



SDI Review Form 1.5

PART A:

Journal Name:	International Journal of TROPICAL DISEASE & Health
Manuscript Number:	MS: 2012/IJTDH/1308
Title of the Manuscript:	<i>A COMPARATIVE STUDY OF CONTRACEPTION AS PROXIMATE DETERMINANT OF FERTILITY AMONG WOMEN IN RURAL AND URBAN AREAS OF OSUN STATE SOUTHWESTERN NIGERIA</i>
Manuscript received on (Date)	
Review comment submitted (Date)	



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PART B: Review Comments

	Reviewer's comment	Author's comment (if agreed with reviewer, correct the manuscript and highlight that part and write here 'Corrected'/ if not agreed, give suitable justifications)
General comment:	The authors present an interesting research in describing the reproductive age of women's views on contraception and contraceptive use. This is a very current issue in worldwide and particularly in Africa, because overpopulation causes a variety of problems to countries which are already without appropriate health care or are in shortage of water and food. However, there are many aspects of the manuscript that need revision/elaboration/clarification before it could be considered for publication.	Modifications have been made to the various sections (as seen below) to address these concerns
Specific comments:	Major compulsory revision The aim was to select a sample that properly reflected the main demographic distributions of the Osun State population (women, aged 15-49) and allowed data collection at reasonable cost. For this the multistage sampling method was used to collect the data. Multistage sampling refers to survey designs in which the population units are hierarchically arranged and the sample is selected in stages corresponding to the levels of the hierarchy. At each stage, only units within the higher level units selected at the previous stage are considered. The main motivation for multistage sampling is usually cost reduction. However, multistage designs result in samples that are "clustered" within a limited set of higher level units and this sample clustering also has a disadvantage. Because units within higher stage units (e.g., households within small areas) tend to be more homogeneous than units in the population as a whole, clustering tends to reduce the precision of survey estimates. In other words,	Noted and addressed Some variables in Table II re-analyzed and represented based on your suggestions



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	the correlation among small groups of observations within each cluster should be taken into account in the phase of analysis. Unfortunately, this has not been done in this study. The sampling design should be taking into account because the sampling design affects the calculation of the standard errors of the estimates. If you ignore the sampling design, e.g., if you assume simple random sampling when another type of sampling design was used, the standard errors will likely be underestimated, possibly leading to results that seem to be statistically significant, when in fact, they are not. All analysis should be made again with appropriate method.	
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Title and abstract	Line 9: South-western should be Southwestern. Insert point mark. Lines 16-17: As a common rule, there should be a space before an opening parenthesis, e.g. 86 (18.6%) and 239 (48.5%). Line 18: "...of urban and rural..." should be "...of rural and urban..." Line 20: The sentence "...birth per woman was 3.4±1.8 births per women..." needs a correction. And what means the numbers 1.8 and 1.5? Line 22: Insert point mark. Line 23 and 25: "C.I" should be "95% CI" Line 25: "... one-eight (OR=0.08..." OR=0.08 means actually one-twelve. Such small numbers are difficult to interpret, so the groups can be switched around by taking the reciprocal of the odds ratio ($1/0.08 = 12.5$) which represent the odds ratio comparing women not using contraceptives to women who used contraceptives.	Line 9: Southwest is now out of topic as recommended by other reviewers and accepted by me. So no need for this modification Line 16-17: Space now exists before all opening parenthesis. This also apply to all other part of the text where such mistakes are found Line 18: changed Line 20: 1.8 and 1.5 are standard deviations (about the mean). It is now written as ± 1.8 and ± 1.5 with the +/- sign inserted Line 22: Point mark inserted after 'other' Lines 23 and 25: CI changed to 95% CI Line 25: agreed and changes effected
Introduction	Line 55: Insert tabulation in the beginning of the sentence. Line 57: As a common rule, there should not be a space between number and percent sign. Line 60: What means FP? Please, clarify before using the abbreviation. Line 76: South western should be Southwestern.	Line 55 has been recommended for deletion, so tabulation may not be necessary again Line 57 and others: Space between number and % sign deleted-same for similar others in the text Line 60: FP and other abbreviations



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		clarified as suggested
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Review of literature (Heading may differ in the case of review paper)		
Materials & methods (Heading may differ in the case of review paper)	Lines 88-91: I couldn't find the original article by Olawuyi (1996) and therefore I cannot say whether the sample size estimation is correct or not. Multistage sampling method is not the standard sampling design and therefore a more detailed explanation of this should be included. Line 89: Sample size calculation is based on prevalence rates 0.61 and 0.48. Explain more clearly what these numbers mean. Lines 106 and 119: Insert point mark. Line 129: Independent-Samples T test was used to compare mean differences. Were the distributions of "age at first sexual intercourse" and "number of children ever had/born" normally distributed? This should be tested before using T test. Lines 128-131: An appropriate method to analyze a difference in use of contraceptives is a logistic regression model which takes into account the sampling design. Also means and proportions should be calculated in an appropriate way. I'm not sure if this can be done with SPSS, but at least R and STATA have a widely range of different svy commands. http://faculty.washington.edu/tlumley/survey/ http://www.stata.com/capabilities/survey-commands/	Lines 88-91: Olawuyi (1996) is a textbook and not article. It is now properly quoted suing Journal referencing guidelines Method used has just been described, and each stage of the multistage sampling method explained e.g random sampling employing simple balloting Line 89: 0.61 and 0.48: in the Nigerian NDHS quoted means- fertility rate was 6.1 births per woman in rural and 4.1 births per woman in urban. Sentence now modified to read Lines 106 and 119; point mark inserted Line 129: Yes they are normally distributed
Results & discussion (Heading may differ in the case of review paper)	Lines 135-136: "Table I shows that the highest proportion of respondents was found in the age group 25-34 years and 25 to 34 years in the urban and rural communities respectively." Remove the latter 25-34 years because this is the most common age group in both groups. Lines 140-165: There should be a space before an opening parenthesis. Table I: -There should be a space before an opening parenthesis. -Why these potentially confounding factors have not been tested	Lines 135-136: Done, as suggested: to avoid unnecessary repetition Lines 140-165: done Table I: space inserted Table II: I agree that there are issues or mix up in with some part of Table 2 that



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between locations (rural and urban respondents)?

Table II:

- I had great difficulty in reading this table. For example "Aware of unsafe/or ovulation period": the number 228 should be divided by number 463 to get 49.2%. What is the number 463? Maybe there are some missing values? It would be very informative to see these numbers.
- There should be a space before an opening parenthesis.
- Sum of the proportions of "age at first sexual intercourse" is not 100 but 111.2 for rural and 106.6 for urban respondents? Please, check the correctness of all proportions.
- Remove percent signs.
- Sum of the proportions of "reasons for discontinued use" is not 100 but 95.2 for rural respondents.
- Why these variables have not been tested between groups (rural and urban respondents)?

Table III:

- Am I right that only 371 rural and 464 urban respondents have answered to the question of knowledge of contraception? And n of usage of contraception is 115 for rural and 269 for urban respondents? For example condom, $227/371=61.2\%$, $328/464=70.7\%$, $33/115=28.7$ and $141/269=52.4\%$.
- Check the proportion of injectable in usage of contraception for urban respondents. This proportion should be bigger, maybe $106/269=39.4\%$.
- This table can be presented without frequencies. For example:

	Knowledge of contraception (%)		Usage of contraception (%)	
	Rural	Urban	Rural	Urban
N				
Condom	61.2	70.7	28.7	52.4
IUCD	19.1	15.1	18.3	25.3
Injectable	10.2	2.6	31.3	20.7 ?

necessitates re analysis, and this informed the change in figures in some parts of this table after re-analysis.

Sum of proportions now 100 in all columns

All % signs in the body of Tables removed

I have decided to highlight the whole of table II in the corrected manuscript so that one can take a new look after the re-analysis.

I STRONGLY APPRECIATE this reviewer for his great assistance on Tables III and IV. I agree to his own style of drawing these tables, and I have adopted the two formats. The content are the same with my own table but better format. Thanks

Yes, you are right. I agree, so I have put the n value up in the new table, and only in %

Table III now without frequencies

Lines 169-171: Table IV: The testing was done for only those who desire to have more children in both locations combined. I have put 'Yes' in front of this. I just asked SPSS to give n values for each location to probably show difference in numbers within locations



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OCP	7.3	8.2	12.2	7.8
Spermicidal	0	1.1	-	-
Traditional	1.9	1.1	8.7	3.0
Others	0.3	1.3	0.9	5.6

Lines 169-171: "Table IV shows that there was a significant association between desire to have more children (among both rural and urban respondents) and use of contraceptives and the level of education ($p=0.001$)". Does this mean that you've combined locations (rural and urban) and tested the association between desire to have more children and use of contraceptives/level of education? If so, why there are columns for rural and urban respondents? Or have you been tested the association between location (rural/urban) and use of contraceptives/level of education only those who desire for more children? In any case, please clarify the above mentioned sentence. Also, you've mentioned the significant association but not which kind the association is.

Lines 171-174: "The mean age at first sexual intercourse was higher in urban (19.5years) than in rural (18.0 years), and this was statistically significant ($t=5.108$, $p=0.001$)". The independent samples T-test can be used if the test variable is normally distributed within each group and the variation of scores in the two groups is not reliably different. If these conditions are not met, then you can evaluate the differences in means between two groups using one of the nonparametric alternatives to the T-test. Please, clarify.

Line 174: " $(t=5.108$, $p=0.010)$ ". In Table IV the t-value is 4.873.

Lines 176 and 178: "C.I." should be "95% CI"

Line 177: "... one-eight ($OR=0.08$..." $OR=0.08$ means actually one-twelve. Please, read the earlier comment (line 25).

Line 175-179: Please clarify the meaning of "fertility" i.e. how has this dependent variable been generated.

Table IV:

-The aim of this study is to describe the awareness of contraception

The kind of association: It was a statistically significant association. This word now reflects

Lines 171-174: As earlier replied, these variables are normally distributed in the data set, and that informed the use of the T test

Line 174: It was a typo error not to quote the corresponding figure, it is $t=4.873$ and $p=0.010$. Correction effected

Line 175 to 179: Actually, 'fertility' here was measure by desire to have more children. I have decided to insert this in the methodology section under data management, and highlighted in yellow

A binary logistics regression analysis for fertility level (based on desire to have more children) and some selected variables was done.

Table IV: The title is correct. Selected fertility determinants include
Desire to have more children (Cross tabs)
Level of education (Regression)
Use of contraceptives (Regression)
Each of these were analyzed within rural and urban locations based on their own merit

The row of N (%) removed as



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	among fertility women in rural and urban areas. Table IV contains the main results of this study but the title refers to association between selected fertility determinants and use of contraception. Is this correct? It seems that you've been tested the association between locations (rural/urban) and fertility determinants, because rural and urban respondents have been mentioned in table IV. Please, clarify the title of table IV. -Does the "Association with a desire to have more children" mean that you have selected only those respondents who desire to have more children and tested the association between location (rural/urban) and used contraceptive/level of education? Please, clarify the sentence. -Remove the row of N (%). -Freq/% should be N (%) and χ^2 should be χ^2 (or chi square). -There should be a space before an opening parenthesis. -What is the exact meaning of level of education 47 (16.3)? Perhaps 16.3% of rural respondents have non-formal education? Please, clarify. -What is the exact meaning of +3.9 or +5.0 in parentheses? Standards deviations? -What is the exact meaning of "Multiple logistics"? Is there only one logistic regression model with two independent variables or two separate models? -What is the dependent variable in this model or in these models? Based on lines 175-179, it seems to be some kind of fertility variable. More detailed description is needed in table IV and also in text. -Are those p-values really 0.001 and 0.019? Based on confidence intervals, the p-value for level of education should be bigger than for use of contraceptives. Please, check the correctness. -All in all, this table is very confusing... Tables should be explanatory enough to be understandable without any text reference. For example: <table border="1" style="margin-left: auto; margin-right: auto; border-collapse: collapse;"> <tr> <td style="width: 30%;"></td> <td style="width: 40%; text-align: center;">Desire for more children (rural and urban), N (%)</td> <td style="width: 30%;"></td> </tr> </table>		Desire for more children (rural and urban), N (%)		suggested.-Freq/% should be N (%) and chi square sign inserted What is the exact meaning of level of education 47 (16.3)? Perhaps 16.3% of rural respondents have non-formal education? Please, clarify. -Yes, Comparism used in the cross tab is 'nil formal education' This is highlighted in yellow. ± 3.9 and ± 5.0 in parenthesis are standard deviations. Plus or minus sign now inserted Actually it was binary logistics regression. The dependent variable is the fertility (represented by the desire to have more children) as stated in the methodology. The response to this question is either a Yes or No Line 209: one eight changed to one twelfth as suggested
	Desire for more children (rural and urban), N (%)				



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Used contraceptives			P
No	217 (82.5)	267 (56.3)	0.001 ^a
Yes	46 (17.5)	207 (43.7)	
Level of education			
No formal	47 (16.3)	18 (7.0)	0.001 ^a
Formal	241 (83.7)	249 (93.0)	
	Differences between locations (rural and urban), mean (sd)		P
Age at first sexual intercourse	18.0 (3.9)	19.5 (5.0)	0.001 ^b
No of children ever had/born	3.4 (1.8)	2.9 (1.5)	0.010 ^b
	Logistic regression model, OR and 95% CI for fertility		P
Level of education (ref=no formal)	0.59	0.45-0.95	0.001
Used contraceptives (ref=no)	0.08	0.06-0.12	0.019

^a Chi-square test

^b T-test

Line 202: Insert point mark.

Line 209: "... had a one-eight fold..." OR=0.08 means actually one-twelve.



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Conclusion	Lines 162-164: "Though awareness of contraceptive methods was high in both settings, use of contraceptive methods was higher among urban than rural respondents." This is only tested for those who desire to have more children (table IV). Why authors didn't construct a logistic model with use of contraceptives as a dependent variable and location (rural/urban) and possible confounding factors (age, education, marital status, religion) as an independent variables? This model would provide a more specific response to this question.	Conclusion: now modified based on the suggestion of two reviewers, and to emanate from the study findings. See yellow colours under 'conclusion'
References	Please check the consistency.	References now according to authors instructions. Formatting and grammatical errors noticed corrected.