PEER REVIEW HISTORY

BMJ Paediatrics 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)	A systematic review of early hearing detection and intervention (EHDI) programs for infants and young children in low and middle income countries in Asia
AUTHORS	Joshi B, Deepashree Ramkumar, Vidya Nair, Lekha Kuper, Hannah

VERSION 1 – REVIEW

REVIEWER	Reviewer name: Dr. Peter Flom Institution and Country: Peter Flom Consulting, 515 West End Ave New York, 10024, United States Competing interests: None
REVIEW RETURNED	16-Nov-2022

GENERAL COMMENTS	I confine my remarks to statistical aspects of this paper. These were minimal, but appropriate, and I recommend publication. Peter Flom

REVIEWER	Reviewer name: James Saunders Institution and Country: United Kingdom of Great Britain and Northern Ireland Competing interests: None
REVIEW RETURNED	08-Dec-2022

GENERAL COMMENTS	The authors use rather a generous definition of inclusion criteria by including all lower middle and upper middle income countries regardless of the respective WHO region. In other words, they have chosen to use geographical definition rather than more culturally defined regions as delineated by the UN or WHO. This does not need a revision but does lead to a heterogenous inclusion that included central asia and middle eastern countries. They may address these differences in analysis or mention them in discussion. They have included world bank upper middle income countries classification. They need to be very clear about the criteria in the methods section. Although the definition of low and all middle income countries is correct, the term LMIC is often taken to include lower and low middle income countries. They should just make sure that it is understood at the outset. It is also notable that the most of their data comes from upper middle income countries. Perhaps giving those classifications in the table would be helpful. In the first line of discussion, they state that there are over 100 LMICs in asia, even with their generous inclusion, I only count 61 LMICs that meet the criteria according to the world bank. The distribution of SNHL and CDHL is an important contribution and I do not think the data is reliable. It is unclear to me what exactly the numbers represent. I assume the percentage

	are the numbers and percentage of the overall group that have the type of hearing loss. Percentages don't add up. Although the number of cases add up to the overall cases but the percentages do not. I would all assume that there are uncertain and mixed hearing loss, this does not seem to be accounted for in the data. My biggest problem is how the data is derived in individual studies. In most of these cases, the diagnostic test is an ENT evaluation, rather diagnostic audiometry. Only 6 of the 11 included studies mentioned that PTA was assessed as the diagnostic study. Furthermore, two of the more studies do not include any of the type of hearing loss. I assume the bone conduction threshold were not obtained at the time of screening audiometry. It is not clearly stated in the manuscript. It is also not clear that if bone conduction was included in the diagnostic PTA assessment. These points needs to be addressed. Chadha et al citation is listed as 2013 in table #2 & 2012 in table#3. The legends for the figure A to E do not match up. The caption for legend or figure 3E should list the countries included

VERSION 1 – AUTHOR RESPONSE

22nd December 2022

To
The Editor
BMJ Pediatrics Open,

Dear Editor,

We thank you for the opportunity to revise and submit our manuscript titled "**A systematic review of early hearing detection and intervention (EHDI) programs for infants and young children in low and middle income countries in Asia**" with all the suggested corrections received during our initial submission.

The following were the suggestions provided and our response;

1. Editor in chief

Comment 1: Add Key Messages: What is already known; What this study adds; How this study might affect research, practice or policy sections

Key messages under the headings described above have been added in - page number 5

Comment 2: Use LICs and MICs instead of LMICs

This change has been incorporated. For greater clarity, the term LMIC (to indicate low and middle income countries) has been replaced with Low Income Countries (LICs), Lower Middle Income countries (LMICs) & Upper Middle Income Countries (UMICs) in the entire manuscript based on the world bank classification of countries.

Comment 3: Tables 1A,1B,1D and 1E delete the column Country

The column 'country' has been deleted from the tables 1A, 1B, 1D and 1E.

2. Reviewer: 1

Comments 1: I confine my remarks to statistical aspects of this paper. These were minimal, but appropriate, and I recommend publication.

Thank you for your positive feedback

3. Reviewer 2:

Comment 1: The authors use rather a generous definition of inclusion criteria by including all lower middle and upper middle income countries regardless of the respective WHO region. In other words, they have chosen to use geographical definition rather than more culturally defined regions as delineated by the UN or WHO. This does not need a revision but does lead to a heterogenous inclusion that included central asia and middle eastern countries. They may address these differences in analysis or mention them in discussion

The reviewer's suggestion to address the heterogenous inclusion is included in the discussion section 1st paragraph – Page number 20

Comment 2: **They have included world bank upper middle income countries classification. They need to be very clear about the criteria in the methods section. Although the definition of low and all middle income countries is correct, the term LMIC is often taken to include lower and low middle income countries. They should just make sure that it is understood at the outset. It is also notable that the most of their data comes from upper middle income countries. Perhaps giving those classifications in the table would be helpful.**

In our initial submission, we included this description in the inclusion criteria of the method section. Based on reviewer's comments, we have now added the year to this classification. In

addition, each country's classification (LIC/LMIC/UMIC) has now been added in the Tables (1A to E).

Comment 3: In the first line of discussion, they state that there are over 100 LMICs in asia, even with their generous inclusion, I only count 61 LMICs that meet the criteria according to the world bank.

The number 100 was an error. This has been edited with correct numbers in the discussion section – page number 21 in the main document.

Comment 4: The distribution of SNHL and CDHL is an important contribution and I do not think the data is reliable. It is unclear to me what exactly the numbers represent. I assume the percentage are the numbers and percentage of the overall group that have the type of hearing loss

The numbers are the cases identified with hearing loss as mentioned in each of the study included in the table. The percentages were calculated based on these numbers. For more clarity, we have edited this section in page number 19. The title of Table 3 has also now been edited for clarity.

Comment 5: Percentages don't add up. Although the number of cases add up to the overall cases but the percentages do not. I would all assume that there are uncertain and mixed hearing loss, this does not seem to be accounted for in the data.

We apologize for the errors in percentage totals. This is due to rounding off of decimal points. This has now been corrected and updated in page number 19.

Comment 6: My biggest problem is how the data is derived in individual studies. In most of these cases, the diagnostic test is an ENT evaluation, rather diagnostic audiometry. Only 6 of the 11 included studies mentioned that PTA was assessed as the diagnostic study.

The number of cases identified with hearing loss was taken as mentioned in each study. Some of these studies (n=5) did not mention the diagnostic information however mentioned the number of cases identified. We recognise that this is a limitation in those studies and therefore have now mentioned in the results section in page number 19 and also in the discussion section in page number 21.

Comment 7: Furthermore, two of the more studies do not include any of the type of hearing loss. I assume the bone conduction threshold were not obtained at the time of

screening audiometry. It is not clearly stated in the manuscript. It is also not clear that if bone conduction was included in the diagnostic PTA assessment. These points needs to be addressed.

The lack of data on bone conduction thresholds, as well as lack of information on diagnostic testing conducted as well as lack of differentiation of the type of hearing loss in some of the studies is now mentioned in the results section in page number 18.

Comment 8: Chadha et al citation is listed as 2013 in table #2 & 2012 in table#3

This error was noted and corrected as 'Chadha et al.,2013' in the table 3.

Comment 9: The legends for the figure A to E do not match up. The caption for legend or figure 3E should list the countries included

The legends for the figures A to E were cross checked and corrected in page number 24. The caption has now been edited with details of the countries.