Reviewer's report

Title: Peer education: The effects on knowledge, and preventive practice of pregnancy related malaria in women of reproductive age in Edo-State, Nigeria.

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Reviewer: Tanya J Marchant

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This study assesses the effects of a peer education campaign on level of knowledge about malaria in pregnancy and uptake of preventive practices in women of child bearing age. The manuscript reports that, following peer education of women of child bearing age, an increase was observed in knowledge of malaria but not on transmission and prevention of malaria. This information is interesting and with some editing (see suggestions below) may be suitable for publication.

However, the recommendation to reject is made because the study design attempts to collect data which will allow a comparison of knowledge level with actual use of interventions by pregnant women - but no data to support this is presented. As such, no conclusion can be made on the effects of peer education on preventive practice of malaria in pregnancy (contrary to the wording of the title). Similarly, the manuscript concludes that peer education can lead to an increase in knowledge but not necessarily an increase in preventive practice but this conclusion is again not supported by the evidence presented.

The subject of how to increase knowledge of malaria prevention is interesting, however, and should the authors wish to make changes to the manuscript the following points should be considered:

Background:
- The policy context of this research should be more detailed, e.g. specifically what malaria prevention interventions are being promoted and through which delivery channels?

Methods:
- More detail about the peer education intervention being tested is needed.
- Information about the sampling methods (Methods) and actual recruitment (Results) needed to be separated out, and to be more detailed. In particular, the problem of including ‘visitors’ in the sampling scheme (and the resulting approx. 50% LTFU) seems to have been problematic; greater clarity is needed about the individual and community level analyses.
- Detail about the way in which the knowledge score was constructed is needed.
- How was the clustering sampling approach in data analysis?
Results:
- Table 1 – information is only shown for the 1105 women who were interviewed twice. In order to interpret the analysis it is important to show the characteristics of all those interviewed in both surveys – and to know more about who dropped out.
- Table 3 – the numbers going into these calculations need to be presented (was it the 1105 interviewed both before and after?). Further, more basic information about the knowledge score needs to be presented, e.g. what was the range of knowledge scores?
- Table 4 – if I understood correctly, this only presents information from the ‘pre’ interview. If no ‘post’ comparison can be made due to an insufficient sample size I suggest this research question be dropped from the manuscript (see comments above). For context in the discussion, the MIS data referenced in the text would be a better source of information on uptake of pregnancy interventions than the pre-interviews. There are too many potential biases in the study design to try to estimate uptake of interventions (either pre or post), e.g. in this study what was the recall period for ‘ever pregnant women’? Table 1 suggests that almost half had their last pregnancy more than 5 years prior to this survey thus likely to have some recall bias and/or responses reflecting different policy environments.

Level of interest: An article of limited interest

Quality of written English: Needs some language corrections before being published

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:
I declare that I have no competing interests