cognitive biases in mental health diagnosis, configuring a fertile field for experimental research in clinical cognition.

The clinical trial by Archer *et al*. (2022) underscores the Collaborative Care model as an organizational trend capable of reducing diagnostic uncertainty through continuous monitoring. Nevertheless, studies have not sufficiently explored how this diagnostic refinement occurs from a cognitive and decision-making perspective, opening space for investigations into the mental processes underlying collaborative decision-making.

The systematic review by Lewis *et al*. (2023) consolidates measurement-based care as an emerging strategy to address diagnostic and therapeutic uncertainty. Despite this, the interaction between standardized measures and subjective clinical judgment remains underexplored, indicating the need for research examining how serial data are interpreted and integrated by professionals.

The study by Mitchell *et al*. (2024) points to the standardization of the clinical interview as an effective means of reducing diagnostic variability. However, studies evaluating the impact of such interviews on the real complexity of cases encountered in primary care, especially in populations with psychosocial comorbidities, are lacking, suggesting a research agenda focused on ecological validity.

Finally, the review by Funk *et al*. (2022) consolidates matrix support and consultation-liaison as promising collaborative trends for mitigating diagnostic uncertainty. Still, the literature lacks direct measurement of how these interactions influence specific diagnostic decisions, indicating the need for studies that articulate interprofessional collaboration with cognitive diagnostic outcomes in mental health.

5 CONCLUSION

The findings map widely used strategies for addressing diagnostic uncertainty, highlighting the predominance of care-based approaches and the more limited exploration of organizational interventions. The results show that screening instruments and standardized scales are useful as initial support but insufficient when used in isolation.

Integrating these tools with structured clinical interviews, serial symptom assessment, and qualified clinical judgment is essential to reduce misclassification and enhance the potential for diagnostic improvement.

Among the main challenges are excessive reliance on point-in-time screening, fragmentation of care, and limited mental health training in primary care. These weaknesses increase uncertainty and compromise diagnostic safety, particularly in conditions with nonspecific or overlapping symptoms. Strengthening collaborative care models, investing in continuous professional training, systematically applying measurement-based care, and standardizing brief clinical interviews are recommended strategies, as they enhance clinical reasoning and promote safer and more consistent care.

REFERENCES

Bobkov, A. *et al.* Telepsychiatry and artificial intelligence: a structured review of emerging approaches to accessible psychiatric care. **Healthcare**, v. 13, n. 11, p. 1348, 2025. Available at: 10.3390/healthcare13111348. Accessed on: Jan. 29, 2026.

Dahm, M. R. *et al.* Communication of diagnostic uncertainty in primary care and its impact on patient experience: an integrative systematic review. **Journal of General Internal Medicine**, v. 38, n. 3, p. 738–754, 2022. Available at: 10.1007/s11606-022-07768-y. Acesso em: 29 jan. 2026.

D'Amico, L. N; Hanania, H; Lee, L. T. Enhancing provider mental health screening in primary care: a quality improvement project. **Journal of Doctoral Nursing Practice**, v. 16, n. 3, p. 196–204, 2023. Available at: 10.1891/JDNP-2022-0042. Accessed on: Jan. 29, 2026.

Derksen, C. *et al.* The implementation challenge of computerised clinical decision support systems for the detection of disease in primary care: systematic review and recommendations. **Implementation Science**, v. 20, art. 33, 2025. Available at: 10.1186/s13012-025-01445-4. Accessed on: Jan. 29, 2026.

Faisal, M. R. *et al.* Collaborative care in LMICs. **Journal of Affective Disorders**, 2024. Available at: 10.1016/j.jad.2024.07.086. Accessed on: Jan. 29, 2026.

Galvão, T. F.; Pansani, T. S. A.; Harrad, D. Principais itens para relatar revisões sistemáticas e meta-análises: a recomendação PRISMA. **Epidemiologia e Serviços de Saúde**, v. 24, p. 335–342, 2015. Available at: 10.5123/S1679-49742015000200017. Accessed on: Jan. 29, 2026.

Gurfinkel, D. *et al.* Patient perspectives of integrated behavioral health in primary care: a mixed methods analysis. **Journal of Patient Experience**, 2024. Available at: 10.1177/23743735241293877. Accessed on: Jan. 29, 2026.

Hunik, L. *et al*. Diagnostic prediction models for primary care, based on AI and electronic health records: systematic review. **JMIR Medical Informatics**, v. 13, e62862, 2025. Available at:10.2196/62862. Accessed on: Jan. 29, 2026.

Husain, M. I. *et al.* Measurement-based care to enhance antidepressant treatment outcomes in major depressive disorder: a randomized clinical trial. **JAMA Network Open**, v. 8, n. 9, e2529427, 2025. Available at: 10.1001/jamanetworkopen.2025.29427. Accessed on: Jan. 29, 2026.

Isaacs, A. N; Mitchell, E. K. L. Mental health integrated care models in primary care and factors that contribute to their effective implementation: a scoping review. **International Journal of Mental Health Systems**, v. 18, art. 5, 2024. Available at: 10.1186/s13033-024-00625-x. Accessed on: Jan. 29, 2026.

Islam, M. M. *et al.* Harnessing big data and predictive analytics for mental health detection in primary care: challenges and opportunities. **Health**, 2024. Available at: 10.1016/j.health.2024.100350. Accessed on: Jan. 29, 2026.

JBI – Joanna Briggs Institute. Evidence implementation training program. 2022. Available at: http://www.ee.usp.br/jbibrasil/cursos/evidence-implementation-training-program-eitp/. Accessed on: Jan. 29, 2026.

Kenwright, M. *et al.* Effectiveness of community mental health nurses in an integrated primary care service: an observational cohort study. **International Journal of Nursing Studies Advances**, v. 6, art. 100182, 2024. Available at: 10.1016/j.ijnsa.2024.100182. Accessed on: Jan. 29, 2026.

Kellermeyer, L; Harnke, B; Knight, S. Covidence and Rayyan. **Journal of the Medical Library Association: JMLA**, v. 106, n. 4, p. 580, 2018. Available at: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6148615/. Accessed on: Jan. 29, 2026.

Kolding, S. *et al.* Estudo clínico/psiquiatria em atenção primária. **Acta Neuropsychiatrica**, 2024. Available at: 10.1017/neu.2024.50. Accessed on: Jan. 29, 2026.

Neulinger, B. *et al.* Screening tools assessing mental illness in primary care: a systematic review. **European Journal of General Practice**, v. 30, n. 1, art. 2418299, 2024. Available at:10.1080/13814788.2024.2418299. Accessed on: Jan. 29, 2026.

Oxford Centre for Evidence-Based Medicine. Levels of evidence. 2024. Available at: https://www.cebm.ox.ac.uk/resources/levels-of-evidence/ocebm-levels-of-evidence.Accessed on: Jan. 29, 2026.

Patel, B. *et al.* Navigating uncertainty in clinical practice: a structured approach. **BMJ Open**, 2024. Available at: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC11043270/. Accessed on: Jan. 29, 2026.

Peters, M. D. J. *et al.* Best practice guidance and reporting items for the development of scoping review protocols. **JBI Evidence Synthesis**, v. 20, n. 4, p. 953–968, 2022. Available at: 10.11124/JBIES-21-00242. Accessed on: Jan. 29, 2026.

Reist, C. *et al.* Collaborative mental health care: a narrative review. **Medicine (Baltimore)**, v. 101, n. 52, e32554, 2022. Available at: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9803502/. Accessed on: Jan. 29, 2026.

Russell, J. *et al.* How is diagnostic uncertainty communicated and managed in real world primary care settings? **BMC Primary Care**, 2024. Available at: https://link.springer.com/article/10.1186/s12875-024-02526-x. Accessed on: Jan. 29, 2026.

Scott, I. A. *et al.* Coping with uncertainty in clinical practice: a narrative review. **Medical Journal of Australia**, v. 218, n. 9, p. 418–425, 2023. Available at: 10.5694/mja2.51925. Accessed on: Jan. 29, 2026.

Tricco, A. C. *et al.* PRISMA extension for scoping reviews (PRISMA-ScR): checklist and explanation. **Annals of Internal Medicine**, v. 169, n. 7, p. 467–473, 2018. Available at: 10.7326/M18-0850. Accessed on: Jan. 29, 2026.

Vogel, M. *et al.* A systematic review and meta-analysis of transdiagnostic interventions for common mental disorders in primary care. **General Hospital Psychiatry**, v. 91, p. 167–179, 2024. Available at: 10.1016/j.genhosppsych.2024.11.003. Accessed on: Jan. 29, 2026.

Zhou, A. Y. *et al.* Investigating the links between diagnostic uncertainty, emotional exhaustion, and turnover intention in general practitioners working in the United Kingdom. **Frontiers in Psychiatry**, v. 13, art. 936067, 2022. Available at: https://www.frontiersin.org/articles/10.3389/fpsyt.2022.936067/full. Accessed on: Jan. 29, 2026.

Authors' Contribution

All authors contributed equally to the development of this article.

Data availability

All datasets relevant to this study's findings are fully available within the article.

How to cite this article (APA)

Gomes, N. P., Pezzi Junior, S. A., Santana, E. S. de, Leal, B. S., Rassy, A. E., Braga, J. V. G., … Gonçalves, R. T. (2026). MITIGATION OF DIAGNOSTIC UNCERTAINTY IN PSYCHIATRY AND MENTAL HEALTH IN PRIMARY CARE: A SCOPING REVIEW. *Veredas Do Direito*, *23*(4), e234838. https://doi.org/10.18623/rvd.v23.n4.4838