Meta-evaluation in Primary Health Care Evaluative Studies: a Scoping Review

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Abstract

Background: The evaluation of health policies and programs expanded in both practical and theoretical-methodological fields, with a strong influence on health system quality, decisions of managers, sustainability, and improvement of the primary care services. However, guaranteeing the qualification and credibility of the evaluation processes using meta-evaluations is a huge challenge for evaluators. This review aimed to map meta-evaluation use in Primary Health Care evaluative studies.

Methods: We conducted a scoping review based on the Joanna Briggs Institute manual and guided by PRISMA Extension for Scoping Reviews (PRISMA-ScR). A systematic and comprehensive three-step search was performed in January and February 2021 in multidisciplinary health science databases and gray literature. No limits concerning publication dates were set. Data extraction and eligibility were performed by two independent authors and interpreted using thematic analysis. The themes were collated, and a narrative summary of the findings reported.

Results: There were 11,641 potential studies identified from the search, finally, 23 studies were included in the analysis. Four thematic groups were identified: search results; characteristics of the included studies; meta-evaluation type, involved stakeholders, and Evaluative standards applied; potentialities and challenges in the meta-evaluation primary health care. Most were summative meta-evaluations focusing on health programs and primary care management and followed the quality standards of the Joint Committee on Standards for Educational Evaluation. We observed low involvement of service users and active participation of managers, health professionals, researchers like stakeholders. We also highlight the importance of formative and democratic meta-evaluations expanding the use of evaluations.

Conclusion: Results showed the potential and challenges of using meta-evaluation in primary health care during or when the evaluations have been completed. Highlighted the importance of permanent and systematic analysis of the quality of evaluations. Meta-evaluators have the technical responsibility of the evaluation process, stimulus to the action of those involved, and decision-making capacity. There is a paucity of published literature on meta-evaluation in primary health care. Hence, further studies are recommended to qualify the processes and results of the evaluations capable of contributing to the improvement and qualification of public policies and health practices.

Background

The World Health Organization, according to the 2030 Agenda for Sustainable Development, reaffirms protagonism of the Primary Health Care (PHC) to ensure healthcare system sustainability [1, 2]. This model influenced sanitary changes in countries with public and universal health systems, occupied a prominent place in international policy agendas [3], and expanded offer and service availability, influencing positively in population health [4].

The debate regarding health system quality and role of managers in decisions is becoming urgent, generating a consensus about the need for technical evaluations. Furthermore, evaluation of health
programs expanded in both practical and theoretical-methodological fields [5]. Studies also reported the importance of PHC evaluative experiences to sustainability and service quality improvement [6, 7, 8].

Although evaluation results are significant, the search for qualification of evaluative processes must be considered to increase credibility. According to Jacob and Affodegon [9], evaluation is the search for continuous improvement while evaluators consult instruments to guarantee validity of conclusions and recommendations.

Meta-evaluations assess quality of evaluations [10, 11] through description, judgment, and synthesis processes based on criteria and validated by associations and auditing authorities [12]. It promotes quality of evaluated interventions, operationalizes interests, and offers subsidies to evaluative improvements [13].

Evaluative researches in PHC increased [14, 15, 16, 17], drawing attention to development of meta-evaluation studies. This review will provide information synthesis, which may guide meta-evaluation activities and other researches and evaluative practices. Therefore, the present review aimed to map meta-evaluation use in PHC evaluative studies. We considered the identification of meta-evaluation types, objects, criteria or applied evaluations, involvement of stakeholders, and learned lessons.

**Method**

This scoping review was conducted based on the Joanna Briggs Institute (JBI) manual [18], and guided by the PRISMA Extension for Scoping Reviews (PRISMA-ScR) [19]. We also followed the steps proposed by Arksey and O’Malley [20] and Levac et al. [21]: formulation of research question; identifying relevant studies; study selection; data extraction and coding; collating, summarizing, reporting, and discussing results; and stakeholder consultation.

The study was approved by research ethics committee of Onofre Lopes University Hospital - Federal University of Rio Grande do Norte (CAAE: 84537418.1.0000.5292), and direct participation of people in the study occurred only during consultation with stakeholders. The methodology used was previously reported in a protocol registered in Figshare [22].

**Formulation of research question**

Study question was defined by consensus among authors and formulated using PCC mnemonic (Population, Concept, and Context) [18]: How meta-evaluation is being used in PHC evaluative studies?

**Identifying relevant studies**

We observed a lack of reviews regarding the topic after consulting JBI Evidence Synthesis, Cochrane Database of Systematic Reviews, and Campbell Library. Researchers specialized in bibliographic search developed the initial search strategy, and the standard strategy was developed after a pilot search. Descriptors were chosen according to Medical Subject Headings (MeSH) and Health Sciences Descriptors.
(DeCS), combining keywords and Boolean operators ‘AND’ and ‘OR’ to contemplate PCC mnemonic terms. Additional file 1 presents the strategy performed in each database.

The following multidisciplinary health science databases were used: MEDLINE/PubMed, Scopus, Web of Science, Virtual Health Library, and Scientific Electronic Library Online (SciELO). Grey literature was identified in international repositories from Europe (DART-Europe E-Theses Portal, Repositórios Científicos de Acesso Aberto de Portugal [RCAAP], and Electronic Theses Online Service [EthOS]), Africa (National ETD Portal South African Theses and dissertations), North America (Theses Canada – Library and Archives Canada), and South America (Catálogo de Teses e Dissertações da Coordenação de Aperfeiçoamento de Pessoal de Nível Superior [CAPES]). Google Scholar and reference lists of identified studies were also consulted for grey literature.

Study selection

Searches were performed between January 21 and February 12, 2021, using a three-step search strategy [8]: 1. Identification of descriptors and keywords, with an initial exploratory search in two databases, followed by the construction of the search strategy; 2. Definition and search across all databases; 3. Search for additional sources in the selected publications references. Search strategies are presented in additional file 1.

Study selection followed the Preferred Reporting Items for Systematic Review and Meta-Analyses (PRISMA-P) [23]: identification, screening, eligibility, and inclusion.

Mendeley software was used for identification, management, and organization, and duplicates were removed. The second step screened potentially relevant studies through the extensive title and abstract reading by two independent reviewers (OGBJ and CRDVS). Eligibility was performed through full-text reading by two independent reviewers. In case of disagreement, a third reviewer (SACU) was consulted.

Eligibility criteria included PHC meta-evaluation studies (quantitative and qualitative, regardless of method used); theses and dissertations (grey literature); electronically available in Portuguese, Spanish, or English languages; in accordance with research question; and from inception to February 2021; Primary studies not involving meta-evaluation, literature reviews, theoretical essays, specialist opinions, manuals, and books were excluded.

Data extraction and coding

Data were extracted and encoded using a form based on JBI template [18] and adapted by authors, containing the following information: characterization of studies (first author, publication year, country of origin, aim, and study design); meta-evaluation type, involved stakeholders, and Evaluative standards applied; potentialities and challenges in the meta-evaluation primary health care. Data extraction form are presented in additional file 2.

Collating, summarizing, reporting, and discussing results
Narrative analysis and absolute ad relative frequencies of year, country, aim, design, and meta-evaluation type were performed. Narrative synthesis regarding evaluation criteria or standard, involvement of stakeholders, meta-evaluation objects, and learned lessons were performed using thematic analysis [24]. Results were reported as narrative presentations, boxes, and figures to facilitate information synthesis.

**Stakeholder consultation**

Results of this review were presented to four stakeholders (i.e., researchers with experience in PHC meta-evaluation) to fulfill the following objectives recommended by Levac et al. [21]: preliminary sharing of study findings (i.e., knowledge transfer and exchange mechanism) and development of effective dissemination strategies and ideas for future studies.

**Result**

In all, 11,553 articles and 88 dissertations and theses., were obtained from all databases during the initial search, of which 6,598 titles met the eligibility criteria at the title screening stage. A total of 21 titles were identified as duplicates and removed using Mendeley Desktop. After eligibility criteria, exclusion of duplicates, analysis of titles and abstracts, and full-text reading, in two consecutive assessments, 23 publications were included for data extraction in this review (Fig. 1). All the included studies somehow demonstrated the uses of meta-evaluation in the evaluative studies developed in the PHC.

**Fig. 1** – Flowchart of study selection process for scoping review adapted from Preferred Reporting Items for Systematic Review and Meta-Analyses (PRISMA-P).

**Characteristics of the included studies**

A total of 14 studies were conducted in Brazil [26, 27, 29, 31, 33, 34, 37, 39, 40, 41, 42, 45, 46, 47], 3 studies in United States [25, 32, 44], 3 studies in Canada [30, 35, 36], 1 study in United Kingdom [28], 1 study in Guine-Bissau [43], and 1 study in Australia [38] (Fig. 2).

**Fig. 2** – Quantitative geographic distribution of included studies.

Most studies were published in 2018, followed by 2012, 2015, and 2017 (60.9% of publications). We identified the following meta-evaluation objects (i.e., evaluations assessed): Family Health Strategy [26, 27, 42, 46]; external evaluation of the National Program for Access and Quality Improvement in Primary Care (PMAQ-AB) [37, 39, 45]; health management [33, 40, 41]; children health [25, 28, 32]; tuberculosis [29, 47]; health of rural women [38]; mental health [34]; guideline and prescription of drugs [36]; International Healthy Cities Movement [31]; health development [43]; assistance development [44]; professional capacitация [30]; and primary care projects [35]. Most meta-evaluations were qualitative (56.5%). Document analysis was the most used technique (69.6%), and questionnaires, interviews, focus groups, workshops, and observations were also mentioned (Table 1).

**Table 1** – Characteristics of the included studies between 1999 and 2018 (N = 23).
From: Meta-evaluation in primary health care evaluative studies: a scoping review
| Author and year | Type     | Country | Meta-evaluation objectives                                                                 | Methodological aspects                                      |
|---------------|----------|---------|------------------------------------------------------------------------------------------|-------------------------------------------------------------|
| Sanders, J.R. 1999 [25] | Article | USA     | National evaluative study of an infant development program                                 | Qualitative approach; Document analysis.                    |
| Fonseca, A.C.F. 2009 [26] | Dissertation | Brazil | Evaluative practices of Evaluation for Quality Improvement in Family Health Strategy       | Qualitative approach; Case study; Document analysis;        |
| Figueiró, A.C. 2010 [27] | Article | Brazil  | Evaluative report of baseline studies of the Brazilian Family Health Strategy Expansion Project | Quanti-qualitative approach; Document analysis.             |
| Léveillé, S. 2010 [28] | Article | United Kingdom | Evaluation studies of action model implementation for vulnerable children and their families | Quantitative approach; Document analysis.                  |
| Natal, S. 2012 [29] | Article | Brazil  | Evaluative process of research projects supported by the Global Fund Tuberculosis Project in Brazil | Qualitative approach; Document analysis; Interviews.     |
| Dickson, R. 2012 [30] | Thesis  | Canada  | Evaluation of a continuous professional development program for health professionals       | Quanti-qualitative approach; Case study; Document analysis; |
| Dias, A.L.F. 2012 [31] | Thesis  | Brazil  | Evaluative studies in the context of International Healthy Cities Movement                 | Quanti-qualitative approach; Document analysis.            |
| Author and year     | Type        | Country | Meta-evaluation objectives                                                                 | Methodological aspects                  |
|--------------------|-------------|---------|-------------------------------------------------------------------------------------------|-----------------------------------------|
| Nkwake, A.M. 2013  | Article     | USA     | Evaluation results from child well-being programs                                           | Quantitative approach; Document analysis. |
| Nickel, D.A. 2014  | Article     | Brazil  | Evaluation of the primary care State management focused on strengthening evaluation and monitoring | Qualitative approach; Case study; Interviews. |
| Furtado, J.P. 2014 | Article     | Brazil  | Evaluative process about home of people with severe mental disorders in the context of Brazilian psychiatric deinstitutionalization | Qualitative approach; Interviews; Focus Groups; Participant observation. |
| Webster, F. 2015   | Article     | Canada  | Evaluative projects of health interventions based on primary, hospital, and community care | Qualitative approach; Document Analysis; Interviews. |
| Conklin, J. 2015   | Article     | Canada  | Evaluation of drug prescriptions guidelines                                                 | Quanti-qualitative approach; Document analysis; Interviews; Observation. |
| Santos, P.F. 2015  | Dissertation| Brazil  | External evaluation of the National Program for Improving Access and Quality of Primary Care | Quantitative approach; Document analysis; Questionnaires. |
| Author and year | Type     | Country    | Meta-evaluation objectives                                                                 | Methodological aspects                           |
|-----------------|----------|------------|-------------------------------------------------------------------------------------------|--------------------------------------------------|
| Kozica, S.L. 2016 [38] | Article | Australia | Evaluation of a healthy lifestyle program for rural women                                    | Quantitative approach; Interviews; Questionnaires. |
| Folli, S.P.L. 2016 [39] | Dissertation | Brazil | External evaluation of the National Program for Improving Access and Quality of Primary Care | Qualitative approach; Interviews.                |
| Almeida, C.A.L. 2017 [40] | Article | Brazil | An experience of participative evaluation developed by municipal health secretaries and accessors | Qualitative approach; Interviews; Workshops.     |
| Almeida, C.A.L. 2017 [41] | Article | Brazil | Participative evaluation performed by municipal representatives of a health sector            | Qualitative approach; Interviews; Workshops.     |
| Oliveira, M.R. 2017 [42] | Dissertation | Brazil | One of the evaluation fields (Family Health Strategy) instituted by the Comptroller General of the Union, entitled Evaluation of Government Programs Execution | Quantitative approach; Document Analysis; Questionnaires; Interviews. |
| Guerreiro, C.S. 2018 [43] | Article | Guine-Bissau | Evaluation process of the National Health Development Plan implementation                  | Qualitative approach; Document analysis; Interviews. |
| Raifman, J. 2018 [44] | Article | USA       | Evaluation of the Assistance Development ordered or conducted by main global health financiers | Quantitative approach; Document analysis.        |
| Author and year | Type     | Country | Meta-evaluation objectives                                                                 | Methodological aspects                     |
|-----------------|----------|---------|-------------------------------------------------------------------------------------------|--------------------------------------------|
| Uchoa, S.A.C. 2018 [45] | Article  | Brazil  | External evaluation of the National Program for Improving Access and Quality of Primary Care | Qualitative approach; Interviews; Focus groups. |
| Barros, L.F.R. 2018 [46] | Article  | Brazil  | Evaluation report of Govern programs execution n.8: Family Health Programme                | Qualitative approach; Document analysis    |
| Abreu, D.M.F. 2018 [47] | Thesis   | Brazil  | Evaluation of the performance of National Tuberculosis Control Programme                  | Qualitative approach; Case study; Document analysis; Interviews; Direct observation. |

### Meta-evaluation type, involved stakeholders, and Evaluative standards applied

Most meta-evaluations were summative (i.e., retrospective) (87%). Regarding stakeholders, apart from evaluators/researchers of meta-evaluations, most individuals involved were managers and health professionals, whereas service users were little involved (Table 2).

**Table 2**– Meta-evaluation type and stakeholders involved.

From: Meta-evaluation in primary health care evaluative studies: a scoping review
| MAPPED CHARACTERISTICS          | REFERENCES                                                                 |
|---------------------------------|-----------------------------------------------------------------------------|
| META-EVALUATION TYPE            | Summative [25, 26, 28, 30, 31, 32, 33, 34, 35, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47] |
|                                 | Formative [27, 29, 36]                                                      |
| STAKEHOLDERS INVOLVED IN META-EVALUATION | Managers [26, 30, 33, 38, 39, 40, 41, 42, 43, 45, 47]                      |
|                                  | Professionals [26, 30, 33, 34, 35, 37, 38, 39, 42]                         |
|                                  | Users [35, 38, 41, 42]                                                    |
|                                  | Evaluators/researchers [25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47] |

Applied standards to meta-evaluate evaluations were extensive, especially the Joint Committee on Standards for Educational Evaluation (JCSEE) [48] recommendations: utility, viability, propriety, and accuracy (43.5%). JCSEE utility standard was used in 26% of meta-evaluations. Table 3 demonstrates all evaluative standards mentioned in the studies.

Table 3 – Evaluative standards applied in PHC meta-evaluation.

From: Meta-evaluation in primary health care evaluative studies: a scoping review
| EVALUATIVE STANDARDS                           | REFERENCES |
|-----------------------------------------------|------------|
| Consistence                                   | [27]       |
| Validity                                      | [44]       |
| Inovation                                     | [45]       |
| Legal principles                              | [46]       |
| Influence                                     | [47]       |
| Intencionality                                | [32]       |
| Interdisciplinarity                           | [34]       |
| Realistic evaluation                          | [35]       |
| Materiality; Criticality                      | [42]       |
| Rigor; Credibility; Confirmability; Transferability | [28]   |
| Complementarity; Autonomy; Competence of individuals; Evaluative Culture | [33] |
| Efficacy; Reach; Adoption; Implementation; Sustentability; Adoption | [38] |
| Reliability                                   | [28, 44]  |
| Ethical Principles                            | [36, 46]  |
| Participation                                 | [34, 40]  |
| Relevance                                     | [28, 42, 44, 46] |
| Utility (JCSEE)                               | [26, 29, 41, 45, 46, 47] |
| Utility; Viability; Propriety; Accuracy (JCSEE) | [25, 27, 30, 31, 33, 36, 37, 39, 42, 43] |

**Potentialities and challenges in PHC meta-evaluation**

The following stood out as potentialities observed in the meta-evaluation in PHC, in descending order: Pedagogical, formative, and democratic character [27, 31, 33, 35, 40, 43, 45]; Credibility of evaluation results for decision-making [25, 29, 36, 41, 44, 45, 46]; Qualification of the evaluated object [32, 33, 47]; Expand dialog between involved and interested individuals [26, 28, 29]; Formation of collaborative nets between teaching and research institutions and decision-makers [33, 45, 47]; Monitoring of financial resources application and investments viability [25, 44, 45]; Participation of individuals from different positions in the context of health system [40, 44]; Generalization of results in robust meta-evaluations [38, 44]; Formative meta-evaluations allow changes during evaluation [36]; Possibility of using different
criteria and standards [34]; Knowledge translation and health services quality improvement [36]; Scientific publication of results stimulates those involved in evaluations [29]; Potentiate results and theory of the evaluated program [32].

As for the challenges of meta-evaluation in PHC, they were identified, in descending order: Time and financial resource requirement more than the available [27, 29, 38, 44]; Adequacy of evaluation standards to political, economic, social, and cultural reality, especially in vulnerable societies [30, 40, 42, 43]; Involvement of interested parts in all steps of the evaluative process [25, 31, 41]; Negotiation and conflicts of interest mediation between actors [31, 39, 43]; Consider limitations of the evaluated object when proposing recommendations [30, 47]; Ideological, political, and conjunctival factors may interfere in meta-evaluation utility [26, 29]; Ethical risk in using results when meta-evaluation favors the prosecutor [41]; Use limited by reduced disclosure of results [25]; Evaluation standard used partially or randomly [42]; Some program designs difficult evaluation and meta-evaluation [38]; Participation of internal evaluators is not always viable [38]; Low credibility of evaluators among decision-makers limits the use of results [29]; Previous experiences little responsive and/or negative weaken the involvement of those interested [26]; Deal with possible consequences of major actors participation, such as conflicts [31]; Sensibilization of involved actors to actual demands of the process [31].

**Discussion**

Regarding PHC, evaluative studies are considered an important element to health systems reform, while international agencies suggest a broad PHC approach based on the "Renewing Primary Health Care in the Americas" document [49, 50]. In Brazil, evaluative studies were directed to PHC when this model became the focus of the health system and the first level of contact for individuals, families, and the community.

Three social and historical processes in Brazil favor meta-evaluation predominance [51]: Brazilian National Health System (SUS) organization, which formulates several sectoral policies and requires evaluation of its results; request of international funding institutions to evaluate impacts of health programs; and partnership between Brazilian Ministry of Health and Universities to evaluate policies, programs, and projects.

The predominance of publications from Brazil may be attributed to the increased number of postgraduate programs, mainly in Collective Health field, with research funding, and discussions regarding health evaluations [52]. Moreover, researchers and the Brazilian Ministry of Health enhanced evaluations methodologically and conceptually since 2000, contributing to debates regarding the importance of evaluative cultures [5, 53].

Meta-evaluation studies of health programs and projects involve peculiar characteristics of health services. All studies developed in Brazil are related to PHC planning and management. Therefore, the focus reflects structural moments of PHC in this country. Among these, the following can be highlighted:
1) Family Health Strategy growth from 2000 stimulated studies to evaluate implantation, execution, and impact of this health reorientation in the national territory [54, 55, 56]. In this perspective, we point to the Brazilian Ministry of Health initiative (supported by the World Bank), named Baseline Studies of the Project for the Expansion and Consolidation of Family Health, focused on consolidation of Family Health Strategy and primary care fortification. This project and the National Policy for the Evaluation of Primary Health Care, which tried to consolidate the institutionalization process of evaluation, were topics of evaluative studies [57].

2) PMAQ-AB creation in 2011 and increased number of studies evaluating its effects on primary care fortification, access expansion, and service quality improvement [58]. With this program, financial incentives are based on results (i.e., payment by performance), an increasing tendency in Brazil and other countries [59, 60]. Moreover, external evaluation of PMAQ-AB was studied because of its detailed information and possibility of novel experiences for institutionalizing a Brazilian evaluative culture.

To Stufflebeam [10], evaluation field has advanced, especially methodologically, and evaluators should submit their evaluations to meta-evaluation. This process ensures improved efficiency and effectiveness of evaluations and provides reliable findings and conclusions of public, professional, and institutional interests.

According to the present results, methodological approaches of meta-evaluations triangulate techniques and informants within a qualitative approach, which is considered positive since it allows an overview on various dimensions and perspectives in meta-evaluative studies [61]. Methodological choice requires flexibility, creativity, and coherence with meta-evaluation object and purpose, and multiple methodological approaches are needed due to complexity of the health field [62].

Most meta-evaluation studies used the following JCSEE recommendations [48]: utility, feasibility, propriety, accuracy (precision), and responsibility [63, 64]. These guidelines were adopted by policy and social programs (including health programs) of American and Canadian Evaluation Societies and other countries (e.g., Germany, Switzerland, Africa, and Brazil) [63].

Evaluative parameters proposed by JCSEE are relevant due to their application on the Framework for Program Evaluation in Public Health: A Checklist of Steps and Standards proposed by the Centers for Disease Control and Prevention [65]. These parameters are recommended for continuous improvement and strengthening of the cycle: Planning – Implementing – Monitoring – Evaluating [65, 66].

Studies suggest meta-evaluation should follow international and national standards to guide the evaluative process and assure quality [67]. However, meta-evaluation is not limited to applying criteria because they generically provide a different context according to the evaluated region.

Summative meta-evaluation was present in most studies, corroborating with Elliot and Orlando Filho [64]. This assessment is performed after evaluation to verify quality according to standards and criteria. However, formative perspective occurs during the evaluative process and guides evaluators on planning,
conduction, improvement, interpretation, and communication [68]. Formative meta-evaluation emphasizes the learning process due to constant feedback during the evaluative process, indicating solid and weak points and guiding decisions [69].

Implications for practice and research

Most studies emphasized formative meta-evaluations approaches, their pedagogical characteristics, and the opportunity to democratize evaluations; therefore, is necessary include and increase the use of this approach, guaranteeing negotiation of interests and values of interested parties, validating them on health context especially PHC. This corroborates the assertion that when evaluation is considered an intervention that can be evaluated (e.g., meta-evaluations with scientific approaches, debates, negotiations, and learning), it stimulates changes in the reality of services to institutionalize practices and improve quality [70]. A recent movement is expanding the intention to learn with participatory, transformative, and emancipatory evaluations [71].

Expanding utility in evaluations is essential for evaluators' performance. In meta-evaluations, the term "use" is relevant in the debate about "utility" pattern [40]. Use is the evaluation outcome, an important characteristic to be considered in the evaluative process [72, 73, 74]. According to Patton [75], technical and methodological rigors are not sufficient to ensure of utility. Therefore, evaluations must respond to interests and necessities of the audience [76]. For example, different interest groups (i.e., stakeholders) can be inserted in the evaluative process [77], increasing the introduction of other groups, such as policy developers, managers, professionals, users, and clients [78].

We observed a low insertion of stakeholders in meta-evaluation, especially service users. This was found even in formative meta-evaluations where participation of stakeholders may be expanded. Meta-evaluators should stimulate action of those involved and have technical responsibility in the evaluative process and decisive capacity based on results. The involvement of different stakeholders also strengthens the evaluative design and expand data collection and interpretation. This involvement increases the use of evaluation results, purpose of evaluation designs, elaboration of instruments for data collection, and results from analysis and dissemination [79, 80, 81].

Formative, pedagogical, democratic, and dialogical aspects and qualification and credibility of evaluations for decision-making are strengths of meta-evaluations. In contrast, important challenges can also be observed, such as ensuring stakeholder involvement, negotiating conflicts between them, and demand for financial resources, time, and adequacy to international evaluation standards according to reality and political, economic, social, and cultural contexts.

Our study shows limited published research on meta-evaluation of PHC, regardless the growing tendency of evaluative studies. Involvement of stakeholders was low in most meta-evaluations, indicating a gap in literature mainly among PHC users. We hope our study will stimulate research studies on formative, democratic, and participative meta-evaluations to expand the use of evaluations. We also recommend the development of more primary studies to verify quality of current or subsequent evaluations, expanding
health evaluation credibility since there is increase in its applicability in health systems. Most of the included studies were qualitative, this demonstrates the need to develop more studies with a quantitative or mixed approach. Moreover, systematic review with meta-analysis could be performed to assess the impact of meta-evaluations on decision-making by managers and health service practices.

**Strengths and limitations of the study**

This scoping review probably is the first broad study to map evidence on the application of meta-evaluation in evaluative studies developed in PHC, providing comprehensive and detailed information on the potential and challenges of its use. The study met criteria for scoping reviews [82] and followed methodological references, checklists, and protocol [22].

Although the scoping review was conducted in line with the guidelines of the methodology, we still need to acknowledge some limitations. We did not evaluate quality of publications. However, this step is not essential due to the exploratory and descriptive nature of a scoping review. We did not include official government documents from gray literature. However, the search was performed to reach the highest number of publications regarding the topic. Even though databases for peer-reviewed publications and gray literature were included with no filter limits and a high-sensitivity search strategy was performed it is possible that there are other relevant studies in other databases that were not captured. It is possible researches on meta-evaluations existed under different terminologies that were not captured in the review. Nevertheless, we included DeCS and MeSH terms, and a wide range of keywords as well to help address this. We recommend future studies to conduct additional searches in those databases that were not captured by this study.

**Conclusions**

This scoping review mapped the application of meta-evaluation in evaluative studies developed in PHC. It was possible to consider that meta-evaluation lies in the ethical aspects of the evaluator and quality of evaluation while performing the study, when finished, or both times.

Results showed the potential and challenges of using meta-evaluation. This strategy may encourage evaluations, qualify its processes and results, support decision-making, improve of public policies and health practices, especially when it has formative, pedagogical, and democratic character. Meta-evaluators are technically responsible for the evaluation process, in stimulating the action of those involved, and the decision-making capacity.

Some features of this study can be highlighted as recommendations: expansion of meta-evaluation in PHC to become a culture of both evaluation and meta-evaluation; use of evaluative standards (e.g., JCSEE) providing credibility and quality and enabling technical or instrumental values and interlocutions between individuals and knowledge construction; development of formative meta-evaluations with greater stakeholder involvement; and strengthening of meta-evaluations based on potentials of the activity, its challenges, and execution.
Abbreviations

PHC: Primary Health Care

PRISMA – P: Preferred Reporting Items for Systematic review and Meta-Analysis Protocols.

PRISMA – ScR: PRISMA Extension for Scoping Reviews

JBI: Joanna Briggs Institute

JCSEE: Joint Committee on Standards for Educational Evaluation

PMAQ-AB: National Program to Improve Primary Care Access and Quality

Declarations

Ethics approval and consent to participate

Approved by research ethics committee of Onofre Lopes University Hospital - Federal University of Rio Grande do Norte (CAAE: 84537418.1.0000.5292).

Consent for publication

Not applicable.

Availability of data and materials

The datasets supporting the conclusions of this article are available through the detailed reference list.

Competing interests

All other authors declare they have no conflict of interest.

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Authors' contributions

SACU, OGBJ, CRDVS, RHL, and MFT planned the study. OGBJ and CRDVS performed study selection and data extraction, and SACU was the third reviewer. CRDVS, RHL, OGBJ, and CSM performed analysis and synthesis of results. All authors contributed to writing the manuscript. SACU, MFT and RAA critically reviewed the manuscript. All authors approved the final version of the manuscript.
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Figures

Figure 1

Flowchart of study selection process for scoping review adapted from Preferred Reporting Items for Systematic Review and Meta-Analyses (PRISMA-P).
Figure 2

Quantitative geographic distribution of included studies.

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