Qeios

Peer Review

Review of: "Cognitive Screening Tools for Dementia Detection in Primary Healthcare Centers in India: A Scoping Review"

Emma E. Broome[1]

1. University of Nottingham, United Kingdom

Dear authors,

Thank you for the opportunity to review your paper. I have provided you with some detailed, constructive feedback to help enhance the clarity, rigor, and overall impact of your work.

This scoping review explores which cognitive screening tools are currently available within primary healthcare centres in India. Overall, the aim of this scoping review is timely and addresses an important research question. Dementia prevalence is increasing in lower-middle-income countries, and therefore it is important that there are appropriate tools, which are culturally appropriate, available to help screen for dementia.

My main comments regarding this review concern the reporting of the methods and contextualising of the findings. In particular, the authors should focus on expanding the methods section of their review, particularly with regard to the thematic synthesis. Likewise, the results section needs contextualising with reference to the papers included in this review. Without this, the article reads as a commentary rather than a scoping review.

Introduction:

- It would be helpful for the authors to contextualise the increasing public health challenge that dementia poses in lower-middle-income countries. For example, the World Alzheimer's Report (2015) highlights how India has a high number of people living with dementia (~4.1 million), and it

doi.org/10.32388/TS26S6

is expected that this number will rapidly increase. Other references which might be of interest include:

- Prince, M., et al. (2013). *The Global Prevalence of Dementia: A Systematic Review and Meta-Analysis*. Alzheimer's & Dementia.
- World Health Organization. (2012). *Dementia: A Public Health Priority*.
- Alzheimer's Disease International. (2015). *World Alzheimer Report 2015: The Global Impact of Dementia – An Analysis of Prevalence, Incidence, Cost and Trends*. London: Alzheimer's Disease International.
- The authors might also want to draw on recommendations from the WHO and The Lancet Commission for integrating dementia care into primary healthcare in lower-middle-income countries. This would highlight the importance of cognitive screening within primary healthcare centres and thus further justify the need for this review.
- The authors may also want to further highlight the impact of language barriers on the accuracy of cognitive screening. For example, the authors describe how the MMSE and MoCA are implemented in PHC settings in India; however, are these measures delivered in English, or have they been translated into other languages for use in India?
- On a similar note, and given that one of the review questions explores the educational and language barriers faced by the diverse Indian population, it would be helpful for the authors to describe some of the barriers faced in delivering cognitive screening, for example, cultural nuances, the use of interpreters, or illiteracy or low educational attainment, and how these may influence the applicability of cognitive screening in Indian populations.
- *Borson S, Scanlan JM, Watanabe J, et al. Simplifying detection of cognitive impairment: comparison of the Mini-Cog and Mini-Mental State Examination in a multiethnic sample. J Am Geriatr Soc. 2005;53(5):871–874.*
- The sentence beginning "This review addresses the current landscape" I think would benefit from being rewritten. Scoping reviews primarily serve the purpose of mapping the extent and nature of evidence, rather than conducting a formal assessment of effectiveness. Thus, I think this sentence could be clarified for the reader.

Research Question:

- The authors state the scoping review is to "identify and assess the effectiveness of cognitive screening tools". As I mentioned above, scoping reviews do not conduct formal assessments of

efficacy; therefore, I think the objective would benefit from being re-written. For example, to map the extent and nature of cognitive screening tools used in primary healthcare centres in India"

- Consider clearly delineating the primary and secondary objectives. Explicitly stating these research questions or hypotheses will help guide the reader through your methodology and results.
- Objective 3 is pre-empting the outcome of the review. I would suggest rephrasing to "explore whether current approaches to cognitive screening in PHC are culturally and linguistically appropriate".

Eligibility criteria:

- The participants' criteria encompass both people being screened for dementia and also healthcare providers administering cognitive tools in PHC in India. It would be helpful, later in the review, to clarify whether these two groups were analysed separately or combined. This is important as it could affect the data extraction processes and consequently the synthesis. In addition, the authors may want to provide clarity around the participants' definitions. For example, does "patients screened for dementia" also include those individuals with suspected Mild Cognitive Impairment? What healthcare professionals would be included? For example, is this with respect to certain roles, e.g., General Practitioner? This would help ensure consistency across studies included.
- I agree with the "context" criteria; however, I think that the authors could consider re-writing the sentence so that they are highlighting the contextual factors such as literacy levels, language barriers, and cultural diversity that influence the implementation of cognitive screening tools, as it currently reads as though the studies included will address this. The authors could also consider mentioning the contextual challenges within the "concept" criteria, as these factors are important elements with regard to the screening tools' effectiveness.
- I would recommend that the authors provide justification for why articles published before 1995 were excluded.

Data Search Strategy

- The authors mention that they used keywords relating to cognitive screening tools and dementia detection, but it appears they have only used "Cognitive Screening Tools"; including other keywords such as "cognitive assessments" perhaps would have broadened the search.

Data extraction and presentation

- The authors mention that the data was extracted by two reviewers, which minimises bias and increases the reliability of the extracted data. The authors could describe how discrepancies were resolved between the two reviewers – this would enhance the reproducibility of the data extraction process. The authors could consider including a data extract form template as a supplemental item.
- To improve this article, the authors should provide more information on the process they took to synthesise the data thematically. This would strengthen this section of the review; for example, they could describe the coding process, whether any qualitative data management software was used, and how themes were revised. The authors should clarify whether one or both reviewers undertook the thematic synthesis.

Section 5.1: Cognitive screening tools used in India's PHCs

- The paragraph starting "cognitive screening tools are essential..." this sentence and the following sentence should be moved to the introduction of the article. This section should start with "The evaluation of various cognitive screening tools..".
- Although the authors have tabulated the screening tools, they could consider providing a written narrative on the types of tools that were reported in the review.
- In addition, it would be helpful for the reader to know whether the information reported in Table 2 came from the studies included, or whether this is the authors' interpretation of the screening tools.
- In addition, there is no information about the study design and methodology of included studies. I would expect this information to be tabulated and include information such as the type of study, a description of the participants, sample size, and setting, and also pertinent information about the geographic location or specific environment (as this would have implications for the synthesis of objective 3).
- It would also be helpful to know the context of the screening tool and any outcomes associated with the screening tools' use. This also relates to my earlier comment regarding the dual participants criteria (people screened for dementia AND healthcare professionals); there is no mention of how the two data sets were analysed and how this then affected the synthesis.
- Results – this review would benefit from a distinct results section, as at present the study characteristics merge into the results. The authors described that they thematically analysed the data; it would be helpful to present the qualitative findings in a way that matches this form of analysis.

1. **Tool availability and language adaptation**

- In this section, the authors could outline whether the included studies acknowledged the limitations of English-only cognitive screening tools. It would be helpful to have a narrative synthesis surrounding the barriers of implementing not just the tools themselves but the interaction with healthcare professionals.

1. **Administration time and practicality**

- It would be helpful for the reader to have tools referenced or findings referenced to particular studies.

1. **Effectiveness in cognitive impairment detection**

- Here the authors have used the phrase "cognitive impairment detection," whereas previously they have referred to "screening for dementia." I would recommend that the authors be consistent throughout the article. In addition, the authors state that the MoCA and ACE-R are effective in identifying MCI; thus, they should clarify whether their inclusion criteria is adequately explained, as they state "studies focussing on cognitive screening tools for dementia detection." They could perhaps rephrase to say "studies focussing on cognitive screening tools for the detection of cognitive impairment."
- Moreover, this section doesn't highlight whether the limitation of tools such as the MMSE and MoCA stem from the literature included in the review. If this is the case, which it should be, the authors should clarify how measures were highlighted to perform inadequately in individuals with a low educational background.
- They should also explain clearly how this can lead to both overdiagnosis AND underdiagnosis, as these are two separate concepts.

1. **Challenges and limitations**

- The authors could consider highlighting which tools have been adequately tested in diverse cultural contexts and which haven't.

5.1 Barriers to implementation

- This section makes some interesting and relevant points – however, the authors should reference their findings within the context of the articles included in the review. At present, it is not clear to

the reader where the findings come from or if these are the authors' interpretation.

5.4. Resource constraints

- The authors state that "...the absence of dedicated training programs makes it difficult for healthcare providers to integrate these tools into their routines". It is unclear whether this is a finding from the included articles in the review, or the authors' interpretation. It would be helpful and appropriate to describe the type of studies which highlight this finding. At present, most of the results sections read as author interpretation rather than the result of a thematic analysis.

6. **Discussion**

- The sentence that starts "research indicates..." has no references – the authors should include references for this statement.
- At present, the review provides a commentary on some of the common challenges associated with cognitive screening in PHCs in India. To strengthen this section of the article, I would advise the authors to think about how they report their findings and then contextualise this within the wider research literature.
- I would recommend that the authors discuss the implications of their findings within the context defined in their inclusion criteria (PCC criteria) and highlight any contextual factors that were highlighted as significant from their findings. This would help structure the discussion in a way that enables the reader to interpret the findings.

6. **Strengths and limitations**

- The authors describe a strength of their review as having focussed on cognitive screening tools that are culturally relevant. However, many of the cognitive screening tools in the review were highlighted as not culturally relevant due to their lack of diverse cultural and linguistic appropriateness for Indian populations. This strength contradicts what was included in the review.
- A limitation not highlighted by the authors is the fact that their inclusion criteria comprised two populations (people screening for dementia AND healthcare professionals) and how they addressed this in the data extraction and synthesis.

Declarations

Potential competing interests: No potential competing interests to declare.