Reviewer’s report

Title: Factors influencing the attention to home storage of medicines in China

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Reviewer: Celestino Obua

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Reviewer comments PUBH-D-18-03866

The authors have presented a report on an important phenomenon that is happening in almost all communities across the world. Home storage of medications is an important contribution to the inappropriate use of medicines that may lead to emergence of drug resistance where antimicrobials are misused, or emergence of adverse drug reactions generally. Therefore studies that highlight the problem and make suggestions or influence policy on how to mitigate this problem are very necessary and important contributions to the body of knowledge in the field.

There are however some issues that are not clear in the manuscript to which I have some concerns.

General concerns
1. The authors state that the manuscript was English Language edited by a native English speaker! However, there are still many instances of poor syntax and/or grammatical errors. E.g. second last statement under Background, "Only a few studies have investigated different aspects of adequate storage conditions and factors which affect patient home storage practices", it is important to note that subject matter is "medicines and not "patients" as if patients are being stored at home! Again, under section 2.1 Study design… line 5, "Respondents were invited by face to face ....." Or under conclusion - the sentence "The storage and disposal of household medicines has been becoming an important issue of increasing public awareness" is vague or poor language.
2. Repetition of statements is common too.

Specific Concerns
Under Background - it would have been appropriate to provide information whether there has ever been any study on home storage of medicines in China, or any documented or undocumented background (empirical) as to why this study was necessary in the communities in China. In other words the need to provide a clear motivation for carrying out this study

Under Methods Section -
1. Please explain whether pretesting of the questionnaires among community members also part of the pilot testing among professors and doctors. If different, what did you do with the results from both?
2. What was the sample size of your study? One sees that under section 3.1 Sample profile you have the figure 625/1000 - where did the figure 1000 come from? Was 1000 predetermined as the
sample size, if so, how was it calculated? And did it satisfy the power of your study? The study population has also not been well described. It is also not clear who conducted the study and how the study participants were identified.

3. It is not easy to understand the choice of options provided for the study participants in the Likert type scale where the key object of choice is "attention"! You could explain better why you chose 'attention' as the operating scale for measurement.

4. Under data analysis - the statistical/analysis tests used may not provide meaningful results since prior values were not set. E.g. the use of Kaiser-Meyer-Olkin (KMO) test for adequacy of sample size, yet the sample size was not calculated from the outset in the study design. In addition the KMO value was reported as being high (0.865) which would have required a factor analysis, and it is not clear whether this was carried out.

Under Results Section
1. The demographic factors could have been better presented in the form of a table.
2. It is not easy to appreciate the classification of the medicines as presented in the study: Were the medicines presented in the study all "hallopathic medicines" i.e conventional/western medicines? Could the study participants have reported on some "homeopathic medicines" i.e. natural/traditional medicines? The type of medicines considered in the study should be well defined as some commercial homeopathic medicines are possibly used and stored at home.
3. Reviewing the questions presented in the survey, some questions (Q 13, 16, 17 and 19) are not clear thus making their value in the study questionable.

Discussion
This is largely a repeat of what has been presented in the results section. One would have loved to read arguments on or synthesis of the various factors on the actual problem of irrational use of medicines as a result of home storage of medicines. This does not come out clearly since the effects of home storage of medicines have been presented in previous publications some of which were sited in this study. Are there any specific risks that are presented by the various factors as far as home storage of medicines are concerned in causing inappropriate use of medicines and the attendant dangers for this?

Conclusion
As a result of poor synthesis of the results, the conclusion as presented appears to be speculative, unclear, and could not possibly be from the results of this study. The authors are advised to look again at the results and then present conclusions derived from the findings of this study, and make some recommendations as appropriate.

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.
Yes

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 recommend additional statistical review

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Needs some language corrections before being published

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