Reviewers report

Title: Reproductive health of women with and without disabilities in South India, the SIDE Study (South India Disability Evidence) Study: A Case Control Study

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Reviewer: Nadine Seward

Reviewers report:

The manuscript entitled “Reproductive health of women with and without disabilities in South India, the SIDE Study (South India Disability Evidence) Study: A Case Control Study” was an interesting piece of work and read well. However I still feel that overall, the manuscript will require considerable major compulsory works before it is fit for publication. Importantly, the author does not state the main objective of the paper and how this will be assessed for, only that the reproductive health of women will be described.

I feel this is a decent first attempt, but a paper that looks at a specific outcome that is of public health interest would be more beneficial to the reader, in addition to the univariable analysis. As an example, a paper that looked at predictors of having a live birth in the past 2 years in women with a disability compared to women without a disability. I'm not an expert in disability by any means, so I'm not sure about topics of public health importance.

I also feel the authors would benefit from hiring an epidemiologist or statistician to help with some of the more technical aspects of the paper.

The report I detail below is based as my experience as an epidemiologist/statistician and not as a clinician. Although many corrections are required, I have only presented a few general comments below that will hopefully be of some value to the authors:

1. Is the question posed by the authors well defined?
   - The abstract does not specifically state what the objective of the study was, only that they would look at reproductive health experiences of women with disability in South India. How will the authors attempt to do this? What is the purpose of having the case control study? Are the authors comparing women with disability to women without disability? If so, this should be clearly stated in the objective.
   - Although a vague objective is proposed, authors still need to state the main question of the study. The following excerpt illustrates how vague the authors have been: “There is a complete lack of published literature in peer reviewed journals on the reproductive health status of women with disabilities in India. The present study was therefore conducted to bridge this evidence gap to enable need-based appropriate reproductive health services for women with disability in...
India."

- Authors compare reproductive health of women with disability to women without disability. Is this how authors which to look at reproductive health experiences? If so, this should be stated in a clear objective.

2. Are the methods appropriate and well described?
- The statistical methods were not described in sufficient detail. The authors state a chi-squared test was used for associations and authors do not state associations for what. It was also state logistic regression was used to determine odds for associated variables, but does not state associated variables of what. Furthermore, logistic regression presents odds ratios, not odds.
- Although the univariable analysis provides an initial understanding of the situation, further work is required to understand if there is truly no difference/or a difference between these two populations. There was no attempt to account for clustering, nor were there an attempt to create a multivariable model whilst adjusting for appropriate confounders with an appropriate outcome measure.
- The results are not presented in a way that is considered appropriate. For example, for a chi square test, it is only necessary to present the p value and not the chi square. Also, the mean age of women in the two separate groups is presented, but authors do not state if there is a difference or not.
- Authors should provide a reference for the large study (i.e. South India Disability Evidence Study) that the present study is a part of.
- Tables mention that some statistics are age adjusted, but the methods on how this was done were not reported.

3. Are the data sound?
- Impossible for me to tell from the information provided.

4. Does the manuscript adhere to the relevant standards for reporting and data deposition?
- Results have not been appropriately stated. If authors state something is “significantly higher”, then a p value should be reported.
- Presenting results as “x” times higher is not appropriate. Authors should state if this is an odds ratio, rate ratio, etc.
- Results tables need some work. As an example, there is no need to report the number and percent in two separate columns. One column will do!
- If authors are comparing two groups, a statistic to describe the associations should also be stated.
- These are only a few of the many corrections that are required with the information in the results section.

5. Are the discussion and conclusions well balanced and adequately supported by the data?
• Discussion and conclusion requires considerable work
• Authors state reproductive health indicators are comparable between these two populations. What are the reproductive health indicators? These should be clearly stated in the discussion when the authors state there are no differences between the two groups.
• Limitations are not discussed.
• Discussion and conclusions are not adequately separated out.
• Authors state there are no significant differences on most parameters of reproductive health. The results section to not support this statement.
• Future research is not discussed

6. Are limitations of the work clearly stated?
• Limitations of the study are not discussed
• Recall bias? Women report on reproductive health and outcomes of any pregnancy over the past 2 years
• Have controls been appropriately selected? They are age and sex matched, but authors do not state why they think this was important.
• Other potential bias?

7. Do the authors clearly acknowledge any work upon which they are building, both published and unpublished?
• This has been adequately completed.

8. Do the title and abstract accurately convey what has been found?
• The study findings are adequately described in the title and abstract

9. Is the writing acceptable?
• Writing is acceptable English

Level of interest: An article of limited interest

Quality of written English: Acceptable

Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:
I declare I have no competing interests