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

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Author’s response to reviews:

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BHSR-D-17-00316

Dear Dr. Rahul Shidhaye,

The authors would like to thank BMC Health Research and the reviewers for the most helpful comments following the revision of our original research article 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-17-00316). We believe that all of the suggested changes have improved the overall quality of the article.
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 5th October 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 article 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,

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Response to the editor:

1. Comment: Reviewers have raised some very important issues related to definition of outcome (acute use of substance), sample size, limited external validity of the findings and presentation of results and discussion. We request you to address these comments and wherever appropriate please make major changes in the manuscript to reflect the limitations related to methodology.

Response: This has now been done; specific changes made to the manuscript are highlighted in the rest of the letter.
2. Comment: The manuscript currently is too lengthy and some of the sections (e.g. background) can be presented more succinctly.

Response: The manuscript has been revised and major changes have been made to present the background section more succinctly.

The manuscript has been shortened where possible. However, the reviewers also asked for specific detail to be added. Any additions made were kept as concise as possible.

The original word count was 6350, while the current word count after revisions are 6242 including abstract, references, and tables.

Responses to reviewer 1: Dr Arvin Bhana

1. Comment: Page 3, lines 36-38. The term "acute use of substances" needs to be explained in greater detail. Simply indicating that it refers to substance use during or after self-harm does not help determine whether consumption of substances is at a risky level (in the case of alcohol), or what quantity or type of other illicit substances would be considered to qualify as "acute use"!

Response:

Thank you for this important comment. We have provided clarity about how the "acute use of substances" was operationalized in this study. We have clarified that we relied on self-reports of any substance use (regardless of the level of use or context of use). This has also been further discussed in the limitations section, so that future research might focus on the level / quantity of use as an important independent variable.
Due to the small number of patients who engaged in AUS (n=48) a distinction cannot be made between types of AUS (e.g. alcohol and different types of illicit substances) as this would not allow meaningful comparison in the analysis and interpretation of the data.

The following statement has now been highlighted in the limitations:

‘Future research needs to include a larger sample size and employ adequate measures that allow for a distinction between types of substance use, determine whether substance use was at a risky level, and establish when the individuals was exposed to the substance in proximity to self-harm.’ (Discussion section, lines 344 to 347, page 16)

2. Comment: An important question is whether 'acute' use of substances has been present without suicidal behavior previously? It would appear from the analysis that this question was not asked though 'history of self-harm' was asked. Given that just under 50% of the sample had a history of self-harm, an important discriminating question would have been about substance use patterns of behavior! Unfortunately, the details of the measures used indicates that only data related to substance use at the time of the self-harm was collected.

Response: Thank you for this important comment. Unfortunately, this information was not collected during the study, so we are not able to run this analysis. We have addressed this as a limitation of the study.

This statement has now been highlighted in the manuscript:

‘This study did not assess whether AUS has been present without previous self-harm. Future research should also assess substance use patterns of behaviour and previous AUS without an act of self-harm.’ (Discussion section, line 347 to 349, page 17)
3. Comment: Page 3, lines 38-40. This text should be in the methods section

Response: Thank you for this suggestion. The sentence has now been removed from the introduction. This information is mentioned in the methods section. (Methods section, line 140 to 174, page 8 to 9)

4. Comment: Page 8, line 145-148. The PSIS scores ranging from 0-11 indicates low to moderate suicidal intent. This makes little sense as the one reflects low risk and the other moderate risk. Needs to be clarified.

Response: Thank you for pointing out this confusion. We have attempted to clarify this by including the following statement in the manuscript:

The PSIS scores range from zero to 25, where scores between zero and three indicates low suicidal intent, scores between four and 11 indicates moderate suicidal intent, and scores higher than 11 indicates severe suicidal intent. In this study, only three AUS patients reported low suicidal intent. The small number of patients makes meaningful analysis difficult. Therefore, two categories were created for the analysis consisting of low to moderate suicidal intent (i.e. scores between zero and 11) and high suicidal intent (i.e., scores higher than 11). (Methods section, line 162 to 168, page 8 and 9)

5. Comment: Results: While the statistical analysis is appropriate, it is not surprising that there were no significant associations found on the key outcome variables. It would appear that more careful conceptual consideration of the variable acute use of substances may have suggested that a pattern of substance use may be a better predictor related to self-harm. I suggest that the authors consider this issue and the ways in which it may have limited the usefulness of the study itself. The discussion section, page 15: lines 308 to 310 indicate as much, though it is unclear what is meant by 'chronic substance use'!
Response: The authors agree that the pattern of substance use may be an important predictor of self-harm.

This limitation to our research along with a suggestion for future research has been included in this manuscript: ‘This study did not assess the pattern of substance use or whether AUS has been present without previous self-harm. Future research should also assess substance use patterns of behaviour and previous AUS without an act of self-harm.’ (Discussion section, line 347 to 349, page 17)

Comment: it is unclear what is meant by ‘chronic substance use’!

Response: The phrase ‘chronic substance use’ has now been clarified. The sentence now reads: ‘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-injury. (Discussion section, line 296, page 14)

6. Comment: Discussion Section: Given the cross-sectional nature of this study and the absence of significant findings on the key outcome variables, it is inappropriate to discuss the findings as if they were significant!

   A more nuanced approach that suggests trends rather than positive findings should form the focus of the discussion.

Response: The authors agree with this statement and have carefully revised the discussion section to correct statements that seem to discuss findings as if they are significant when they are in fact not. The manuscript now uses terminology that suggests trend instead of positive findings.
7. Comment: The discussion section 3 appears to overstate the significance of the findings! An example is page 15, lines 311-315. The study itself did not evaluate if screening is appropriate for self-harm patients, nor does the data suggest this as it was not significant!

Response: The discussion section 3 has now been revised as to not overstate the significance of the findings.

The statement: ‘As such the data seems to support the assertion that self-harm patients should routinely be screened for problem substance use and should be offered referrals to appropriate substance use treatment centers or, where appropriate, brief targeted interventions as part of the management of their self-harm.’

Now reads: ‘It may be beneficial to routinely screen for problem substance use among self-harm patients and to offer referrals to appropriate substance use treatment centers or, where appropriate, brief targeted interventions as part of the management of self-harm at the hospital.’

(Discussion section, line 329 to 332, page 16)

Responses to reviewer 2: Dr Kaustubh Joag

1. Comment: About the term prevalence - Study title uses a word 'prevalence' and correlate this with public health issue. To establish this topic to be a public health issues, the sample size should have been larger and drawn from multiple sites or larger population.

But this sample is drawn from one hospital/site and sample size is only 238. Being a cross sectional study, this is a point prevalence in small population. So it will be better if this is explained in the methodology in detail and mentioned as a limitation of the study.

Also this prevalence cannot be generalized to the whole population. It may be public health issues but that link cannot be established here with the current data. Unless an author of the study has relevant argument to make, I think this needs to be corrected.
Response: The authors agree with this important comment. The article has now been revised so that prevalence is not correlated with being a public health issue based on the data from this study. Where this statement has been corrected: Abstract, line 4 and 19, page 2; Introduction section, line 108, page 6; Discussion section, line 313, page 16; Discussion section, line 355, page 17.

‘This study consisted of a point prevalence sample from a small population by collecting data from all self-harm patients who presented for treatment at the hospital between 16 June 2014 and 29 March 2015.’ (Methods section, line 116, page 6)

The limitation has now been included: ‘Due to the cross-sectional nature of this study, it is not appropriate to generalise the findings to other settings. Future research should replicate this study by collecting data from different hospitals across multiple settings.’ (Discussion section, line 338 to 340, page 16)

2. Comment: I agree that correlation between ASU and patterns of medical service utilisation is established and there is need to be established further.

Response: No response needed.

3. Comment: The points mentioned under limitations are important and need to be included in further study.

Response: Thank you, the limitations have now been adapted and more recommendations for future research have been made.
"The authors' response letter has also been included as a supplementary file"