Author's response to reviews

Title: Unintended pregnancy: Magnitude and correlates in six urban sites in Senegal

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Version: 2 Date: 8 November 2013

Author's response to reviews: see over
Responses to Reviewer Enrique Gadow

The manuscript adequately analyzes the sociodemographic characteristic of the population. Although a large body of references is cited, an additional reference could be included: Unintended pregnancies in women delivering at 18 South American hospitals. NFP-ECLAMC Group. Latin American Collaborative Study of Congenital Malformations. Gadow EC, Paz JE, López-Camelo JS, Dutra MG, Queenan JT, Simpson JL, Jennings VH, Castilla EE. Hum Reprod. 1998 Jul;13(7):1991-5.

Thanks for mentioning this interesting paper, we have added that reference.

The study findings are consistent with the objectives. The only drawback is how the population is recorded. Vital statistics, such as those used in the study, are not usually reliable. The fact that pregnancy was unintended is not reliable either. Notwithstanding that, the manuscript is well designed, it provides a large number of cases, with an adequate statistical analysis, and should be considered for publication.

We added this remark as a limitation of our study.
Responses to Reviewer Nega Assefa

Major Compulsory:

1. The introduction needs re-work based on the comments given, as some of the sections are too much
   We have re-worked the introduction to make it shorter based on the comments given.

2. Methodology, the type of analysis needs to be revisited, I suggested GEE than SVY because it is not full cluster by its nature. Or multilevel analysis than SVY if they have truly couple level factors but I fail to find the factor in the tables.

   The approach that we have taken using the SVY commands in Stata statistical software is the appropriate approach given the sampling strategy which is similar to the DHS sampling approach. We have tried to provide greater depth in our methods section on the sampling approach to help clarify the methods. In particular, the data we are using was collected with a two-stage sampling design to select a representative sample of women ages 15-49 in each city. In the first stage, a random sample of clusters was selected from each city and in the second stage, a random sample of households was selected from all selected clusters (and all eligible women ages 15-49 in the selected households were interviewed). Given this cluster sampling design, we use the SVY commands to adjust the standard errors for correlation between observations from the same cluster. For the “couple-level” factors, these are actually as reported by the woman and thus do not represent true couple-level variables. We have tried to make this clearer in the text.

3. Methodology, also to think making unintended pregnancy as a reference category, because they are studying unintended pregnancy, which should have a positive number than 1 or zero to address wider reader

   Thank you for this observation. We have reversed the models as proposed by the reviewer so that the categories we look at are: unintended pregnancy vs. no pregnancy since 2009; and unintended pregnancy vs. intended pregnancy. We have made this change throughout all of the multivariate tables presented.

4. Methodology:
   Changing the way findings are presented, coefficients (#) to exponent of coefficients (OR) to address wider reader.
   Thank you for this comment. We have adjusted the multinomial logistic regression results to present the relative risk ratios that can be interpreted like odds ratios and as the reviewer points out are more familiar to the wider audience.

Table 3: you put the reference category to be unintended pregnancies in both the never pregnant and intended pregnancy. That is why it shows a reverse association. While you are studying unintended pregnancy it is better to put higher marks for
unintended pregnancy and lower mark for other categories so that the association will not be reversed, and will be clear for any reader. As it appears though it doesn’t have a problem with the statistical analysis, it is not wise way of putting values to address all kinds of readers.

Thank you for this comment; we have made the revision as proposed by the reviewer in the major compulsory comments (number 3).

5. Discussion: the poorly written section of this article is discussion; you need to re-work taking time. Your outputs should be discussed, for the positive and negative values compared to other findings. It is not a conclusive remark, rather showing the scientific merit of your paper.

We have re-worked the discussion section to respond to this remark.

Minor Essential:
Abstract:
You started by saying “In Senegal, unwanted pregnancies ….. Less is known about this topic among married women…..” but you are not including in your study only married women, why you used this statement?

We have revised that statement according to the paper’s content.

Introduction:
Page 5, paragraph 1-3 page 6 paragraph 1: starting from “The 2010-2011 Senegal Demographic……” up to page 6 paragraph 1 line number 1-7, not clear why you put these things for two reasons.
1. The First reason is, you have already concluded in page 4 last statement “….Less is known about unintended pregnancy in francophone West Africa, and especially Senegal.” In my view what shall next come after this statement is the statement in page six line number 7 a statement starting “…..This paper seeks to fill these gaps…..”.
2. The second reason is you gave too much emphasis on unmarried women, while majority of your study population is married women. You may talk little but not this much.

We have revised that paragraph to shorten the emphasis on unmarried women and move the conclusive statement.

Methodology:
Please remove the word cluster not to confuse with cluster sampling which is totally different from the way you selected sample. You may replace the word with “Enumeration area”

We have replaced “cluster” by “enumeration area”

Paragraph 2: you said “The main outcome variable for this study is the intentionality of the last pregnancy since 2009” please say it “…. for this study is pregnancy
intention”, I am wondering why you give the time 2009, do you want to verify that the women is infertile.

*We have given the time 2009 because in this study we have focused on the last two years before the data collection (which happened in 2011). We have alternatively used “intentionality of the last pregnancy during the last two years prior to the survey”.*

Svy Command is used for cluster data, your data is stratified by enumeration areas that was proportionally allocated than a clustered data. Why you used SVY command? I suggest you use GEE model or Multi-level analysis than the SVY. GEE takes into account the clustering effect in your stratification by enumeration area.

*See our response in Major Compulsory – point 2. We have explained why svy command has been used.*

You have also used couple level variable in model 4, which is best handled by Multi-level analysis. SVY is best for full cluster sampling techniques which is not the case for you.

*We have used svy command which is the best approach, given our sampling technique. We have provided more explanation above.*

Result:

Please take the first statement starting with “Table 1 shows the……” to the last of the description.

Page 10, 1st paragraph last statement, it appears as if you are writing discussion. “Indeed, several studies have demonstrated that short birth intervals (less than 2 years) are harmful to the health and nutritional status of children and increase their risk of death [27,28,29].” here you are required to write only your findings.

*We have dropped that statement from that paragraph.*

Page 10, 2nd paragraph: you started a paragraph by saying “More interesting is…….” Don’t be judgmental in your result writing. Just put what you found. Don’t use any emotion words.

*We have noted that suggestion and changed the text accordingly.*

Page 11, paragraph 1, line number 3 the statement starting “the reference group…..” and ending with “… versus unintended pregnancy” this is not needed here. If at all needed, you put it in the methodology section.

*The statement has been dropped from that paragraph as it was already mentioned in the methodology.*

Page 11 paragraph 2 line number 9 “..Not surprisingly…” Avoid

*Well noted, statement dropped.*

Discussion:

First paragraph line number 1-5 I suggest remove this section. Staring with “our study…..” ending “….categories of women”

*Thank you for this comment that we have undertaken.*
We have modified the discussion to take into consideration this recommendation from the reviewer.

Table 1: Age group classification 40+ seems too much, why you don’t make 40-44, 45-49

*We keep the age category 40+ as they are only 23% of the sample and would not like to create sub-groups with very few numbers.*

Table 2: I can’t understand your P values at the middle of the column, why to which value are you referring?

*The p-values were referring to the correlation between the two variables (outcome variable vs. independent variable). We agree that they are not necessary at this step and finally drop them from Table 1.*

Table 3: you put the reference category to be unintended pregnancies in both the never pregnant and intended pregnancy. That is why it shows a reverse association. While you are studying unintended pregnancy it is better to put higher marks for unintended pregnancy and lower mark for other categories so that the association will not be reversed, and will be clear for any reader. As it appears though it doesn’t not have a problem with the statistical analysis, it is not wise way of putting values to address all kinds of readers. Again, though it is not wrong to put coefficients of analysis, again to address wide section of readers it is advised to put exponents of coefficients (OR) than the row coefficients in the analysis.

*Thank you very much for this suggestion, we have reversed the models accordingly. As the reference group, now “unintended pregnancy” has the higher marks. Also, we have displayed the Relative Risk Ratio (RRR) which is possible for multinominal analysis.*