Reviewer’s report

Title: An Issue of Unwanted Births in India: An Application of Conditional Logistic Regression

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Reviewer: Sada Nand Prof. Dwivedi

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BMC Pregnancy and Childbirth

From public health program point of view, the hypothesis to be investigated by the authors is very much relevant. Also, findings under this article may be useful to those who have closely related research interests. To make the article more lucid and clear, the following observations need to be considered:

1. The hypothesis posed by the authors is clearly defined & has merit. As mentioned under Methods in abstract as well, “This paper attempts to examine the associated factors of unwanted births, without matching the village and after matching the village, by using the matching case-control design”, to make the title convey more accurately what has been done, it can be modified as “Determinants of Unwanted Pregnancies in India Using Matched Case-Control Designs”. It may obviously be better to call unwanted pregnancy instead of unwanted birth.

2. They need to include current references on topic while describing available review of literature. For example, “Begum S, Dwivedi SN, Pandey A. On optimum numbers of controls under case control studies on unwanted pregnancies: an analytical appraisal. Statistics in Transition, 2008; 9(1):117-128”.

3. The methods are conventionally appropriate but not well- described. As described under Methods, it is mentioned that Frequency as well as pair matching were used to consider the controls. It’s not explained why they have used both procedures? Why not one of them?

4. Further, since major emphasis of this article is on matched design, they need to explain under methods, why matched design might be a better choice than unmatched design, with suitable references.

5. Under Analysis (Frequency Matching), it is mentioned that “After selection of case and controls in frequency matched case control design, the data satisfy the
conditions
of unconditional logistic regression model.” Instead of this, one needs to write about
required conditions & their fulfilments. Under Major Compulsory Revisions, it needs to be elaborated because suitability of analytical method depends on study
design only. Inappropriate analytical methods can lead to distortion in results.
6. The data are as such sound. They have used data from the ‘National Family Health
Survey’ round three (NFHS-3) conducted in 2005-06, spread over across the states
and union territories of India. The authors have tried to investigate the factors associated with unwanted pregnancies using a nationally representative, large-scale
population-based dataset. However, matching design adds artificial nature in
distributions of matched factors. To be more specific, in present case, age of the sampled respondents regarding wanted pregnancy (table 2 & 3) has different
distribution than its original distribution (table 1). Hence point 5 mentioned-above becomes more relevant.
7. This manuscript has adhered to the relevant standards for reporting and data deposition, specially considered data & absolute frequency (not only %) in a desired manner. But, the tables 1 & 2 need to be pooled in one table appropriately.
8. In tables 3 & 4, once 95% confidence interval is included, there is no much use of reporting p-values in the last columns. They need to be deleted. Further, for comparability of results, tables 3 & 4 also need to be reported in one table appropriately.
9. The discussion and conclusions also need to be updated after revision of the article.
10. The limitations of the work also need to be updated after revision of the article.
11. The authors need to clearly acknowledge any work upon which they are building.
12. The writing of the article is otherwise acceptable.
13. I have assessed the statistics in my report.

After incorporation of suggested Revisions, the article may be accepted for its possible publication in the MBC, Pregnancy and Childbirth.

I declare that I have no competing interests.
**Level of interest:** An article whose findings are important to those with closely related research interests

**Quality of written English:** Acceptable

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

**Declaration of competing interests:**

I declare that I have no competing interests.