

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)	A questionnaire survey exploring healthcare professionals' attitudes towards teamwork and safety in acute care areas in South Korea.
AUTHORS	Kim, Sung Eun; Kim, Chan Woong; Lee, Sang Jin; Oh, Je Hyeok; Lee, Dong Hoon; Lim, Tae Ho; Choi, Hyuk Joong; Chung, Hyun Soo; Ryu, Ji Yeong; Jang, Hye Young; Choi, Yoon Hee; Kim, Su Jin; Jung, Jin Hee

VERSION 1 - REVIEW

REVIEWER	Rona Patey University of Aberdeen UK
REVIEW RETURNED	11-Apr-2015

GENERAL COMMENTS	<p>Although I have suggested that the standard of english is suitable for publication I believe that this could be significantly improved for easier reading. I have attached a list in a word document of some of the points of the paper with some tracked changes suggestions to illustrate my view. I have picked some where I think I have understood what the authors are saying but I cannot be sure - therefore there is a need for some review of the english across the paper. I would suggest that reviewing a further copy would make a significantly better standard of publication and understanding.</p> <p>I suggest that the title of the paper is changed to better reflect the work e.g. A questionnaire survey to explore healthcare professionals attitudes towards teamwork and safety in acute care areas in South Korea'</p> <p>The key words and the subject headings might best include something relating to safety / human factors or teamwork?</p> <p>I believe that this is an important area: to being to understand the culture with respect to safety and understanding of human performance limitations in a country. This would be a first step to understanding the kind of training and system changed required if the healthcare system is to become safer in that area. I believe that this could be expanded on in the discussion and conclusions of the paper with suggestions for what the further strategies or priorities for staff training should be rather than just one sentence at the very end.</p> <p>This might be achieved by condensing slightly the discussion around each sub section in the ORMAQ questionnaire and then making comment on what the results suggest overall for the Korean system compared with other countries where this questionnaire has been</p>
-------------------------	--

	<p>administered and reported. It might be helpful for the reader to understand which other countries are being referred to when the authors cite the papers in the discussion (e.g. Flin, Helmreich).</p> <p>From my reading of the article I don't think that the authors could provide a true response rate as copies of the questionnaire were sent to departments and the whole team invited to reply but it would be of interest and helpful in judging the likelihood of their results to strongly reflect the prevailing culture if they could give some indication of the possible numbers who could have responded.</p> <p>I note that means were used rather than medians although the scale was a Likert scale - it would be helpful for the authors to note and give their reasoning for this.</p> <p>The reviewer also provided a marked copy with detailed comments. Please contact the publisher for full information about it.</p>
--	--

REVIEWER	Blanca Gallego Australian Institute of Health Innovation Australia
REVIEW RETURNED	12-Apr-2015

GENERAL COMMENTS	<p>This study aims to investigate the patient safety attitudes of acute care medical personnel in South Korea. In order to do so, the authors analysed responses to the Operating Room Management Attitudes Questionnaire (ORMAQ) by 752 clinicians from intensive care units, emergency departments and operating rooms working at 9 urban hospitals. Assessing the safety attitudes of nurses and doctors in hospital is important for improving patients' safety. However, I believe this manuscript, in its current form, is not good enough for publication for the following reasons:</p> <ol style="list-style-type: none"> 1. The authors present a statistical description of the survey responses. It would be preferable if they aim to answer specific questions (such as 'is there a relationship between higher scores and patient safety?' or 'is inter-clinician variance explained by age or career?'), using specific modelling techniques (e.g. multilevel modelling, structural equation modelling) 2. The level of English is not good enough. The manuscript has too many typos and grammatical errors to be corrected by the reviewers. I suggest proofreading by a native English speaker or a scientific editing service prior to submission.
-------------------------	--

VERSION 1 – AUTHOR RESPONSE

Response to the comments of Rona Patey

1. Although I have suggested that the standard of English is suitable for publication I believe that this could be significantly improved for easier reading. I have attached a list in a word document of some of the points of the paper with some tracked changes suggestions to illustrate my view.

Answer> We changed some of the points as your suggestions and received English-language editing

again.

2. “ Method: page 8, Line 50 – I am not sure what the distribution ratio is – and why it would be divided by 24 months.” in your attached file

Answer> We divided clinical career into novice and advanced beginner and more by 24 months according to 5 levels of nursing experience not just mean or median value.

3. I suggest that the title of the paper is changed to better reflect the work.

Answer> We changed the title of the paper as your recommendation with English-language editing process.

4. The key words and the subject headings might best include something relating to safety / human factors or teamwork?

Answer> We agree with your suggestion but cannot select the words relating to safety / human factors or teamwork from the list.

5. I believe that this is an important area: to being to understand the culture with respect to safety and understanding of human performance limitations in a country. This would be a first step to understanding the kind of training and system changed required if the healthcare system is to become safer in that area. I believe that this could be expanded on in the discussion and conclusions of the paper with suggestions for what the further strategies or priorities for staff training should be rather than just one sentence at the very end.

This might be achieved by condensing slightly the discussion around each sub section in the ORMAQ questionnaire and then making comment on what the results suggest overall for the Korean system compared with other countries where this questionnaire has been administered and reported. It might be helpful for the reader to understand which other countries are being referred to when the authors cite the papers in the discussion (e.g. Flin, Helmreich).

Answer> We added suggestions for what the further strategies or priorities for staff training in Korea in the conclusions.

6. From my reading of the article I don't think that the authors could provide a true response rate as copies of the questionnaire were sent to departments and the whole team invited to reply but it would be of interest and helpful in judging the likelihood of their results to strongly reflect the prevailing culture if they could give some indication of the possible numbers who could have responded.

Answer> We added an estimated number of nurses and doctors working in acute care settings of nine hospital in the method and the response rates in the results.

7. I note that means were used rather than medians although the scale was a Likert scale - it would be helpful for the authors to note and give their reasoning for this.

Answer> We used Likert scales, not Likert-type ites, to combine the responses from the series of questions to create an attitudinal measurement scale. Our data analysis was based on the composite score from the series of questions that represented the attitudinal scale.

Response to the comments of Blanca Gallego

1. The authors present a statistical description of the survey responses. It would be preferable if they aim to answer specific questions (such as 'is there a relationship between higher scores and patient safety?' or 'is inter-clinician variance explained by age or career?'), using specific modelling techniques (e.g. multilevel modelling, structural equation modelling)

Answer> We compared mean values for each theme via three-or-more-way ANOVA, with interaction, followed by multiple comparisons among several groups as described in the method after the statistical consultation. We agree with your opinion. We will use your suggestions to the following research.

2. The level of English is not good enough. The manuscript has too many typos and grammatical errors to be corrected by the reviewers. I suggest proofreading by a native English speaker or a scientific editing service prior to submission.

Answer> We received English-language editing again.

VERSION 2 – REVIEW

REVIEWER	Rona Patey Head of Division of Medical and Dental Education University of Aberdeen UK
REVIEW RETURNED	02-Jun-2015

GENERAL COMMENTS	<p>I think that the paper is much improved but would suggest some minor changes before publication. The English is much clearer - there remain one or two places where I feel that minor change would improve understanding and more correctly reflect the authors perspective (if I have understood correctly) - I have detailed all of these below</p> <ol style="list-style-type: none"> 1. Page 4 - abstract - outcome measures section is repeated 2. Page 4 - in results the authors detail there were discrepancies among professional groups - does this mean within a profession or between the two professions surveyed. If the latter is the case then 'discrepancies between professional groups' would be most correct. 3. page 5: third bullet point - I would suggest should read - this study suggests that there is a rigid culture which does not encourage the open discussion and feedback on differing opinions etc 4. page 5: final bullet point - last part of this sentence should read 'further survey needs to extend to different etc 5. page 6, line 43: are these postgraduate specialty training programme for medics or training programmes for patient safety? do they include nursing 6. page 10, line 6 - should read nurses or nursing staff rather than 'nurse' 7. page 12, line 26: this sentence should probably start 'it is true that' 8. page 12, line 35/36: would it be helpful for the authors to state that the Fliin paper was based in UK (ie another country with its own healthcare culture) 9. page 12, line 43 - does this refer to medical or medical and nursing? 10. page 14: I am not convinced that the section on organisational climate are really about the pride in an organisation but rather the shared attitudes, beliefs and values held across an organisation -
-------------------------	---

	<p>this section needs rewording</p> <p>11. Page 17, line 17 - the authors state that universal measurement tools are required - does this mean additional tools which can be used in all healthcare settings across the world - or is the point that tools to measure attitudes and culture with respect to safety should be administered across all settings - not currently clear</p> <p>12. page 18, line 19 - authors state a lack of any perception - I think that the results suggest limited or very limited perception rather than complete lack</p> <p>13. page 18, line 37/38 - should 'form of formal course' read 'form of a formal training programme' or 'included to the core curriculum'?</p> <p>14. Table one does not detail what the numbers refer to</p>
--	--

REVIEWER	<p>Blanca Gallego Australian Institute of Health Innovation Macquarie University Sydney, Australia</p>
REVIEW RETURNED	01-Jun-2015

GENERAL COMMENTS	<p>The study remains a presentation and statistical description of the results of a questionnaire survey, and more interesting research questions are left for future work.</p> <p>The authors have improved the level of English of their manuscript, making it easier to read. I suggest addressing the following issues:</p> <ol style="list-style-type: none"> 1. The 'Outcomes measures' subsection in the abstract appears twice. 2. The 'Design' subsection in the abstract should include basic information regarding the statistical analysis 3. The 'Results' subsection in the abstract should include basic information regarding discrepancy of attitudes as well as results that link to the statements in the 'Conclusion' subsection. 4. There is a typo in page 6 paragraph 2 "Therefore, it is important that a there is ..." 5. In page 6 paragraph 4 "integral systemic training courses"? 6. In Table 1 please include proper headings e.g. 'Mean and standard deviation' instead of 'Result'. Then 'Mean+-SD' in column "Characteristic" can be removed. I suggest the use of Median, and quantiles, which is more informative than the mean if the data is not normally distributed. 7. In Table 4 please include proper headings e.g. definition of 'B', and is <-24 mo. or Physician the 'reference group'? Also substitute 0.000 by <0.001 in the p-values. 8. In Table 3 please include definition of alpha 9. In the 'Discussion' section the authors state that 'we identified ..., and differences between Korea and other countries'. In what follows, the authors repeatedly compare their results with a 2003 study from Scottish hospitals by Flin et al. Is there any other international ORMAQ survey that they could compare to in the same way?
-------------------------	--

VERSION 2 – AUTHOR RESPONSE

Response to the comments of Blanca Gallego

1. The 'Outcomes measures' subsection in the abstract appears twice.
 Answer> We corrected it as you pointed out.

2. The 'Design' subsection in the abstract should include basic information regarding the statistical analysis

Answer> We changed the 'Design' subsection in the abstract as your recommendation.

3. The 'Results' subsection in the abstract should include basic information regarding discrepancy of attitudes as well as results that link to the statements in the 'Conclusion' subsection.

Answer> We changed the 'Results' subsection in the abstract as your recommendation.

4. There is a typo in page 6 paragraph 2 "Therefore, it is important that a there is ..."

Answer> We corrected it as you pointed out.

5. In page 6 paragraph 4 " integral systemic training courses"?

Answer> We corrected " integral systemic training courses" to " integral training courses".

6. In Table 1 please include proper headings e.g. 'Mean and standard deviation' instead of 'Result'. Then 'Mean+SD' in column "Characteristic" can be removed. I suggest the use of Median, and quantiles, which is more informative than the mean if the data is not normally distributed.

Answer> We changed Table 1 headings and mean and standard deviation to median and quantiles as your recommendation.

7. In Table 4 please include proper headings e.g. definition of 'B', and is <-24 mo. or Physician the 'reference group'? Also substitute 0.000 by <0.001 in the p-values.

Answer> We changed Table 4 as your recommendation.

8. In Table 3 please include definition of alpha

Answer> We added definition of alpha in Table 3.

9. In the 'Discussion' section the authors state that 'we identified ..., and differences between Korea and other countries'. In what follows, the authors repeatedly compare their results with a 2003 study from Scottish hospitals by Flin et al. Is there any other international ORMAQ survey that they could compare to in the same way?

Answer> There are other international ORMAQ surveys but the majority are the results for some of the nine theme. We compared the available theme or items (e.g. stress and fatigue). Whereas we did not compare directly or mention the result of other survey if comparison is considered impossible because of different composition of the items for that theme.

Response to the comments of Rona Patey

1. Page 4 - abstract - outcome measures section is repeated

Answer> We corrected it as you pointed out.

2. Page 4 - in results the authors detail there were discrepancies among professional groups - does this mean within a profession or between the two professions surveyed. If the latter is the case then 'discrepancies between professional groups' would be most correct.

Answer> We corrected it as you pointed out.

3. page 5: third bullet point - I would suggest should read - this study suggests that there is a rigid culture which does not encourage the open discussion and feedback on differing opinions etc

Answer> We corrected it as you pointed out.

4. page 5: final bullet point - last part of this sentence should read 'further survey needs to extend to different etc

Answer> We corrected it as you pointed out.

5. page 6, line 43: are these postgraduate specialty training programme for medics or training programmes for patient safety? do they include nursing

Answer> We corrected it to 'training programmes on patient safety for physicians and nurses'.

6. page 10, line 6 - should read nurses or nursing staff rather than 'nurse'

Answer> We corrected it as you pointed out.

7. page 12, line 26: this sentence should probably start 'it is true that'

Answer> We corrected it as you pointed out.

8. page 12, line 35/36: would it be helpful for the authors to state that the Flin paper was based in UK (ie another country with its own healthcare culture)

Answer> We corrected it as you pointed out.

9. page 12, line 43 - does this refer to medical or medical and nursing?

Answer> This refers to medical and nursing and we corrected it.

10. page 14: I am not convinced that the section on organisational climate are really about the pride in an organisation but rather the shared attitudes, beliefs and values held across an organisation - this section needs rewording

Answer> We corrected it as you pointed out.

11. Page 17, line 17 - the authors state that universal measurement tools are required - does this mean additional tools which can be used in all healthcare settings across the world - or is the point that tools to measure attitudes and culture with respect to safety should be administered across all settings - not currently clear

Answer> This means that tools which can be used in all healthcare settings across the world and we corrected it.

12. page 18, line 19 - authors state a lack of any perception - I think that the results suggest limited or very limited perception rather than complete lack

Answer> We corrected it as you pointed out.

13. page 18, line 37/38 - should 'form of formal course' read 'form of a formal training programme' or 'included to the core curriculum'?

Answer> It means that training programme should be included to the core curriculum and we corrected it.

14. Table one does not detail what the numbers refer to

Answer> We some changed Table 1 headings and form.