

PEER REVIEW HISTORY

BMJ Open publishes all reviews undertaken for accepted manuscripts. Reviewers are asked to complete a checklist review form (<http://bmjopen.bmj.com/site/about/resources/checklist.pdf>) and are provided with free text boxes to elaborate on their assessment. These free text comments are reproduced below.

ARTICLE DETAILS

| | |
|----------------------------|---|
| TITLE (PROVISIONAL) | Preparedness for peer first response to mining emergencies resulting in injuries: a cross-sectional study |
| AUTHORS | Karlsson, Sofia; Saveman, Britt-Inger; Hultin, Magnus; Björnstig, Ulf; Gyllencreutz, Lina |

VERSION 1 - REVIEW

| | |
|------------------------|--|
| REVIEWER | Jafar Khademi Hamidi Tarbiat Modares University |
| REVIEW RETURNED | 11-Jan-2020 |

| | |
|-------------------------|--|
| GENERAL COMMENTS | I suggest the reviewers provide a summary information from seven mines including the ore type, mining method, production. Also, it could be more useful if the analysis results to be reported in viewpoint of this technical mining data. |
|-------------------------|--|

| | |
|------------------------|---|
| REVIEWER | Deng Mingming Xi'an Jiaotong University, China |
| REVIEW RETURNED | 11-Feb-2020 |

| | |
|-------------------------|---|
| GENERAL COMMENTS | <p>I have reviewed the article entitled: Preparedness for peer first response to mining emergencies with injuries: a cross-sectional study. It applied a questionnaire study of mine workers to identify factors of importance for being prepared for a peer first response to underground mining emergencies with injuries. Overall this article is interesting and adds to the research on mine worker safety. I have number of queries on the article.</p> <p>1. Introduction The introduction needs more in-depth analysis and the lack of information in the methodology limits the readers ability to assess the quality of the design. The questionnaire used in this study is not clear. The variables which the questionnaire includes should be interpreted more. Why were these variables chosen to measure in this study? How were the variables used in existed studies? This needs some literature review. The introduction is a bit too short. Additionally, the research significance needs to be emphasized.</p> <p>2 Method Why was the exploratory factor analysis applied in data analysis?</p> |
|-------------------------|---|

| | |
|--|---|
| | <p>3 Result Result should re-organized more logically. It is not very clear. After I read the result section, I could not catch the key point, especially the first and second paragraph in the result section.</p> <p>4 Discussion The three factors including (i) Familiarity with rescue procedures during emergencies with injuries, (ii) risk perception of emergencies with injuries and (iii) experience of using self-protective and first aid equipment need to be discussed more. It is important to compare the findings with other existed studies in Discussion section.</p> |
|--|---|

| | |
|------------------------|---|
| REVIEWER | James Bentham University of Kent, UK |
| REVIEW RETURNED | 09-Mar-2020 |

| | |
|-------------------------|---|
| GENERAL COMMENTS | <p>The authors have presented important and interesting analysis. The survey appears to have a very good response rate, the strengths and limitations are stated clearly, and the factor analysis has worked well.</p> <p>I have a number of comments, most of which are quite minor:</p> <ol style="list-style-type: none"> 1. In Table 1, 285/741 miner-labourers is 38%. 2. In Table 2, 233/741 access to splints is 31%. 3. In Table 2, Q2-Q8, the number of non-respondents should be stated, so that the numbers in each row add to 741. It's also not clear whether the percentages are calculated using n=741, or the number of respondents to each question. However, in Q2, 55/(55+166+378+115+25) and 55/741 are both 7%, so these percentages should all be checked thoroughly. Also, the text in results should explain whether the percentages are for all mineworkers, or just those who responded to the question. 4. Table 3 would be better as a figure using a heat map, rather than a table. 5. The notation for chi-squared should have "2" in superscript. 6. I don't think Figure 1 is necessary - the text describes the choice of components clearly. 7. The authors could consider including a figure with the odds ratios from the regression. This is a key result of the analysis. 8. The final sentence of results seems to repeat the information given previously, so could be deleted. 9. The authors should explain the imputation in more detail. Given that some answers are missing for Q2-Q8, which data were imputed? |
|-------------------------|---|

VERSION 1 – AUTHOR RESPONSE

| | Editor's and reviewers' comments | Performed revisions |
|------------|---|--|
| Reviewer 1 | <p>Reviewer(s)' Comments to Author:</p> <p>Reviewer: 1 Reviewer Name Jafar Khademi Hamidi Institution and Country</p> | <p>In the Introduction section there is a description that the Swedish underground mines are mineral- and metalliferous mines, which have a different set of risks than coal mines.</p> <p>In the Method subsection Data</p> |

| | | |
|------------|--|---|
| | <p>Tarbiat Modares University</p> <p>Please state any competing interests or state 'None declared': None</p> <p>Please leave your comments for the authors below I suggest the reviewers provide a summary information from seven mines including the ore type, mining method, production. Also, it could be more useful if the analysis results to be reported in viewpoint of this technical mining data.</p> | <p>collection a paragraph has been added with summarized information about the mines. In the Discussion section more contextual information has been included about the general principles of Swedish underground mining.</p> |
| Reviewer 2 | <p>Reviewer: 2 Reviewer Name Deng Mingming</p> <p>Institution and Country Xi'an Jiaotong University, China</p> <p>Please state any competing interests or state 'None declared': no competing interests</p> <p>Please leave your comments for the authors below</p> <p>I have reviewed the article entitled: Preparedness for peer first response to mining emergencies with injuries: a cross-sectional study. It applied a questionnaire study of mine workers to identify factors of importance for being prepared for a peer first response to underground mining emergencies with injuries. Overall this article is interesting and adds to the research on mine worker safety. I have number of queries on the article.</p> <p>1. Introduction The introduction needs more in-depth analysis</p> | <p>Thank you for your positive comments!</p> <p>The Introduction has been rewritten in order to include a clearer and more in-depth-analysis of the problem area where the significance of the study has been made more explicit.</p> |
| | <p>and the lack of information in the methodology limits the readers ability to assess the quality of the design. The questionnaire used in this study is not clear. The variables which the questionnaire includes should be interpreted more. Why were these variables chosen to measure in this study? How were the variables used in existed studies? This needs some literature review.</p> | <p>Relevant literature and explanations have been expanded within Method subsection Questionnaire.</p> |
| | <p>The introduction is a bit too short. Additionally, the research significance needs to be emphasized.</p> | <p>The Introduction has been rewritten in order to include a clearer and more in-depth-analysis of the problem area</p> |

| | | |
|------------|--|--|
| | | where the significance of the study has been made more explicit. |
| | <p>2 Method</p> <p>Why was the exploratory factor analysis applied in data analysis?</p> | A more comprehensive explanation of the use of exploratory factor analysis has been made in the Method subsection Exploratory factor analysis. |
| | <p>3 Result</p> <p>Result should re-organized more logically. It is not very clear.</p> <p>After I read the result section, I could not catch the key point, especially the first and second paragraph in the result section.</p> | An extensive re-organization of the structure of the Results section has been performed to clarify the key-points. |
| | <p>4 Discussion</p> <p>The three factors including (i) Familiarity with rescue procedures during emergencies with injuries, (ii) risk perception of emergencies with injuries and (iii) experience of using self-protective and first aid equipment need to be discussed more. It is important to compare the findings with other existed studies in Discussion section.</p> | The Discussion section has been substantially restructured and complemented with relevant literature in order to clarify the focus on the three factors. |
| Reviewer 3 | <p>Reviewer: 3</p> <p>Reviewer Name</p> <p>James Bentham</p> <p>Institution and Country</p> <p>University of Kent, UK</p> <p>Please state any competing interests or state 'None declared':</p> <p>None declared</p> <p>Please leave your comments for the authors below</p> <p>The authors have presented important and interesting analysis. The survey appears to have a very good response rate, the strengths and limitations are stated clearly, and the factor analysis has worked well.</p> <p>I have a number of comments, most of which are quite minor:</p> | Thank you for this comment! |
| | 1. In Table 1, 285/741 miner-labourers is 38%. | In Table 1 this number has been corrected |
| | | In Table 2, this number has |

| | | |
|--|---|---|
| | 2. In Table 2, 233/741 access to splints is 31%. | been corrected and all the numbers have been checked and corrected and consequently if the numbers were reported in the results and discussion section they have been changed. |
| | 3. In Table 2, Q2-Q8, the number of non-respondents should be stated, so that the numbers in each row add to 741. It's also not clear whether the percentages are calculated using n=741, or the number of respondents to each question. However, in Q2, 55/(55+166+378+115+25) and 55/741 are both 7%, so these percentages should all be checked thoroughly. Also, the text in results should explain whether the percentages are for all mineworkers, or just those who responded to the question. | Non-respondents are included in Table 2, which means all rows add up to 741 respondents. This has been clarified in the Method subsection Questionnaire where Table 2 is presented. |
| | 4. Table 3 would be better as a figure using a heat map, rather than a table. | Table 3 has been remade into a heatmap, Figure 1. Thank you for this suggestion, which hopefully make the results clearer. |
| | 5. The notation for chi-squared should have "2" in superscript. | This is rewritten to: "Pearson chi-square" |
| | 6. I don't think Figure 1 is necessary - the text describes the choice of components clearly. | What was Figure 1 showing Eigenvalues has been removed . |
| | 7. The authors could consider including a figure with the odds ratios from the regression. This is a key result of the analysis. | The results and discussion sections has been restructured in order to clarify the focus on the three factors. As suggested, a figure showing the OR with CI has been added (Figure 2) |
| | 8. The final sentence of results seems to repeat the information given previously, so could be deleted. | The unnecessary sentence at the end of the results section has been removed. |
| | 9. The authors should explain the imputation in more detail. Given that some answers are missing for Q2-Q8, which data were imputed? | Table 2 shows the responses to the questions before imputation was performed. This explanation has been included in the Method subsection Questionnaire. |

VERSION 2 – REVIEW

| | |
|------------------------|---|
| REVIEWER | James Bentham University of Kent, UK |
| REVIEW RETURNED | 19-Aug-2020 |

| | |
|-------------------------|---|
| GENERAL COMMENTS | I think the paper is ready to be accepted, and I have no further comments |
|-------------------------|---|