Author’s response to reviews

Title: Empowerment and Adequate Use of Antenatal Care among Women in Ghana: A Cross-Sectional Study

Authors:

Heather Sipsma (sipsmah@uic.edu)
Angela Ofori-Atta (angela.oforiatta@yahoo.com)
Maureen Canavan (maureen.canavan@yale.edu)
Christopher Udry (christopher.udry@yale.edu)
Elizabeth Bradley (elizabeth.bradley@yale.edu)

Version: 5 Date: 10 October 2014

Author’s response to reviews: see over
October 10, 2014

Peter O'Donovan
Executive Editor
BMC Pregnancy and Childbirth

Dear Dr. O’Donovan,

Thank you for your continued review of our manuscript number 1567158053124069 entitled, “Empowerment and Adequate Use of Antenatal Care among Women in Ghana: A Cross-Sectional Study.” We are pleased to have the opportunity to revise this paper for further consideration. Attached is our revised manuscript as well as an itemized list of reviewer comments and our responses to each. We appreciate your time and consideration.

If you have any questions, please contact me at sipsmah@uic.edu.

Sincerely,

[Signature]

Women, Children and Family Health Science
University of Illinois at Chicago College of Nursing
Phone: 312-355-2718
Email: sipsmah@uic.edu
Editorial Comments

Comment 1
Thank you for making these changes. Your response to Referee 1, comment 2 is very helpful and we would like you to put an adapted version of this explanation into the text, if you would, please. The two references you mention would also be helpful to refer to in the text, and include in the reference list. You should also mention this as a limitation.

Response
We are comfortable with your recommended approach and have inserted this text and the corresponding reference into the manuscript as requested. The paragraph in the Results section on Pages 8 and 9 of the revised manuscript reads as follows:

Tests of interaction terms revealed possible differential effects among education levels (P-value < 0.001 for interaction term). Among women with at least some formal education, including a primary level and middle or higher level of education, experiencing physical abuse was not statistically associated with inadequate antenatal care (OR among women with a primary level of education = 1.27; 95% CI = 0.18, 8.83; OR among women with a middle or higher level of education = 6.17; 95% CI = 0.41, 92.79). Among women with no formal education, however, having experienced physical abuse (compared to not having this experience) was associated with significantly higher odds of receiving inadequate antenatal care (OR=84.37; 95% CI = 3.96, >999.99). The large OR and the extreme upper bound of the confidence interval are due to little variability in the data. Among this subgroup of women, very few were victims of physical abuse and received adequate antenatal care. Despite low variability, however, we believe it is acceptable to maintain these variables in the model [22, 23]. Our model also demonstrates adequate fit (Hosmer and Lemeshow test p-value = 0.22 and C-statistic = 0.78).

We have also inserted the following additional text into the Discussion on Page 10:

Future research, however, should aim to replicate these findings as our sample size among women with no formal education was small and our confidence interval was wide.
Referee 1

Comment 1
In their response to the comment n.2, the AAs have well explained why the data produce a so big association (OR) between physical abuse and inadequate antenatal care among women with no formal education and the reason for a so large confidence interval (little variability and small numbers). The AAs also indicated new references. In my opinion it would be important to insert these comments in the text. A more deep discussion on this aspect as a limit of the study is worthy also considering how the AAs emphasize this finding.

Response
We agree and have inserted this text and the corresponding reference into the manuscript as requested. The paragraph in the Results section on Pages 8 and 9 now reads as follows:

Tests of interaction terms revealed possible differential effects among education levels (P-value < 0.001 for interaction term). Among women with at least some formal education, including a primary level and middle or higher level of education, experiencing physical abuse was not statistically associated with inadequate antenatal care (OR among women with a primary level of education = 1.27; 95% CI = 0.18, 8.83; OR among women with a middle or higher level of education = 6.17; 95% CI = 0.41, 92.79). Among women with no formal education, however, having experienced physical abuse (compared to not having this experience) was associated with significantly higher odds of receiving inadequate antenatal care (OR=84.37; 95% CI = 3.96, 999.99). The large OR and the extreme upper bound of the confidence interval are due to little variability in the data. Among this subgroup of women, very few were victims of physical abuse and received adequate antenatal care. Despite low variability, however, we believe it is acceptable to maintain these variables in the model [22, 23]. Our model also demonstrates adequate fit (Hosmer and Lemeshow test p-value = 0.22 and C-statistic = 0.78).

We have also inserted the following additional text into the Discussion on Page 10:

Future research, however, should aim to replicate these findings as our sample size among women with no formal education was small and our confidence interval was wide.
Referee 2

Comment 1
The results chapter, I recommend you to add the absolute numbers for all the tables.

Response
We have done as recommended and have added the absolute numbers for all tables. We have footnoted the tables to indicate that we present unweighted counts and weighted percentages. We have also added the following sentence to the Statistical Analysis section on Page 7 for clarity:

We present results as unweighted counts and weighted percentages and odds ratios.

Comment 2
The discussion chapter, I was not able to find three previous research. It did not enough to compare the other researcher's outcomes. Especially one of three is your same research group's research. You should mention that the results showed same insight or differ from these results. You have to search more references and add more explanation about the relationship with partner abuse and antenatal care for pregnant women.

Response
We understand the reviewer’s concern and have revised the discussion to provide references of former studies of physical abuse and antenatal care. We have revised the Discussion on Page 9 in order to compare our results to other relevant literature as recommended.

Our results are consistent with other literature suggesting that partner abuse is associated with lower likelihoods of receiving any antenatal care and sufficient antenatal care (Diop-Sidibe 2006; Stockl 2010; Koski 2011; Viellas 2013; Rahman 2012). They are also consistent with analyses conducted among women in Bangladesh and Egypt demonstrating that physical abuse is significantly associated with antenatal care even after accounting for other indicators of empowerment (Diop-Sidibe 2006; Rahman 2012).

References
Viellas E, da Gama S, de Carvalho M, Pinto L: Factors associated with physical aggression in pregnant women and adverse outcomes for the newborn. *Jornal de Pediatria* 2013, **89**(1):83-90.