Reviewer's report

Title: Change over time in factors associated with domestic violence by intimate partner in Egypt: analysis of two surveys

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Reviewer: Farah Ahmad

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Manuscript Title: Change over time in factors associated with domestic violence by intimate partner in Egypt: analysis of two surveys

This is an interesting paper and written well. The authors report prevalence of domestic violence and help seeking patterns by analysing two Demographic and Health Surveys (DHS) conducted in Egypt in 1995 and 2005. This study has the potential to advance knowledge in the area of women's health from epidemiological and public health perspectives. However, the paper needs improvements as discussed below.

To meet the BMC's reviewer guidelines, I have indicated **Major Compulsory Revisions** with double asterisk (**), and *Minor Essential Revisions* with a single asterisk (*). Other suggestions should be considered *Discretionary Revisions*.

ABSTRACT:

1. * The method section should describe the type of statistical analyses used and inclusion of weights for population estimates.

2. * The result section describes the results without actual numbers. Please include actual numbers (e.g. the prevalence of domestic violence as xx% for 1995 and xx% for 2005)

BACKGROUND:

The authors present an in-depth review of the existing literature in a concise and logical manner. This section needs some improvements as suggested below:

1. * In the 3rd paragraph on page 3, the authors state *Egypt is a country with both high prevalence of domestic violence compared to other countries*. It is important to give details of this previous work in Egypt, such as: what were the rates of domestic violence reported in the previous studies? How were these studies conducted? How was domestic violence measured? What are the limitations? Why this new study is needed?

2. What is the new divorce law in Egypt?

3. The last sentence of paragraph 3 on page 3 has a typo: *We assess more in dept the effects* should be *We assess more in depth the*
METHODS

1. Sample: A good overview of the DHS survey and its modules is presented. Could you please tell the readers about some of these details: the response rates of the two surveys; method of administration (in person interviews, phone interviews, self-administered)?; completion time; language of the surveys; and use/non-use of proxy interviews.

2. Variables: The authors provide good details about the questions used in the 1995 and 2005 surveys to measure domestic violence and help seeking. Were these questions coming from previously validated tools? Do we know the validity and reliability of the translated versions?

3. As this is long a section, please make two sub-sections for the Key variables and Socio-demographic variables.

4. ** The major limitation of this paper is the operationalization of the domestic violence and help seeking variables which were measured differently in the two DHS surveys.

   4.a. In 1995, the DHS survey measured beating while in 2005 the DHS measured several types of domestic violence perpetrated by partners. These two are NOT alike. The authors also acknowledge, though indirectly, and make an attempt to explain their counterintuitive findings (page 7) by conducting Factor Analyses of the 2005 version of the domestic violence questions. This factor analyses found that the questions actually measure different forms of violence: extreme, strong, and moderate violence. In my view, the 1995 item on beating should be compared only with similar items included in the 2005 (e.g. extreme and strong). The analyses should be re-run with this re-operationalized variable. It may resolve many counter intuitive findings in this paper.

   4.b. Likewise, help seeking was measured differently in 1995 and 2005:
   (i) The help-seeking item focused on disclosing ever in 1995 compared to disclosing in the last 12 months in 2005.
   (ii) The help-seeking item focused on spousal beating in 1995 compared to spousal physical abuse in 2005.
   (iii) The help-seeking item focused on getting [general] help in 1995 compared to getting help to prevent or stop him from hurting you. What would be this type of help? Police intervention?

   In my view, these two are not very comparable. The authors should separately report analyses on this item, without forced comparison, and the discussion should interpret the results by focussing on different aspects of help seeking measured in 1995 and 2005.

STATISTICAL ANALYSIS
1. ** As suggested above, the comparison between 1995 and 2005 DHS surveys for the rates of "domestic violence" needs re-operationalization.

2. ** Analysis for "help seeking" should be reported separately for 1995 and 2005, without treating them as an identical measure.

3. * I assume for some analyses, there were small number of cases. Could you report the "coefficient of variation"?

RESULTS

1. ** Based on my earlier suggestion, the result section will change.

2. The authors should present the results in a more concise way. The current version is too long.

3. Figure 1: What is "degrees of violence" on y-axis? The figure is not clear. Could it be presented in a simple format? e.g. Pie Chart.

4. Table 4 and 2: the "reference category" should appear in a consistent manners (i.e. always in the 1st position or always in the last position). In the current version, for some variables the "reference category" is in the 1st position (e.g. Table 2, Region) and for other variables it is at the end (e.g. Table 2, Age of respondent).

DISCUSSION

1. ** The discussion section will need revisions on re-operationalization of the "domestic violence" and "help seeking" variables.

2. An important limitation to be highlighted in the discussion section is that these two surveys included different people. A better design would be measurement of domestic violence in a longitudinal design.

3. * There is a need to discuss the implications for future research (e.g. measurement issues when national surveys include different questions) and public health programs (e.g. how to target messages for different groups).

The authors have undertaken an important work in an under researched area. Such research is essential to advance our understanding and to address the issue of domestic violence.

All the best in you future work!

**What next?:** Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

**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.