Author’s response to reviews

Title: Substance use and self-harm: a cross-sectional study of the prevalence, correlates and patterns of medical service utilisation among patients admitted to a South African hospital

Authors:
Elsie Breet (elcbreet@gmail.com)
Jason Bantjes (jbantjes@sun.ac.za)
Ian Lewis (ian.lewis@uct.ac.za)

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Author’s response to reviews:
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BHSR-D-17-00316R1

Dear Dr. Rahul Shidhaye,

The authors would like to thank BMC Health Research and the reviewers for the further consideration of our original and revised research manuscript entitled: “Substance use and self-harm: a cross-sectional study of the prevalence, correlates and patterns of medical service utilisation among patients admitted to a South African hospital” (BHSR-D-17-00316R1). We believe that all of the suggested changes have improved the overall quality of the manuscript.

We would like to accept the invitation to revise the manuscript for further consideration by BMC Health Service Research. As per the technical instruction received on 27th December 2017 we have made revisions using track changes. The remainder of this letter includes a point-by-point response to editorial and reviewer comments describing exactly what amendments have been made to the manuscript text and where these can be viewed.

The manuscript contains original material that has not been published previously and is not currently under consideration for publication elsewhere. Each author has contributed
significantly to the work and agrees to the submission. There is no conflict of interest regarding this article.

Many thanks,

Sincerely,

Corresponding author: Elsie Breet, Private Bag X1, Matieland, Stellenbosch, 7602, South Africa.
Telephone number: +27 -21-808 3459. Email: elsie@sun.ac.za
Co-authors: Dr Jason Bantjes and Dr Ian Lewis

Response to the editor: Dr. Rahul Shidhaye

1. Comment: Please clearly mention that the outcome variable was assessed based on self-report in the limitations section. Please mention objective ways of assessing outcome in the limitation section (describe in detail 'adequate measures' on page 16, line 344) and the impact of not using the same in this paper again in the limitations.

Response: The limitations section now includes a sentence to clearly identify the variables that were assessed using self-report measures. Additionally, suggestions are included for objective measures that could be used in future research. Finally, a sentence has been included to state the impact of not using objective measures in this study. Explicit suggestions have not been included for future research (see Discussion sub-section, 363 to 374, page 17 and 18).

We have made it explicit that we relied on Self-report measures for substance use (see Methods sub-section, 150 to 153, page 8).

2. Comment: The discussion section still clearly overstates the significance of the findings, e.g. line 300, page 15 and lines 309-311, page 15. This means that comment no. 7 in previous review is not adequately addressed. This is a serious problem which needs to be addressed. It is mentioned that greater number of patients who used substances at the time of self-harm, employed methods that inflict damage to body tissue. This is clearly not the case given the
numbers in table 2 and the text on page 11. It is better to remove this from discussion or present in a way which is in accordance with the data. Line 311, page 15 mentions association with higher level of suicidal intent while the PSIS scores (table 2) suggest contrary findings. This needs to be modified.

Response: We have amended the text by removing the claim that a greater number of patients who used substances at the time of self-harm, employed methods that inflict damage to body tissue from both the abstract (Abstract section, line 11 to 12, page 2) and the discussion (Discussion sub-section, line 314 to 315, page 15). Similarly we have removed the claims previously made in the Discussion sub-section, line 311, page 15.

3. Comment: Line 315-319, page 15, these findings are statistically non-significant, but it is not mentioned in the discussion which may mis-guide readers.

Response: Line 333 to 334, page 16 have been modified to clearly state that the associations were non-significant.

4. Comment: Line 338, page 16, cross-sectional nature of the study does not affect the external validity/generalization of the findings. It prevents us to draw causal inference between exposure and outcome variables. This needs to be clearly stated.

Response: The sentence has now been modified by removing the reference to a cross-sectional study and by including a statement that the data was collected from one hospital setting, therefore making it difficult to generalise the findings to other settings (Discussion sub-section, line 355 to 357, page 17).

5. Comment: Please clearly mention that there wasn't a single positive association between any of the exposure variables and the outcome as well as AUS and self-harm.

Response: The discussion now states that associations calculated using the Chi-Square statistical test were not statistically significant (Discussion sub-section, line 318 to 319 and 333 to 334, page 15 and 16).
6. Comment: Consecutive sample is a type of purposive sample and so non-random sample which might result in selection bias. Please mention the same in limitations section.

Response: The study limitations have now been modified to include a statement that consecutive sampling is a type of non-random purposive sampling that may result in selection bias (Discussion sub-section, line 357 to 360, page 17).

7. Comment: Line 361-362, page 17 is not supported by data (refer comment no. 2). Please modify the same.

Response: This sentence has been removed (Conclusions sub-section, line 398 to 399, page 19).

Responses to reviewer: Dr Arvin Bhana

1. Comment: I find the changes made acceptable in relation to the specific highlighted sections. However, I am dismayed that these principles did not transfer to the Discussion section. A study that did not find any significant associations or relationships between variables cannot assert that the trends are in the appropriate direction. I have made a number of comments in this section.

Response: Thank you for highlighting important points that needed further revision. Specific reviewer comments and the corresponding changes made are highlighted in the rest of this letter.

2. Comment: The sentence: “Given that patients are reluctant to report substance use honestly [32], it is likely that this prevalence is lower than would have been found had we used more objective measures of substances use.” should be in the weaknesses of the study section.

Response: Line 292 to 294 has now been revised and moved to the limitations section (Discussion sub-section, line 367 to 371, page 17).

3. Comment: The sentence: “Future studies may shed light on the extent to which a history of substance use among this sub-group of patients may have played a role in causing the
relationship and financial problems that precipitated their self-harm.” (Discussion section, line 295 to 298) should be in the future studies section.

Response: The sentence: “Future studies may shed light on the extent to which a history of substance use among this sub-group of patients may have played a role in causing the relationship and financial problems that precipitated their self-harm.” has now been moved to the future studies section (Discussion sub-section, line 386 to 388).

4. Comment: The analysis undertaken to demonstrate the association between those with AUS and suicidal behavior and those without AUS. Please check that I have not misunderstood the statistical analysis you did. Chi-square test (measure of association) and logistic regression (relationships/ odds ratio) were used. In which case, reference to differences in the Discussion section makes no sense!

Response: The authors confirm that the Chi-square test (measure of association) and logistic regression analysis (relationships/ odds ratio) were used in this manuscript. In addition, the Mann-Whitney test was used to test between-group differences of continuous variables with nonnormal distributions (Methods sub-section, line 181 to 182).

Comment: The Chi-Square is a statistical test of association and not differences. Also, regression analysis reflects the strength of the relationship between an independent variable and dependent variables - not differences! This discussion should be honest about not finding any relationships though the overall direction of the findings is consistent with that of international literature. There is no other story to tell - including "a tendency to support..."

Response: The discussion section has now been modified to exclude the term ‘differences’ when referring to the Chi-Square statistical test and to make it clear that no significant associations where found for these findings when calculating the Chi-square statistic (Discussion sub-section, line 318 to 321, page 15).

Reference to ‘differences’ have also been modified in the results section (Results sub-section; line 232 to 234, page 12; line 241 to 243, page12; line248 to 250, page 12; line 269 to 272, page
Furthermore, sentences stating ‘a tendency to support’ were rewritten or removed. These sentences refer to:

“When compared to other self-harm patients, those who had used substances were more inclined to…” (Abstract section, line 10 to 15, page 2).

“We also found that on average self-harm patients who had used substances tended to have longer hospital stays than other self-harm patients.” (Discussion sub-section, Line 321 to 323, page 15).

“The data thus shows a tendency to support the literature that AUS at the time of self-harm is associated with more violent and medically serious self-injury [12, 32] and with higher levels of suicidal intent [15].” (Discussion sub-section, Line 310 to 324 to 327, page 16).


Response: A reference has now been included (Discussion sub-section, Line 343 to 344, page 16).

6. Comment: The assertion that a better measure and bigger sample size is likely to show significance is poorly founded and should not be included as it suggests a poor conceptual foundation for the study.

Response: The mention of a larger sample size has been removed. The mention of using adequate measures have been rewritten to address a comment made by the editor (Dr. Rahul Shidhaye): “Please mention objective ways of assessing outcome in the limitation section.
(describe in detail 'adequate measures' on page 16, line 344) and the impact of not using the same in this paper again in the limitations.”

Suggestions are included for objective measures that could be used instead. A sentence has been included to state the impact of not using objective measures with regard to some variables in this paper. Suggestions are made for future research (Discussion sub-section, line 366 to 383, page 16 and 17).

7. Comment: The following statement is not true: “The results show that AUS at the time of self-harm tended to be associated with more medically serious self-harm.” (Conclusions section, line 366 to 367, page 17).

Response: This sentence has been removed (Conclusions sub-section, line 398 to 399, page 18).