Reviewer's report

Title: Analysis of awareness of health knowledge among rural residents in western China

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Reviewer: Christopher A. Loffredo

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This manuscript reports the results of a survey in a rural area of western China regarding the current levels of awareness of health information. While the information is potentially important in the local context, several major limitations reduce the potential impact of the manuscript for a wider audience. These points are summarized below.

Major Compulsory Revisions: all of the following points are in this category.

Is the question posed by the authors well defined?
There were two stated goals for this paper. The first one focused on health knowledge and is well defined. The second was ambiguous: it is not clear whether the authors gathered information about the sources of health knowledge that the respondents are currently using, or if they intended to gather data on the preferences of respondents for future sources.

Are the methods appropriate and well described?
In general the sampling and survey methods are standard for the field, but important measures of quality were missing from the paper. Data on the number and proportion of subjects who refused to participate need to be included, together with measures assessing how well the study sample represents the source population.

Are the data sound?
It is difficult to interpret the data given several important issues. In general there are inconsistencies between the data in the tables and their interpretation in the text. For example, it is stated on page 9 that the subjects “had discrimination” in relation to hepatitis B infection, but there are no data supporting this statement in the table, and the survey did not appear to include an item about this issue. How did the authors learn about feelings of discrimination: were focus group discussions included in the research? There are several statistical terms mentioned on page 9 (stratification, population average score) that are undefined and lack any corresponding data in the tables. In addition, the rather complex patterns of results indicated by results of ANOVA (Table 3) were grossly oversimplified in the text: for example, the non-monotonic trends for education and occupation in that table are completely ignored in the text. As one illustration of the problem, the table shows that persons with university level education had
lower scores than those with a high school education, but this important and unexpected finding is not mentioned at all in the text.

Does the manuscript adhere to the relevant standards for reporting and data deposition?
No, due to the above issues.

Are the discussion and conclusions well balanced and adequately supported by the data?
No, in general the discussion and conclusion are not well balanced and data-supported: they are highly speculative, unreferenced (in terms of citing certain previous research publications), and unsupported by the survey data. These comments apply to nearly all of page 12 (Discussion), and all of page 13 (Conclusion).

Are limitations of the work clearly stated?
There is no mention at all of limitations.

Do the authors clearly acknowledge any work upon which they are building both published and unpublished?
No, there are many statements (particularly on pages 12 and 13) that appear to come from the work of others, or from previous work of these authors, but without cited references or sources.

Do the title and abstract accurately convey what has been found?
The title is acceptable. The abstract has several flaws: the goal for assessing “the approach of health knowledge” is not clearly defined; the description of the most important findings is misleading as it does not inform the reader of the trends in age- and education-and income-related health awareness. The conclusion section of the abstract is entirely unsupported.

Is the writing acceptable?
The paper needs to be completely rewritten by a person who is thoroughly familiar with English grammar and syntax and scientific writing style.

Minor revisions: none
Discretionary revisions: none

Level of interest: An article of limited interest

Quality of written English: Not suitable for publication unless extensively edited

Statistical review: Yes, and I have assessed the statistics in my report.

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