Reviewer's report

Title: The link between mental health and safe drinking water behaviors in a vulnerable population in rural Malawi

Version: 1 Date: 03 Dec 2018

Reviewer: Robert Dreibelbis

Reviewer's report:

I still think there are a few structural issues with the introduction. Line 55 - 58: I would move this until after line 70. You are moving back and forth between background and the study with the current structure.

I would suggest an additional round of English language editing for newly added text - for example: "People who scored equal or above 7 points were included in a group defined as 'poor mental health' and people who scored less THAN 7 points were included in a group defined as "good mental health"

Line 155: Should capitalise "self-reporting questionnaire" (perhaps?), but also add acronyms here as it is used later.

Line 190 = If 26% scored 7 or above on SRQ-20, then this is closer to a quarter, rather than a third.

Please make it explicit in the methods how you coded behaviours - you report on Means, but it's not clear how that translates back to the categories you have used. Perhaps you should compare as frequency rather than continuous variables since they are ordinal not actually continuous…

For the factors and factor blocks - how did you define specific questions within attitudes? Why the focus on diarrhoea as a health outcome? Perhaps a bit more explanation about how you translated factor blocks to specific questions. For example - distance wouldn't be a traditional determinant, but this was included because it relates to attitudes. Give a bit more context about how you arrived at these specific questions.

Line 257 - 261: I think this text isn't really helping. You're just explaining directionality. I think more important is to help understand how a certain coefficient would change the observed behaviour in actual terms. I think part of the challenge is that how the behaviour is translated to numbers is still rather ill defined. What is an average increase of .1 in the behaviour of interest mean? If you really do have a linear outcome, this would mean that you've increased X%, etc. Again - it's difficult to know if you are saying they would collect more water (in terms of volume) or collect more water (in terms of frequency).
Line 296-300: this belong in the methods.

Line 315: In other words is repeated a lot. Can you clarify the statement "Those with poor mental health are less likely to collect safe drinking water with higher commitment" Could you rephrase this: Commitment was a stronger predictor of safe drinking water collection in respondents with good mental health."?

Line 329-333: This should be in the discussion.

Line 372 - through paragraph: Stylistic, but it's a bit cumbersome to read. Perhaps you could leave out the repeated "than individuals with good mental health" since that's the implicit comparison you are making.

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

Yes

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.

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