

PEER REVIEW HISTORY

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ARTICLE DETAILS

TITLE (PROVISIONAL)	Unequal access and use of contraceptives among parenting adolescent girls in sub-Saharan Africa: A cross-sectional analysis of demographic and health surveys
AUTHORS	Ahinkorah, Bright; Obisesan, Matthew Tobiloba; Seidu, Abdul-Aziz; Ajayi, Anthony

VERSION 1 – REVIEW

REVIEWER	Sserwanja, Quraish GOAL
REVIEW RETURNED	08-May-2021

GENERAL COMMENTS	<p>Invitation to Review for BMJ Open bmjopen-2021-051583</p> <p>This is an informative analysis of the unequal access and use of contraceptives among parenting adolescent girls in sub-Saharan Africa, which identifies a number of factors associated with unequal access and use of contraceptives. There are however a number of points that need to be responded to as below.</p> <p>Abstract and title</p> <p>(1) The title and aim of the study are clearly stated.</p> <p>(2) Abstract: Indicate the number of adolescents using contraceptives and the confidence interval of the overall prevalence of contraceptive use on line 37.</p> <p>Background: On lines 62-64, the decline rate given is between 2005 and 2020 yet the reference used is for 2019. Please cite a 2020 paper or change to between 2005 and 2019.</p> <p>Please specify on lines 62-64 if the decline in adolescent birth rate given is global or for sub-Saharan Africa. If its global, please provide one for SSA.</p> <p>Specify on line 68 if the 'half of adolescent pregnancies are unintended' mentioned is global or SSA?</p> <p>Provide citation (s) for lines 91-92</p> <p>Lines 119-120, the citation given (37) talks about only South Africa focusing on HIV clients. Can we give more citations to match the statement that says "some SSA countries have invested heavily in providing contraceptives"?</p> <p>Provide citation for lines 120-122.</p>
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	<p>Methods:</p> <p>Reduce the space between countries and countries on line 141</p> <p>On lines 144 – 147, you only mention 15 countries yet line 139 says 17 countries. Seems you forgot to mention Sierra Leone and Malawi. Please rectify this.</p> <p>For line 154, since we included studies between 2015 and 2019, can we cite a paper that is between 2015 and 2019 instead of one cited (38) which is 2012?</p> <p>Line 182, add https://doi.org/10.1186/s12905-021-01206-7</p> <p>Line 190, Exposure to media was coded as 'yes' for adolescent girls who either read 190 newspapers, listened to the radio, watched television at least once a week. DHS data usually has three positive responses (less than once a week, atleast once a week and almost every day) so if you only coded yes to at least once a week, how about almost every day and less than once a week?</p> <p>Line 179 mentions ten independent variables yet only nine were explained how they were coded between lines 184 and 196 and all tables have nine variables. Preferred waiting time for birth of another child was mentioned on line 185 as an individual level factor but this seems was not included in the analysis since it is missing in all tables. Was this a mistake or it was deliberate. If deliberate, please add an explanation in the methods section. If it was a mistake, please add it in the analysis.</p> <p>Line 194, is it wealth or wealth index?</p> <p>Were variables assessed for collinearity? If yes, please mention it. Some variables such as parity and age might need this assessment.</p> <p>DHS usually asks if the woman was visited by a health field worker (usually V393) or if the woman herself visited a health facility in the previous year (usually V 394) and if yes, she is further asked if they received family planning counselling. This would be a good variable to add in the analysis. It would also be good to look at healthcare seeking decision making variable and see how the associations would be.</p> <p>Results</p> <p>Kindly provide confidence interval for the overall prevalence on line 223.</p> <p>Would be better to briefly mention the utilisation prevalence for the three methods in the results section (modern, traditional and folkloric) between lines 221 and 228.</p> <p>Table 2 doesn't mention folkloric methods at all yet line 173 mentions them.</p> <p>Line 246, remove space between controll and ing to make it controlling instead of controll ing.</p> <p>Line 246, reduce space between the words girls and with.</p>
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	<p>Line 185 to 186 says age was coded as 15, 16, 17, 18, and 19 yet lines 249 and 250 and all tables show that coding was done as 18-19 and 15-17. Please rectify this.</p> <p>Lines 188 to 189 says parity was recoded as one birth, two births, three births, and four or more births yet all tables show that parity was coded as one birth and two or more births. Please clarify.</p> <p>Line 272, reduce the space between words disaggregated and by, by and country, country and adolescents.</p> <p>Lines 281 and 279 mention Sierra Leone and Malawi respectively yet these were not mentioned in lines 144 to 147.</p> <p>Was permission sought and given by DHS to use DHS data? If yes, please add this between lines 403 and 405.</p> <p>Discussion</p> <p>Mention the prevalence on line 305.</p> <p>Lines 304-305 “Our analyses show an overall relatively low prevalence of contraceptive use across SSA” Relatively low in comparison to what? Do we have a recommended global or regional prevalence? The same to line 307.</p> <p>Lines 307-308, Zimbabwe prevalence is 67.58%, Chad is 5.1% and Nigeria is 6.4%. It is not accurate to say seven out of ten adolescent mothers are using any form of contraceptives in Zimbabwe and one in ten are using them in Chad and Nigeria. (one in ten implies 10%)</p> <p>Line 321. Please add citation</p> <p>Line 327, add space between are and counselled.</p> <p>Line 330. Reduce space between the full stop and also.</p> <p>Lines 346-351. ‘Parenting adolescents belonging to the highest wealth class were more likely to use contraceptives in Angola, Benin, Ethiopia, Guinea, Nigeria, Sierra Leone, and Tanzania. The wealth inequality in access to contraceptives among parenting adolescents in these countries suggests that the government in these countries have not expanded access to contraceptive. Making contraceptives freely available and counselling girls about the benefits should be an important first step in these countries’. Please double check if contraceptives are not freely available in these countries. If true, kindly add citations.</p> <p>I have not seen the STROBE checklist. Please ignore if you submitted it.</p>
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REVIEWER	Loder, Charisse University of Michigan
REVIEW RETURNED	20-May-2021

GENERAL COMMENTS	Overall, your statistical analysis and models are strong and your findings are compelling. I think that you can provide more evidence for the risks of rapid repeat pregnancy in your introduction. I recommend considering which models to highlight in this paper, as the amount of data is overwhelming to the reader. I
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	<p>recommend reworking the discussion to describe how these individual and contextual factors may be influencing contraceptive method use and what changes could be made to increase uptake of contraceptives.</p> <p>Introduction</p> <p>85-87: Recommend providing more context around the Agenda 2063: African we want statement.</p> <p>88-102: Can you share some more data about the medical and social consequences of rapid repeat pregnancy for the mother and her children?</p> <p>102: The reference to goal 5 “Gender equality” could use more context.</p> <p>103-114: This paragraph builds a better case for consequences of rapid repeat pregnancy. Recommend reshaping these two paragraphs or combining into one.</p> <p>128: would leave this description of analysis and how the findings do be used to the Methods and Discussion sections.</p> <p>Method</p> <p>138: Can remove this sentence if in the introduction you state that your goal is to describe the current landscape of contraceptive use.</p> <p>164-167: if all were “modern methods” would combine into one sentence.</p> <p>171: what is an example of country specific traditional method with proven effectiveness?</p> <p>183: Individual level factors: do not need to explain coding of each variable. However, it might be helpful to share the question that was asked to determine “exposure to media”.</p> <p>199: We calculated descriptive statistics to report on.... Then, we used bivariate analysis....</p> <p>Results</p> <p>239: Would start this paragraph with this statement, chi squared analysis showed association between individual and contextual factors and contraceptive use, except for marital status.</p> <p>244: Can remove this first sentence.</p> <p>Table 4: Do you need to show each model to tell the story? You can show model 3 while describing your approach (looking at individual, then contextual, then both)</p> <p>Tables 6-9: could be interesting as an appendix, but are they necessary to illustrate you main findings?</p> <p>Discussion</p> <p>Overall, I think that you could solidify your main points and propose interventions for each of these points in a clear way. It seems like these results are consistent with previous data. You want to highlight education, wealth and marital status as factors associated with contraceptive use, but you need to develop this story a little more.</p> <p>309: do you mean mirror or are inversely proportional?</p>
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	<p>322-323: What is it about South African that allows more contraceptive use? More sex education, availability of devices, policies that allow minors to access? What is an example of a restrictive policy in Chad?</p> <p>344-345: what was done in Zimbabwe and S. Africa to increase uptake? More education? More commodities?</p> <p>Policy Implications: How are Zimbabwe and South Africa leading? You may want to include this in the introduction.</p>
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VERSION 1 – AUTHOR RESPONSE

Reviewer: 1Dr. Quraish Sserwanja, GOAL

Comments to the Author:

Invitation to Review for BMJ Open bmjopen-2021-051583

1. This is an informative analysis of the unequal access and use of contraceptives among parenting adolescent girls in sub-Saharan Africa, which identifies a number of factors associated with unequal access and use of contraceptives. There are however a number of points that need to be responded to as below.

Response: we thank you for the positive feedback and your constructive comments. We have used your comments to revise our manuscript.

2. Abstract and title

(1) The title and aim of the study are clearly stated.

Response: Thank you.

3. (2) Abstract: Indicate the number of adolescents using contraceptives and the confidence interval of the overall prevalence of contraceptive use on line 37.

Response: We have added confidence intervals. See page 2.

4. Background: On lines 62-64, the decline rate given is between 2005 and 2020 yet the reference used is for 2019. Please cite a 2020 paper or change to between 2005 and 2019.

Response: We have changed 2020 to 2019. See page 3

5. Please specify on lines 62-64 if the decline in adolescent birth rate given is global or for sub-Saharan Africa. If its global, please provide one for SSA.

Response: The statistics is for SSA

6. Specify on line 68 if the 'half of adolescent pregnancies are unintended' mentioned is global or SSA?

Response: the estimate is for developing regions.

7. Provide citation (s) for lines 91-92

Response: we have added a citation. See page 4

8. Lines 119-120, the citation given (37) talks about only South Africa focusing on HIV clients. Can we give more citations to match the statement that says "some SSA countries have invested heavily in providing contraceptives"?

Response: we have added more citations for other SSA countries like Malawi and Zimbabwe

9. Provide citation for lines 120-122.

Response: We have added references. See page 5.

Methods:

10. Reduce the space between countries and countries on line 141

Response: done

11. On lines 144 – 147, you only mention 15 countries yet line 139 says 17 countries. Seems you forgot to mention Sierra Leone and Malawi. Please rectify this.

Response: Thank you for pointing this out. We have effected the changes.

12. For line 154, since we included studies between 2015 and 2019, can we cite a paper that is between 2015 and 2019 instead of one cited (38) which is 2012?

Response: We have added a more recent reference. See page 6.

13. Line 182, add <https://doi.org/10.1186/s12905-021-01206-7>

Response: Thank you. We have added the reference. See page 7, 11 and 16.

14. Line 190, Exposure to media was coded as 'yes' for adolescent girls who either read 190 newspapers, listened to the radio, watched television at least once a week. DHS data usually has three positive responses (less than once a week, atleast once a week and almost every day) so if you only coded yes to at least once a week, how about almost every day and less than once a week?

Response: We coded less than once a week, at least once a week and almost every day as 'yes'. We have corrected it in the manuscript. See page 7.

15. Line 179 mentions ten independent variables yet only nine were explained how they were coded between lines 184 and 196 and all tables have nine variables. Preferred waiting time for birth of another child was mentioned on line 185 as an individual level factor but this seems was not included in the analysis since it is missing in all tables. Was this a mistake or it was deliberate. If deliberate, please add an explanation in the methods section. If it was a mistake, please add it in the analysis.

Response: We have removed "Preferred waiting time for birth of another child"

16. Line 194, is it wealth or wealth index?

Response: It is wealth index. Thank you.

17. Were variables assessed for collinearity? If yes, please mention it. Some variables such as parity and age might need this assessment.

Response: We have added two sentences on how we addressed collinearity. See page 7.

18. DHS usually asks if the woman was visited by a health field worker (usually V393) or if the woman herself visited a health facility in the previous year (usually V 394) and if yes, she is further asked if they received family planning counselling. This would be a good variable to add in the analysis. It would also be good to look at healthcare seeking decision making variable and see how the associations would be.

Response: We appreciate this comment. However, there were too many missing cases on family planning counselling, hence, including it will drastically reduce our sample size.

Results

19. Kindly provide confidence interval for the overall prevalence on line 223.

Response: This has been added. See page 8.

20. Would be better to briefly mention the utilisation prevalence for the three methods in the results section (modern, traditional and folkloric) between lines 221 and 228.

Response: This has been added

21. Table 2 doesn't mention folkloric methods at all yet line 173 mentions them.

Response: folkloric methods were added to traditional methods.

22. Line 246, remove space between controll and ing to make it controlling instead of controll ing.

Response: done

23. Line 246, reduce space between the words girls and with.

Response: done

24. Line 185 to 186 says age was coded as 15, 16, 17, 18, and 19 yet lines 249 and 250 and all tables show that coding was done as 18-19 and 15-17. Please rectify this.

Response: we revised the statement in line 185 and 186 to reflect what we did

25. Lines 188 to 189 says parity was recoded as one birth, two births, three births, and four or more births yet all tables show that parity was coded as one birth and two or more births. Please clarify.

Response: This has been clarified.

26. Line 272, reduce the space between words disaggregated and by, by and country, country and adolescents.

Response: done

27. Lines 281 and 279 mention Sierra Leone and Malawi respectively yet these were not mentioned in lines 144 to 147.

Response: We have added Sierra Leone and Malawi to line 144 and 147

28. Was permission sought and given by DHS to use DHS data? If yes, please add this between lines 403 and 405.

Response: We have added a statement to indicate permission was sought from and granted by DHS to line 403 to 405.

Discussion

29. Mention the prevalence on line 305.

Response: done

30. Lines 304-305 "Our analyses show an overall relatively low prevalence of contraceptive use across SSA" Relatively low in comparison to what? Do we have a recommended global or regional prevalence? The same to line 307.

Response: one in five adolescent mothers are using contraceptives which we consider low, given that the prevalence was as high as 70% in South Africa and over 50% in Zimbabwe and Malawi.

31. Lines 307-308, Zimbabwe prevalence is 67.58%, Chad is 5.1% and Nigeria is 6.4%. It is not accurate to say seven out of ten adolescent mothers are using any form of contraceptives in Zimbabwe and one in ten are using them in Chad and Nigeria. (one in ten implies 10%)

Response: we have revised the sentence to read "While approximately seven out of ten adolescent mothers are using any form of contraceptives in Zimbabwe and South Africa, less than one in ten are using them in Angola, Chad, Benin, and Nigeria". See page 10-11.

32. Line 321. Please add citation

Response: done. See page 11.

33. Line 327, add space between are and counselled.

Response: done

34. Line 330. Reduce space between the full stop and also.

Response: done

35. Lines 346-351. 'Parenting adolescents belonging to the highest wealth class were more likely to use contraceptives in Angola, Benin, Ethiopia, Guinea, Nigeria, Sierra Leone, and Tanzania. The wealth inequality in access to contraceptives among parenting adolescents in these countries suggests that the government in these countries have not expanded access to contraceptive. Making contraceptives freely available and counselling girls about the benefits should be an important first step in these countries'. Please double check if contraceptives are not freely available in these countries. If true, kindly add citations.

Response: This statement has been revised. See page 12.

36. I have not seen the STROBE checklist. Please ignore if you submitted it.

Response: We have attached a strobe checklist.

REVIEWER: 2

Dr. Charisse Loder, University of Michigan

Comments to the Author:

37. Overall, your statistical analysis and models are strong and your findings are compelling. I think that you can provide more evidence for the risks of rapid repeat pregnancy in your introduction. I recommend considering which models to highlight in this paper, as the amount of data is overwhelming to the reader. I recommend reworking the discussion to describe how these individual and contextual factors may be influencing contraceptive method use and what changes could be made to increase uptake of contraceptives.

Response: Many thanks for the positive and constructive comments.

Introduction

38. 85-87: Recommend providing more context around the Agenda 2063: African we want statement.

Response: We have added more context as suggested. "Agenda 2063 is the continent's strategic framework for inclusive and sustainable social and economic development between 2013 and 2063. It recognises ending harmful social norms and cultural practices, and violence against women and girls, and achieving gender parity as key to socioeconomic development.

39. 88-102: Can you share some more data about the medical and social consequences of rapid repeat pregnancy for the mother and her children?

Response: we have mentioned the medical and social consequences of rapid repeat pregnancy for mother and her children. See page 4.

40. 102: The reference to goal 5 "Gender equality" could use more context.

Response: The goal is "Achieve gender equality and empower all women and girls". We have corrected this. See page 4.

41. 103-114: This paragraph builds a better case for consequences of rapid repeat pregnancy. Recommend reshaping these two paragraphs or combining into one.

Response: we have combined it with the previous sentence. See page 4.

128: would leave this description of analysis and how the findings to be used to the Methods and Discussion sections.

Response: We have removed it and added to methods

Method

42. 138: Can remove this sentence if in the introduction you state that your goal is to describe the current landscape of contraceptive use.

Response: done

43. 164-167: if all were “modern methods” would combine into one sentence.

Response: done

44. 171: what is an example of country specific traditional method with proven effectiveness?

Response: In the DHS dataset, these were not clearly stated. (https://dhsprogram.com/data/Guide-to-DHS-Statistics/Current_Use_of_Contraceptive_Methods.htm)

45. 183: Individual level factors: do not need to explain coding of each variable. However, it might be helpful to share the question that was asked to determine “exposure to media”.

Response: Respondents were asked how often they listened to radio, watched television, and read newspaper. For each of these questions, the responses were (not at all, less than once a week, at least once a week, and almost every day). See page 7.

46. 199: We calculated descriptive statistics to report on.... Then, we used bivariate analysis....

Response: We have revised this. See page 7.

Results

47. 239: Would start this paragraph with this statement, chi squared analysis showed association between individual and contextual factors and contraceptive use, except for marital status.

Response: We have revised the sentence as suggested. Thank you. See page 8.

48. 244: Can remove this first sentence.

Response: deleted

49. Table 4: Do you need to show each model to tell the story? You can show model 3 while describing your approach (looking at individual, then contextual, then both)

Response: We needed to show each model to tell a story so that the readers will understand how the inclusion of the variables affect the results in each model.

50. Tables 6-9: could be interesting as an appendix, but are they necessary to illustrate you main findings?

Response: We agree to have this included as appendix. See Appendix 1-4.

Discussion

51. Overall, I think that you could solidify your main points and propose interventions for each of these points in a clear way. It seems like these results are consistent with previous data. You want to highlight education, wealth and marital status as factors associated with contraceptive use, but you need to develop this story a little more.

Response: We have added a few more sentences to make our discussion clearer. We agree that these findings are consistent with previous data. The main difference remain the heterogeneity of our country-disaggregated results. Because we included a section on policy implications, we thought it is best to add proposed interventions in that section. See page 12-13.

52. 309: do you mean mirror or are inversely proportional?

Response: Thank you. We meant inversely proportional. We have effected the change.

53. 322-323: What is it about South African that allows more contraceptive use? More sex education, availability of devices, policies that allow minors to access? What is an example of a restrictive policy in Chad?

Response: South Africa has liberal policies, contraceptives are widely available in all facilities, and women are counselled on postpartum contraceptive use. But Chad faces many challenges in accelerating progress, including an ongoing humanitarian crisis, frequent and consistent stockouts, and limited domestic resources allocated to family planning.

54. 344-345: what was done in Zimbabwe and S. Africa to increase uptake? More education? More commodities?

Response: Both.

55. Policy Implications: How are Zimbabwe and South Africa leading? You may want to include this in the introduction.

Response: We have deleted the sentence

VERSION 2 – REVIEW

REVIEWER	Sserwanja, Quraish GOAL
REVIEW RETURNED	03-Aug-2021
GENERAL COMMENTS	<p>Thanks so much for the great work and responding to the comments. Below are few typing errors:</p> <ol style="list-style-type: none"> 1. On line 128, kindly add space between of and 17 2. Line 222,prevalence of 2573...This needs to be revised for the meaning to come out clearly. 3. Line 225: Add space between studied and the bracket 4. Line 225: Add space between % and the bracket

VERSION 2 – AUTHOR RESPONSE

Thanks so much for the great work and responding to the comments. Below are few typing errors:

Response: We appreciate your time

1. On line 128, kindly add space between of and 17

Response: Done. See line 128.

2. Line 222,prevalence of 2573...This needs to be revised for the meaning to come out clearly.

Response: Done. See line 222

3. Line 225: Add space between studied and the bracket

Response: Done. See line 225.

4. Line 225: Add space between % and the bracket

Response: Done. See line 225.