

PEER REVIEW HISTORY

BMJ Open publishes all reviews undertaken for accepted manuscripts. Reviewers are asked to complete a checklist review form and are provided with free text boxes to elaborate on their assessment. These free text comments are reproduced below.

ARTICLE DETAILS

Title (Provisional)

Mothers' health-seeking practices and associated factors towards neonatal danger signs in Ethiopia: A systematic review and meta-analysis

Authors

Ferede, Wassie Yazie; Yimer , Tigist Seid; Gelaw, Tiruset; Mekie, Maru; Zewude, Shimeles Biru; Mekete, Getachew; Alemayehu, Habtam Desse; Sisay, fillorenes Ayalew; AYALEW, ABEBA BELAY; Mitiku, Assefa Kebie; Yehuala, Enyew Dagne; Erega, Besfat Berihun

VERSION 1 - REVIEW

Reviewer	1
Name	Adugna, Amanuel
Affiliation	Mizan-Tepi University
Date	29-Apr-2024
COI	No

I have conducted a review of the manuscript "Mothers' health-seeking practices and associated factors towards neonatal danger signs in Ethiopia: A systematic review and meta-analysis" My comments are as follows:

Abstract

Introduction

Comment: Please justify the reason why this systematic review and meta-analysis were conducted.

Result

Comment: The present (%) is missed at the end of the pooled level of mothers' health-seeking practices for neonatal danger signs (52.15).

Comment: What is PNC? Please write the full term rather than an abbreviation or acronym in the abstract part.

Comment: “PNC follow-up, knowledge of the mother's was good, educational status (secondary school and above), decision-making autonomy of the women, and place of delivery were significantly associated with the mother’s health-seeking practices related to neonatal danger signs.” Please rewrite this paragraph.

Introduction

Comment: What are the danger signs in a neonate? Please add a little more detail about the neonatal danger signs

Methods

Comment: Exclusion criteria: “Studies that did not include at least one determinant factor were excluded.” Why were those studies excluded? One of your outcome variables was the prevalence of mothers’ health-seeking practices for neonatal danger signs.

Comment: “The majority of the currently available studies are cross-sectional in design, have a narrow scope, and are unable to address all regions of the country, we are unable to more precisely identify mothers' health-seeking practices for newborn danger signs at the national level.” What is the difference between neonatal danger signs and newborn danger signs ? Please write consistently.

Comment:” The following information was extracted from the articles: author name, sample size, publication year, study area, region, study design, prevalence of mothers' health-seeking practices for neonatal danger signs, and adjusted odds ratios (ORs) with 95% confidence intervals (CIs) for factors associated with mothers' health-seeking practices for neonatal danger signs.” Be sure that all the described information is listed in the table (e.g., study area).

Result

Comment: What could be the source of heterogeneity? Please compute the meta-regression.

Comment: Quality assessment. Which quality assessment scale was used? Newcastle-Ottawa Quality Assessment Scale (NOS) or Joanna Briggs Institute (JBI)?

Comment: Table 1. Please include a footnote below the table to help readers understand the acronyms, such as SNNPR.

Comment: Please include the strengths and limitations of the study before conclusion

Reviewer	2
Name	Gandino, Serena

Affiliation **University of Oxford Medical Sciences Division, Nuffield
Department of Women's & Reproductive Health**

Date **05-May-2024**

COI **I do not have competing interests**

This study is a systematic review and meta-analysis assessing the prevalence of mothers' health-seeking practices in case of neonatal warning signs in Ethiopia, and the factors associated to this practice.

Prompt medical evaluation and management of neonates with warning signs is of paramount importance in order to reduce neonatal mortality. Hence, this study is very relevant and its findings can be useful for guiding policy making. The methodology followed by the authors is good. However, results required further analysis and interpretation.

I would suggest the following revisions:

Abstract

- In the introduction, please provide a clear statement of study aims.
- In the results, highlight the variability that was found among different Ethiopian regions.

Please include a "Strengths and limitations of this study" section.

Introduction

- I would recommend shortening the background section, and highlighting the gap in knowledge that this review aims to fill.
- Please provide an explicit statement of study primary and secondary objectives.

Methods

- The time restriction applied to the search is reported differently in different sections (line 39, line 134, line 149). Please check and correct.
- Please justify the time restriction applied to the search strategy.
- Please state if any language restriction has been applied. If none, explain how non-English studies were translated.
- Line 150: this is a result, should be removed from the Methods section.
- Please clarify further the exclusion criteria applied to the search.
- Add description of the study selection process (title/abstract, full-text,..).
- Line 165 166 repeats what written in the above lines.
- Describe how you handled missing data or unclear information from the studies.

- Report the methods you used to prepare the data collected from eligible studies for synthesis (e.g. data conversion).

Results

- Move the PRISMA flow diagram in the main text.
- In the PRISMA flow diagram, it is not clear which are the “other sources” which identified additional records. Provide description of this search in the methods section as well. The reasons for exclusion of full-text articles are not clear (“conducted at other”?).
- Table 1: “prevalence” should be further clarified.
- Line 246-248 is a repetition of what already stated above.
- Line 249-251: this comment should be moved to the discussion section.
- Table 3: “Pooled proportion of advanced stage breast cancer”??
- Table 3: should this be table 2?
- Add table with risk of bias assessment performed with Newcastle-Ottawa scale for each study.
- Figure 3: “place of delivery” is not clear, should be specified in-hospital delivery. “Good knowledge of mother’s” is not clear.
- The subgroup analysis by year would be more relevant if performed by year in which the study was conducted, rather than year of publication.

Discussion

- Please begin the discussion section with a general interpretation of the results
- Provide a deeper interpretation of the results in the context of other evidence in Ethiopia and other low- and middle- income countries.
- Discuss the findings of subgroup analysis
- Discuss further the possible implications of the review results for policy-making
- Discuss limitations of the evidence included in the review
- Discuss limitations of the review and its possible implications
- Identify gaps that could be addressed with future research

Supplementary material

- The PRISMA checklist is not adequately filled in. Location is not clear (pages?) and does not correspond to information in the text. Please revise

General considerations

- Please report numbers in a consistent way, accordingly to journal instructions.

- Please do not use acronyms without explanation (e.g. PNC at line 49).
 - Table design needs revision to improve clarity
 - Typos and grammar need significant revision
-

VERSION 1 - AUTHOR RESPONSE

Reviewer: 1

Mr. Amanuel Adugna, Mizan-Tepi University

Comments to the Author:

I have conducted a review of the manuscript “Mothers’ health-seeking practices and associated factors towards neonatal danger signs in Ethiopia: A systematic review and meta-analysis” My comments are as follows:

Abstract

Introduction

Comment 1: Please justify the reason why this systematic review and meta-analysis were conducted.

Response 1: Thank you for your genuine comments.

Systematic reviews with meta-analysis represent the gold standard for conducting reliable and transparent reviews of the literature. A systematic review and meta-analysis is a comprehensive summary of the literature on a specific topic. It uses a rigorous and standardized approach to identify, evaluate, and synthesize all relevant studies. Systematic reviews and meta-analyses are conducted to provide a higher level of evidence. They offer a comprehensive and reliable synthesis of research findings, minimizing biases and increasing the power and generalizability of conclusions.

Result

Comment 2: The present (%) is missed at the end of the pooled level of mothers’ health-seeking practices for neonatal danger signs (52.15).

Response 2: Thank you for your helpful comments. Corrected on the document

Comment 3: What is PNC? Please write the full term rather than an abbreviation or acronym in the abstract part.

Response 3: Thank you for your helpful comments. Corrected on the document

Comment 4: “PNC follow-up, knowledge of the mother's was good, educational

status (secondary school and above), decision-making autonomy of the women, and place of delivery were significantly associated with the mother's health-seeking practices related to neonatal danger signs." Please rewrite this paragraph.

Response 4: Thank you for your genuine comments. Corrected on the document
Introduction

Comment 5: What are the danger signs in a neonate? Please add a little more detail about the neonatal danger signs

Response 5: Thank you for your helpful comments. The notifiable causes of neonatal danger signs are neonatal jaundice, vomiting, cord sepsis, inability to suck breast milk, convulsions, hyperthermia/hypothermia, no urine in the first 24 hours, no bowel movement in the first 48 hours, a rapid breathing rate over 60 per minute etc. so we have corrected on the document.

Methods

Comment 6: Exclusion criteria: "Studies that did not include at least one determinant factor were excluded." Why were those studies excluded? One of your outcome variables was the prevalence of mothers' health-seeking practices for neonatal danger signs.

Response 6: Thank you for your thoughtful comments. The error has been corrected in the document, and if the study only outcome variable has already been included in the study.

Comment 7: "The majority of the currently available studies are cross-sectional in design, have a narrow scope, and are unable to address all regions of the country, we are unable to more precisely identify mothers' health-seeking practices for newborn danger signs at the national level." What is the difference between neonatal danger signs and newborn danger signs? Please write consistently.

Response 7: Thank you for your genuine comments. Corrected on the document that is neonatal danger sign.

Comment 8: The following information was extracted from the articles: author name, sample size, publication year, study area, region, study design, prevalence of mothers' health-seeking practices for neonatal danger signs, and adjusted odds ratios (ORs) with 95% confidence intervals (CIs) for factors associated with mothers'

health-seeking practices for neonatal danger signs.” Be sure that all the described information is listed in the table (e.g., study area).

Response 8: Thank you for your genuine comments. However, during the extraction from the articles, the study area was utilized and is available there. We can add it on the table if necessary.

Result

Comment 9: What could be the source of heterogeneity? Please compute the meta-regression.

Response 9: Meta-regression was conducted to identify the possible source heterogeneity of Mothers’ health-seeking practices and associated factors towards neonatal danger signs using the publication years and sample size. Of these factors, none of them were statistically significant (Table 3)

Table 3. Meta-regression analysis using publication years and sample sizes for the possible source of heterogeneity of pooled prevalence of Mothers’ health-seeking practices towards neonatal danger signs, Ethiopia, 2024.

Variables	Coefficients	P-value
Publication years	-0.4380481 (-4.587209 3.711113)	0.836
Sample size	-0.58676 (-0.122966, 0.1050553)	0.113

Comment 10: Quality assessment. Which quality assessment scale was used? Newcastle-Ottawa Quality Assessment Scale (NOS) or Joanna Briggs Institute (JBI)?

Response 10: Thank you for your helpful comments and used Newcastle-Ottawa Quality Assessment Scale (NOS)

Comment 11: Table 1. Please include a footnote below the table to help readers understand the acronyms, such as SNNPR.

Response 11: Thank you for your genuine comments and corrected on the document

Comment 12: Please include the strengths and limitations of the study before conclusion

Response 12: Thank you for your genuine comments and the strengths and limitations of the study added on the document

Reviewer: 2

Dr. Serena Gandino, University of Oxford Medical Sciences Division

Comments to the Author:

This study is a systematic review and meta-analysis assessing the prevalence of mothers' health-seeking practices in case of neonatal warning signs in Ethiopia, and the factors associated to this practice.

Prompt medical evaluation and management of neonates with warning signs is of paramount importance in order to reduce neonatal mortality. Hence, this study is very relevant and its findings can be useful for guiding policy making. The methodology followed by the authors is good. However, results required further analysis and interpretation.

I would suggest the following revisions:

Abstract

Comment 1:

- In the introduction, please provide a clear statement of study aims.

Response#: Thank you for your helpful comments. Corrected on the document

- In the results, highlight the variability that was found among different Ethiopian regions.

-Please include a "Strengths and limitations of this study" section.

Response#: Thank you for your helpful comments. Corrected on the document.

Introduction

- I would recommend shortening the background section, and highlighting the gap in knowledge that this review aims to fill.

- Please provide an explicit statement of study primary and secondary objectives.

Response: Thank you for your helpful comments and corrected on the document

Methods

Comment 2:

- The time restriction applied to the search is reported differently in different sections (line 39, line 134, line 149). Please check and correct.

Response: Thank you for your genuine comments. check and corrected on the document

- Please justify the time restriction applied to the search strategy.

Response: The time restriction applied to the search strategy during the systematic review is justified because a clear time frame ensures consistency in the inclusion criteria, which is essential for maintaining the integrity of the review. It helps to avoid discrepancies that could arise from including studies published at vastly different times, which might reflect different stages of knowledge and practice. Setting a cutoff date also helps manage the volume of literature that needs to be reviewed. Without a time, restriction, the sheer number of studies could be overwhelming, making it difficult to conduct a thorough and comprehensive analysis. Additionally, it prevents the inclusion of research published after the conclusion of this study.

- Please state if any language restriction has been applied. If none, explain how non-English studies were translated.

Response: Thank you for your genuine comments, however not encounter non-English studies

- Line 150: this is a result, should be removed from the Methods section.

Response: Thank you for your helpful comments and corrected on the document

- Please clarify further the exclusion criteria applied to the search.

Response: The exclusion criteria applied to the research are designed to ensure the relevance, quality, and manageability of the included studies. For example, non-peer-reviewed articles, editorials, commentaries, and other non-research articles were excluded to ensure that only high-quality, empirical research studies were included

- Add description of the study selection process (title/abstract, full-text,).

Response: Thank you for your helpful comments. Corrected on the document
- Line 165 166 repeats what written in the above lines.

Response: Thank you for your comments. The authors not similar

Three authors (WY, BB, and TS) were responsible for independently assessing the quality of each study. In cases where there were disagreements among the three authors during the quality assessment, three additional authors (MM, SB and ED) were involved to resolve the discrepancy.

Comment: - Describe how you handled missing data or unclear information from the studies.

Response: Thank you for your genuine comments. For studies with unclear information, we conducted a thorough review and sought consensus among our research team to interpret the data accurately. Studies with missing data or unclear information were removed from this study.

Comment: - Report the methods you used to prepare the data collected from eligible studies for synthesis (e.g., data conversion).

Response: Thank you for your helpful comments and **Search strategies used from** international databases and the methods used to prepare the data collected from eligible studies for synthesis the Preferred Reporting Items for Systematic reviews and Meta-Analyses (PRISMA) statement was developed to facilitate transparent and complete reporting of systematic reviews and has been updated (to PRISMA 2020) to reflect recent advances in systematic review

Results

Comment 3:

- Move the PRISMA flow diagram in the main text.

Response: In the submission guidelines for BMJ, there is a recommendation to include no more than five tables and figures combined in the main text. Any additional tables or figures should be placed in a supplementary file. This is why the PRISMA flow diagram is not included in the main text.

- In the PRISMA flow diagram, it is not clear which are the “other sources” which identified additional records. Provide description of this search in the methods

section as well. The reasons for exclusion of full-text articles are not clear (“conducted at other?”).

Comment 4- - Table 1: “prevalence” should be further clarified.

Response: Thank you for your genuine comments and corrected in the document

- Line 246-248 is a repetition of what already stated above.

Response: Thank you for your helpful comments however, it is not the same or repetition the above sentence discussion focuses on individual studies within the regions, whereas lines 246-248 address the subgroup analysis in the regions.

- Line 249-251: this comment should be moved to the discussion section.

Response: Thank you for your genuine comments and corrected in the document

Comment 4- - Table 3: “Pooled proportion of advanced stage breast cancer”??

- Table 3: should this be table 2?

Response: Thank you for your genuine comments and sorry for the editing error.

The Pooled prevalence of mothers’ health-seeking practices toward neonatal danger signs in Ethiopia at **Figure 1**

Comment 4- - - Add table with risk of bias assessment performed with Newcastle-Ottawa scale for each study.

Response: Thank you for your genuine comments and table with risk of bias assessment performed with Newcastle-Ottawa scale for each study as supplementary data

Comment 4- - - Figure 3: “place of delivery” is not clear, should be specified in-hospital delivery. “Good knowledge of mother’s” is not clear.

Response:

Comment 4- -- The subgroup analysis by year would be more relevant if performed by year in which the study was conducted, rather than year of publication.

Response:

Discussion

Comment 4- Please begin the discussion section with a general interpretation of the results

- Provide a deeper interpretation of the results in the context of other evidence in Ethiopia and other low- and middle- income countries.

Response: Thank you for your genuine comments and corrected in the document

- Discuss the findings of subgroup analysis

Response: Thank you for your comments and subgroup analysis was discuss in the document

Comment: - Discuss further the possible implications of the review results for policy-making

- Discuss limitations of the evidence included in the review

- Discuss limitations of the review and its possible implications

- Identify gaps that could be addressed with future research

Response: Thank you for your comments and corrected on the document in the document

Supplementary material

Comment 5: - The PRISMA checklist is not adequately filled in. Location is not clear (pages?) and does not correspond to information in the text. Please revise

General considerations

Comment 23 - Please report numbers in a consistent way, accordingly to journal instructions.

- Please do not use acronyms without explanation (e.g., PNC at line 49).

Response: Thank you for your comments and corrected on the document

- Table design needs revision to improve clarity

Response: Thank you for your comments and corrected on the document

- Typos and grammar need significant revision

Response: Thank you for your comments and corrected on the document

Reviewer: 1

Competing interests of Reviewer: No

Reviewer: 2

Competing interests of Reviewer: I do not have competing interests

VERSION 2 - REVIEW

Reviewer	1
Name	Adugna, Amanuel
Affiliation	Mizan-Tepi University
Date	16-Sep-2024
COI	No

Almost all comments are thoroughly addressed. However, the justification of your study is still not clear. Please write clearly at the end of the background (abstract part) and at the last paragraph of the introduction.

VERSION 2 - AUTHOR RESPONSE

Reviewer: 1

If you have selected 'Yes' above, please provide details of any competing interests.: No

Response 1: Thank you for your genuine comments and corrected on the document