Author’s response to reviews

Title: Knowledge, attitudes and peer influences related to pregnancy, sexual and reproductive health among adolescents using maternal health services in Ugu, KwaZulu-Natal, South Africa.

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Knowledge, attitudes and peer influences related to pregnancy, sexual and reproductive health among adolescents using maternal health services in Ugu, KwaZulu-Natal, South Africa.

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Dear Editor and Reviewers

RE: Resubmission of Manuscript

I acknowledge receipt of the manuscript titled: Knowledge, attitudes and peer influences related to pregnancy, sexual and reproductive health among adolescents using maternal health services in Ugu, KwaZulu-Natal, South Africa.
Thank you for the opportunity to revise our manuscript. We appreciate the constructive suggestions which has improved our manuscript.

We have attached the reviewers’ comments with our responses in bold.

Regards

Desiree Govender (MPH)
Doctoral student, UKZN
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Responses to Reviewer Comments
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Reviewer 1:
Dear Reviewer,

Thank you for reviewing our manuscript.

Reviewer 2:
Dear Reviewer,

Thank you for reviewing our manuscript.

General impression:
Thank you for addressing the previous comments and the other reviewer's comment so comprehensively. The paper now reads much better and I believe it has significant contribution towards improving sexual and reproductive health knowledge and information among adolescents in the country at large. I however, have minor comments and edits that I would like to suggest to the authors.

1. Abstract

This is good and has improved nicely from the previous version. I'd add a recommendation on how the modes and platforms of service delivery can be improved to ensure that ASRH information is also delivered/ prioritized… that is, what is needed to improve adolescents' SRH knowledge and information, especially those experiencing/experienced pregnancy-in line with Safe Motherhood objectives.

Thank you for your suggestion. The following recommendation has been added to the conclusion”

“An innovative mode to the delivery of sexual and reproductive health education includes the emerging digital platform. The digital platform encompasses social media, multimedia and mobile phones which is growing popular among young people”.

2. Introduction

this section is now well-written, well done!

Line 137 pg 5: check spelling for provinces

Thank you for identifying the spelling error. The spelling has been corrected

3. Methods

Line 147 pg 6: I think the other reviewer here wanted something like "adolescent girls with obvious cognitive abilities, such as being diagnosed with (or with known) mental health problems were excluded from the study"… something specific on your exclusion criteria… as you have described it in line 162.
General comment: please be consistent - often times you use just adolescents, then use adolescent females… I'd use adolescent girls throughout. This manuscript has way too many tables! Some of the tables can really be summarized in a 1 or 2 paragraphs, and others be combined (e.g. table 6+7 can be one table- its STIs and HIV). Table 8+9 can be summed into a paragraph or 2.

In your tables, please distinguish the ledger/ footnote info from the table contents, e.g. line 50-53 pg35 and table 12 line 30-32 pg 38 with a different font or something similar, outside the "actual" table…

Thank you for your comments and suggestion.

In the health institution, health care providers which includes nurses assess the healthcare users mental status by questioning their orientation to date, time and place. The authors have included an explanation:

“The nursing staff was aware of the inclusion and exclusion criteria, which included the adolescents’ cognitive abilities, and they recruited participants accordingly. The nursing staff used the questions from the modified mini mental state exam (MMSE) to determine the participants cognitive function. The MMSE is a widely used measure of global cognitive function (19). The questions in the MMSE with regards to the tests of orientation (time, place, person), registration and recall are used in the assessment of the maternity healthcare users at the institution. Interested participants were referred to the research assistants stationed in the clinic who then provided them with more details, after which they decided whether to participate voluntarily or not”.

We have used the term adolescent girls to ensure consistency.

Thank you for your suggestion regarding the tables in the results section. We agree that there were too many tables adding to a data overload. We have combined table 1 and table 10, table 2 and table 3, table 6 and table 7, table 8 and table 9, table 12 and table 13. We also restructured the tables according to Reviewer 3 comments. We ensured that footnotes are in bold so they can be distinguished. We combined univariate and the multivariable logistic regression in one table. We are happy to report that we now have 8 tables.
4. Discussion

I would start with a sentence about the main objective of this study, then proceed as per the 1st paragraph. I would delete the 2nd paragraph- you have already provided info on the LO program, no need to redescribe it in the discussion.

Line 459-461 is not clear and probably contradicts the 1st sentence of the same paragraph…

Limitations: thanks for adding this part, though it does not necessarily need a subheading of its own- it typically forms part of the discussion section (unless you're writing a thesis). It is important to place an emphasis on the significance of your study despite the limitations… at the moment, you have just listed them without drawing on the importance of your study, under these limitations…?

Thank you for your comments/suggestions. We decided to rewrite the introduction to the discussion section as you recommended.

“Knowledge plays an important role in facilitating people’s access to healthcare [16]. The aim of this study was to determine the knowledge, personal attitudes and peer influences related to pregnancy, sexual and reproductive health among adolescents who attended maternal health services in a district hospital in Ugu, KwaZulu-Natal, South Africa. Although 43.9% of participants scored > 50% for the knowledge test on pregnancy, HIV/AIDS and STIs, there are serious gaps in their knowledge of danger signs of pregnancy, anaemia, alcohol and tobacco use during pregnancy and sexually transmitted infections”.

Thank you for your comments regarding the section on Limitations. We have re-worded and included this section in the discussion.

“The study has several limitations. Firstly, our study was conducted in only one district in KwaZulu-Natal and therefore the findings may only be generalised to the Ugu and similar districts. Moreover, the study did not investigate the participants’ sources of pregnancy or information regarding their sexual and reproductive health. Recall bias was likely to have occurred when participants are asked about their past exposures. The use of convenience sampling could have also lead to under-representation or over-representation of particular groups within a sample. Although our inclusion criteria stipulated that adolescent girls under the age of
18 years had to obtain parental/legal guardian permission prior to consenting to participate in this study, we report that there were no participants under 18 years who were excluded in the study because parents and legal guardians were available to provide written permission”.

5. Conclusion

This section is way too long for a conclusion.

From your findings, you should be able to put together 2/3 lines on key message of your findings, 2 lines of general recommendations, one line for future research… you must remember that most people, especially policy makers and most people really read the abstract and conclusion of a paper, so make sure to concise here.

Some of the paragraphs in this section can be well suited in the discussion section, e.g. the 1st paragraphs here can be moved to the beginning of the discussion section.

I'd recommend the authors to summarize this section into 1 paragraph.

Thank you for your comments and suggestion. We have re-written the conclusion:

Conclusion

“The adolescent participants’ knowledge of pregnancy, sexual and reproductive health was deficient in many respects. Our research has shown that, regardless of repeat pregnancies, adolescents were not necessarily better informed about pregnancy, sexual and reproductive health. Thus we conclude that social determinants, modes and platforms regarding the delivery of adolescent sexual and reproductive health education have become more important than ever before. Moving forward, an innovative mode to the delivery of sexual and reproductive health education includes the emerging digital platform [1, 52]. The digital platform encompasses social media, multimedia and mobile phones which is growing popular among young people.

Schools can play a role in reducing high risk sexual behaviour, transforming the future and improving the well-being of all adolescents. The role of the education sector is therefore crucial as schools can offer skills based SRH education. Schools are also an ideal social environment that can target the individual, families and societies [15]. The role of the healthcare sector is equally important. Health facilities need to be adolescent or youth friendly with convenient service hours. Healthcare providers also need to provide non-judgemental adolescent SRH
education and services. Universal access to SRH as echoed in SDG 3 can only be achieved through intersectoral collaboration. Knowledge through education is likely to ensure that adolescent women are better informed to make appropriate decisions about their health during pregnancy and childbirth”.

Reviewer 3:

Dear Reviewer,

Thank you for reviewing our manuscript.

The topic of knowledge, attitude and peer influences among adolescents using maternal health services is important. The topic is nicely introduced, However, result presentation is unstructured and not connected to the discussion. Result presentation via Tables is very poor. Please work with a more stringent and ordered presentation in result and discussion. Discussion contains everything, no main important messages are clarified

1. Abstract:

Background chapter is far too long. I suggest deleting the text from "In the context of… (line47) until …should be introduced. (Line 52). This information is important but not important enough to be mentioned during the abstract.

Method:

The sentence:

"The data form Mobenyi server were cleaned and exported into R software for statistical analysis." (line 63/64) can also be deleted. It is important but not part as of the abstract.

However, Study design and Response rate is missing in the abstract. This needs to be added

Thank you your suggestion. We have deleted the text that you have suggested. We have now included the study design. We have included in the methods section that “The target sample size of 326 participants were reached for the study”
2. Introduction:

The introduction is nicely written, relevant literature is cited. However, the final chapter should explain the research aim or research question. At the moment the last chapter looks more like a short summary. Please delete this and introduce your research question.

The sentences: Age of consent to sex often conflicts with age to consent for medical intervention (Line 101/102) I do not get what you like to say, please rewrite.

The sentence: "In China marriage is precondition for access to SRH programmes at public facilities that are free of charge (10)". Is not important for your context. Please delete.

Thank you your comments and suggestions. We have reworded the final paragraph in the introduction. We have noted the importance of stating the purpose of the research.

“This paper is an excerpt from a larger doctoral study that aims to develop a community of practice model for a multidisciplinary and comprehensive approach towards caring for pregnant and parenting adolescent mothers. This doctoral study is being conducted in Ugu, KwaZulu-Natal, South Africa. The purpose of this paper is to report the knowledge, personal attitudes and peer influences related to pregnancy, sexual and reproductive health among adolescents who utilised maternal health services in a district hospital in Ugu, KwaZulu-Natal, South Africa”.

The following has been reworded:

“The age that an adolescent is allowed to consent for sex often conflicts with the age that the adolescent is allowed to consent for medical interventions” [10].

We have also deleted the following: “In China marriage is precondition for access to SRH programmes at public facilities that are free of charge” (10).

3. Method:

Please add response rate (for more information please check response rate in Wikipedia). Unfortunately, you used this word wrong in your tables.
Please delete sample size calculation. Such a calculation should be done for the main research question. However, the sample size calculation was based on the prevalence of adolescent repeat pregnancy. Well, this is not the main aim of the paper and no relevant result was presented during the result presentation and discussion. The power calculation is senseless.

You added not having permission from parents as exclusion criteria; that is, unfortunately, wrong. By this procedure you get a biased sample (as some people, particular the youngest ones are not part in your sample. Do you have some information, how often that happens? That would help a lot to understand something about the participation rate of your survey.

Wording: "Informed voluntary consent" does not make sense, you need to write: Participation was voluntary and informed consent was assessed. (line 222)

Thank you for your comments and suggestions.

We have included in the methods section that “The target sample size of 326 participants were reached for the study” We have deleted the sample size calculation.

We acknowledge you comment about the exclusion criteria. We have included the following so our readers would understand the requirement of parental permission for participants under 18 years of age: “Parental or legal guardian consent for participants under the age of 18 years was stipulated by the Biomedical Research Ethics Committee, UKZN”.

We have also included the following under limitations:

“The study has several limitations. Firstly, our study was conducted in only one district in KwaZulu-Natal and therefore the findings may only be generalised to the Ugu and similar districts. Moreover, the study did not investigate the participants’ sources of pregnancy or information regarding their sexual and reproductive health. Recall bias was likely to have occurred when participants are asked about their past exposures. The use of convenience sampling could have also lead to under-representation or over-representation of particular groups within a sample. Although our inclusion criteria stipulated that adolescent girls under the age of 18 years had to obtain parental/legal guardian permission prior to consenting to participate in this study, we report that there were no participants under 18 years who were excluded in the study because parents and legal guardians were available to provide written permission”.

4. Result:
Result presentation needs still a lot clarification.

Please omit the word response rate or senseless wording like "respondent’s response"

Please try to omit empty spaces and double information in your tables.

Here some suggestion:

* Table 1 and table 10 need to be put together, as they contain the same information.

* It would be nice to put some tables together (e.g. tables 6 and 7) to reduce the number of tables with very scarce information.

* Table 12 and 13 can be presented together. You can present logistic regression estimated from the crude and adjusted models in one table. Please check some scientific articles how these results are presented.

* Restructure table title. Table title should contain what is presented and in which population

* Delete the word response rate (as it is wrong)

* Change the word expected response to correct answer. (It is possible to expect a wrong answer; therefor the words "expected response" is wrong).

Delete figure 1 as you present the same result as in table 13.

I like to suggest another table structure:

1st column: question

2nd column: answer*

3 column: n

4 column: %

work with Stars(*) and describe below the table: *the correct answer is marked bold (formerly: expected response)

Thank you for your comments and suggestions. We omitted wording like “respondent’s response” We also noted that the study had too many tables and the data overload. We have combined table 1 and table 10, table 2 and table 3, table 6 and table 7, table 8 and table 9, table 12 and table 13. We also restructured the tables according to your suggestions. We ensured that footnotes are in bold so they can be distinguished. We combined univariate and the multivariable logistic regression in one table. We are happy to report that we now have 8 tables. We deleted figure 1 as well.
We have re-organized paragraphs in the results section to enhance clarity.

5. Discussion

The discussion is very broad and unstructured. Please start with naming the main and or most important results from your cross-sectional study. And discuss them carefully given existing literature.

Please omit chapters that starts not connected to your research question like "Prenatal exposure to pesticide … (line 515). It is tricky to follow your argumentation if you start a chapter with such a sentence that is far away from that what you are presenting.

Under limitation you should also name what does a cross sectional study limit (line 590).

Additionally, you should mention that you might have an under-represented number of children below 18 (due to your exclusion criteria).

Thank you for your comments and suggestion. We agree that our discussion was broad and unstructured. We have considered yours and Reviewer two’s suggestions. Hence, we re-wrote the beginning of the discussion section:

“Knowledge plays an important role in facilitating people’s access to healthcare [16]. The aim of this study was to determine the knowledge, personal attitudes and peer influences related to pregnancy, sexual and reproductive health among adolescents who attended maternal health services in a district hospital in Ugu, KwaZulu-Natal, South Africa. Although 43.9% of participants scored > 50% for the knowledge test on pregnancy, HIV/AIDS and STIs, there are serious gaps in their knowledge of danger signs of pregnancy, anaemia, alcohol and tobacco use during pregnancy and sexually transmitted infections”.

We have focused on the main results of the knowledge survey. We re-arranged the paragraphs and even omitted information that were not necessary to the discussion of the results. We omitted sentences such as “Prenatal exposure to pesticide” as a start to a new paragraph.
We have also included the following under limitations:

“The study has several limitations. Firstly, our study was conducted in only one district in KwaZulu-Natal and therefore the findings may only be generalised to the Ugu and similar districts. Moreover, the study did not investigate the participants’ sources of pregnancy or information regarding their sexual and reproductive health. Recall bias was likely to have occurred when participants are asked about their past exposures. The use of convenience sampling could have also lead to under-representation or over-representation of particular groups within a sample. Although our inclusion criteria stipulated that adolescent girls under the age of 18 years had to obtain parental/legal guardian permission prior to consenting to participate in this study, we report that there were no participants under 18 years who were excluded in the study because parents and legal guardians were available to provide written permission”.

Reviewer 4:

Dear Reviewer,

Thank you for reviewing our manuscript.

Thank you for taking the time to address reviewer comments on the manuscript entitled: "Knowledge, attitudes and peer influences related to pregnancy, sexual and reproductive health among adolescents using maternal health services in Ugu, KwaZulu-Natal, South Africa".

The manuscript has been much improved but there is still some text that is unclear:

1. Reviewer 1 commented: "3.P.6 indicates participants were excluded if they were identified as having a cognitive impairment. How was this assessed?"

Author response: "Adolescents with first and repeat pregnancies who attended the ante- and postnatal clinics were identified by the nurses and briefly informed about the study. The nursing staff was aware of the inclusion and exclusion criteria, which included the adolescents' cognitive abilities, and they recruited respondents accordingly. Interested respondents were referred to the research assistants stationed in the clinic who then provided them with more details, after which they decided whether to participate voluntarily or not"
After reading the text I am still not sure how the nurses assessed 'cognitive abilities'. Did they receive training? How can the authors be sure that all nurses assessed 'cognitive ability' in the same way?

Given the importance of assessing 'cognitive impairment' in your sample I would have expected that there would be a validated screening tool which the nurses was trained in using to ensure inter-rater reliability. How was this ensured in your study?

Thank you for your comments.

In the health institution, health care providers which also includes nurses assess the clients mental status by questioning their orientation to date, time and place. The authors have included an explanation:

“The nursing staff was aware of the inclusion and exclusion criteria, which included the adolescents’ cognitive abilities, and they recruited participants accordingly. The nursing staff used the questions from the modified mini mental state exam (MMSE) to determine the participants cognitive function. The MMSE is a widely used measure of global cognitive function (19). The questions in the MMSE with regards to the tests of orientation (time, place, person), registration and recall are used in the assessment of the maternity healthcare users at the institution. Interested participants were referred to the research assistants stationed in the clinic who then provided them with more details, after which they decided whether to participate voluntarily or not”.