Reviewer’s report

Title: Self-medication among pregnant women attending antenatal clinic at Makongoro health centre in Mwanza, Tanzania: A challenge to health systems.

Version: 0 Date: 25 Mar 2016

Reviewer: Kazeem Babatunde Yusuff

Reviewer's report:

General comment

I have carefully reviewed the manuscript titled "Self-medication among pregnant women attending antenatal clinic at Makongoro health centre, Tanzania: a challenge to health system" authored by Marwa et al. What I considered the main thrust of the manuscript is captured in line 36-45 [Background] and hence a pharmacoepidemiologic system that regularly monitor the use of the prescribed and self-medication among a vulnerable group like pregnant women is warranted. This type of study is undoubtedly relevant particularly in Tanzania and similar developing settings where the drug regulatory capacity is inadequate, there is unfettered access both prescription-only and over-the-counter medicines, the health-seeking behavior favours self-medication and the inherent weaknesses in the public health system cannot support geographic and economic access to essential medicines and quality health care services. The research question posed is thus relevant and warrant being studied. However, the findings presented have not added significantly to the existing body of knowledge in the research area. Furthermore, the authors did not provide sound justification for conducting this study in Tanzania in general and Mwanza city in particular. There were no data on the peculiarity of health-seeking behavior at the study site or in Tanzania, the inherent weaknesses in the drug regulatory capacity and health care system in Tanzania that may be fueling self-medication, data on malformations encountered during births generally or probably associated with self-medication in Tanzania, and other peculiar social-cultural factors that may particularly prone pregnant women in Tanzania to self-medication. This information is important to enable strong justification for conducting this study in Tanzania.

Background: The conceptual framework used for this stu, as presented, in the Introduction section appear weak. Though, sufficient details of findings of previously published studies in the research area were presented, the authors did not provide a strong justification for conducting this study in Tanzania. Hence, the background section sounds more like a rehash of "stories" that have been told by several previously published studies in the research area. There was nothing refreshing or new about the information in this section. Hence, it is actually difficulty to situate the findings presented by the authors within the context of the existing body of knowledge in the research area, and this appeared to question the usefulness of the findings presented by the authors.
Methods: The method adopted by the authors was not described in details, it is weak and seriously question the internal and external validity of the findings presented. Although, the Cross-sectional design adopted is appropriate for the research question posed but the sampling strategy is weak and appears to be a major confounder. Why was serial sampling adopted rather than simple random sampling? Is there any factor or peculiarity about the study site that warrant the use of this error-prone sampling strategy? Furthermore, what informed the choice of the 1st, 3rd and 7th for the selection of participants? What was the total sample require and how was this calculated? What informed the choice of the study site? How many items were included in the questionnaire? How was the questionnaire developed? What was the pilot-testing procedure and what language was used for the design of the questionnaire? These are key details that will enable thorough assessment of the validity and robustness of the methodology and the findings presented.

Results: Appeared generally well written. How many participants were invited, how many actually completed the interview? It is difficult to assess the validity of these findings because of the inherent weakness in the methods used for data gathering.

Discussion: The discussion section appeared relatively well written, however interpretations of results were flawed, a little confusing and also far-fetched in quite a number of places and [Line 46-47, 51-52, 57-60, 4-6(pg 7), 11-16 pg 7, 32-36 pg 7. The implications of some of the findings were also confusing in some areas.

There was no adequate acknowledgement of the several limitations inherent in the methods adopted for the conduct of the study and how this may adversely affect the validity and interpretations of the findings presented and the conclusion made.

Conclusion: The conclusion appeared based on the findings presented but the flawed methodology adopted for data gathering questions the internal and external validity of these findings.

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

No

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

No

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

No
Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics

**Quality of written English**
Please indicate the quality of language in the manuscript:

Acceptable

**Declaration of competing interests**
Please complete a declaration of competing interests, considering the following questions:

1. Have you in the past five years received reimbursements, fees, funding, or salary from an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?

2. Do you hold any stocks or shares in an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?

3. Do you hold or are you currently applying for any patents relating to the content of the manuscript?

4. Have you received reimbursements, fees, funding, or salary from an organization that holds or has applied for patents relating to the content of the manuscript?

5. Do you have any other financial competing interests?

6. Do you have any non-financial competing interests in relation to this paper?

If you can answer no to all of the above, write 'I declare that I have no competing interests' below. If your reply is yes to any, please give details below.

I declare that I have no competing interests

I agree to the open peer review policy of the journal. I understand that my name will be included on my report to the authors and, if the manuscript is accepted for publication, my named report including any attachments I upload will be posted on the website along with the authors' responses. I agree for my report to be made available under an Open Access Creative Commons CC-BY license ([http://creativecommons.org/licenses/by/4.0/](http://creativecommons.org/licenses/by/4.0/)). I understand that any comments which I do not wish to be included in my named report can be included as confidential comments to the editors, which will not be published.

I agree to the open peer review policy of the journal