OPEN PEER REVIEW

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Peer Review

International Journal of Infection
Article DOI: https://doi.org/10.5812/iji-123759
Published in: International Journal of Infection: 9(3) ; e123759

Peer Review Report for "Assessment of Circulating Nurses' Aseptic Practices in Orthopedic and General Surgeries of Public Hospitals in Shiraz, Iran"

Author(s): Hamed Parnikh, Reza Kalantari, samaneh dehghan abnavi, Mehdi Hasanshahi, somayeh Gheysari

Review Timeline:

Submit Date:	5 Mar 2022
Revised Date:	30 May 2022
Accepted Date:	18 Jun 2022

Revision (0)

Here, you can see the **Reviewers**, **Associate Editors** and **EICs'** comments from the beginning to the end of the revision process.

REFEREE : Reviewer

16 Apr 2022

Dear AE
This manuscript is of relevance in the area of infectious disease epidemiology. However, there are some areas that need to be modified to improve the relevance of the manuscript.

1. Title: I would recommend including the geographical setting in the title, as it is not clear what the study area is.
2. Abstract: Similarly, I would recommend including the time period and geographical setting in the methods section of the abstract.

3. English needs some editing. For instance, line 51: “circulating nurses (12), which is one step forward to address the aseptic technique better.” And Line 77: “This tool evaluates the agreement of circulating nurses regarding different aseptic practices.” It is suggested to do a grammar and spelling check on the manuscript.
4. Methods section: What is the logic behind choosing only general surgery and orthopedics wards?
5. Data collection has been conducted througha self-administered questionnaire. What measures have been taken to reduce reporting bias in data collection?
6. Please present data for the independent T test and the one-way ANOVA test in a separate Table.
7. Discussion: Line 140: Please consider reporting bias when dealing with self-reported performance data.

In general, this is a well-written manuscript, but it needs some modifications to make it suitable for publication in this journal.
BEST REGARDS

REFEREE : Reviewer 3 May 2022

Dear AE
The following comments are recommended.
1-It is better that the references are up to date. 10 items are below 2010.
2-Despite the operating room field, are nurses still used in the operating room?
3-Is this done by operating room nurses or by surgical and orthopedic nurses?
4-Modify the word orthopaedic to orthopedic in the text
Best regards.

REFEREE : Reviewer 19 May 2022

Dear AE

The present manuscript aimed to assess the aseptic practice in orthopedic and general surgeries. It has been well-written. There are some ambiguities which come as follows:

1. Methods. “The census sampling method” is better expressed as “the census method”.
2. Methods. Clearly define the sampling method.
3. Methods. What kind of hospitals were selected? (private or educational). Please explain.
4. Methods. Please explain the number of items for each sub-scale, separately. And also explain the range of scores for the questionnaire and its sub-scales.
5. Methods. Cronbach’s alpha was “estimated” or “computed,” not “measured”. Please revise it.

6. Methods. Please report ICC instead of the Pearson correlation coefficient for reliability.
7. Results. Please add an extra column to tables 2 and 3 to report the related proportion (%) of the total score in each sub-scale and item. It could make a better understanding and insight into the findings.
8. Results and Methods. Please explain in more detail about scoring the responses in the section methods. As there were 20 items with the 5-point score, it seems the paper has computed the means instead of the sums of the items in total and in each sub-scale. It is not clear.
9. Results. Report the means for significant sub-scales for different genders and educational levels separately. (line 124-130).
10. Results. The paper has employed a t-test for comparing the means of genders. Since the scores are ordinal variables (the total score for each sub-scale was from 1 to 5), it's suggested to use appropriate nonparametric statistical tests. Also, revise the ANOVA test.
11. Results. As the items are in the ordinal scale, please report the median in another column added to tables 2 and 3, too.
12. Discussion. The paper has mentioned (line 135) that "The circulating nurses' aseptic practice scores were at a high level in all three subscales". The question is how the author categorizes the responses in high? I did not see any categorization in the section methods or other sections! Please explain or add.
13. Discussion. Please revise the English writing of the sentence (line 134): The circulating nurses' aseptic practice scores were at a high level in all three subscales. However, in some behaviors, they had lower scores than average.

Good luck

REFEREE : Associate Editor

22 May 2022

Dear EIC
Please ask the author to revise the following comments.
Reviewer 1:
The present manuscript aimed to assess the aseptic practice in orthopedic and general surgeries. It has been well-written. Some ambiguities come as follows:
1. Methods. "The census sampling method" is better expressed as "the census method".
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Reviewer 2:
1-It is better that the references are up to date. 10 items are below 2010.
2-Despite the operating room field, are nurses still used in the operating room?
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4-Modify the word orthopaedic to orthopedic in the text.

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This manuscript is of relevance in the area of infectious disease epidemiology. However, there are some areas that need to be modified to improve the relevance of the manuscript.
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3. English needs some editing. For instance, line 51: "circulating nurses (12), which is one step forward to address the aseptic technique better." And Line 77: "This tool evaluates the agreement of circulating nurses regarding different aseptic practices." It is suggested to do a grammar and spelling check on the manuscript.
4. Methods section: What is the logic behind choosing only general surgery and orthopedics wards?
5. Data collection has been conducted through a self-administered questionnaire. What measures have been taken to reduce reporting bias in data collection?
6. Please present data for the independent T test and the one-way ANOVA test in a separate Table.

7. Discussion: Line 140: Please consider reporting bias when dealing with self-reported performance data.
In general, this is a well-written manuscript, but it needs some modifications to make it suitable for publication in this journal.
Best regards.

Hamidreza Kouhpayeh : EIC

22 May 2022

Dear Author
Please consider all comments on your manuscript.
Reviewer 1:
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2. Methods. Clearly define the sampling method.
3. Methods. What kind of hospitals were selected? (private or educational). Please explain.
4. Methods. Please explain the number of items for each sub-scale, separately. And also explain the range of scores for the questionnaire and its sub-scales.
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6. Methods. Please report ICC instead of the Pearson correlation coefficient for reliability.
7. Results. Please add an extra column to tables 2 and 3 to report the related proportion (%) of the total score in each sub-scale and item. It could make a better understanding and insight into the findings.
8. Results and Methods. Please explain in more detail about scoring the responses in the section methods. As there were 20 items with the 5-point score, it seems the paper has computed the means instead of the sums of the items in total and in each sub-scale. It is not clear.
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11. Results. As the items are in the ordinal scale, please report the median in another column added to tables 2 and 3, too.
12. Discussion. The paper has mentioned (line 135) that “The circulating nurses’ aseptic practice scores were at a high level in all three subscales”. The question is how the author categorizes the responses in high? I did not see any categorization in the section methods or other sections! Please explain or add.
13. Discussion. Please revise the English writing of the sentence (line 134): The circulating nurses’ aseptic practice scores were at a high level in all three subscales.

However, in some behaviors, they had lower scores than average.

Reviewer 2:
1-It is better that the references are up to date. 10 items are below 2010.
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In general, this is a well-written manuscript, but it needs some modifications to make it suitable for publication in this journal.
Best regards.
EIC

OPEN PEER REVIEW

Revision (1)

Reply to Reviewers

Ideally, the reviewing process can significantly improve the submitted manuscripts by allowing the authors to take into account the advice of reviewers. Author(s) must reply to all reviewers' comments in a separate Word file, point by point. A "**Reply to Reviewers**" document is submitted along with revised manuscript during submission of revised files, summarizing the changes that the authors made in response to the reviewers' comments. The responses to reviewers' comments specifies how the authors addressed each comment the reviewers made.

You can read the authors' responses to the reviewers' comments in the next page.

Answer sheet

Dear editor in chief

Thank you for giving us the opportunity for revising the manuscript. We also would like to thank the reviewers for their nice and useful comments which help us improving the quality of presentation our work. We considered each comment carefully and addressed all them. Here below we provide a comment by comment response to the reviewers' comments. The changes has been made are written with colored font. We hope we could publish in your high-quality journal.

Reviewer 1:

1. Methods. "The census sampling method" is better to convert to "the census method".

Response: We revised the phrase based on your opinion. (Line 74)

2. Methods. Clearly define the sampling method. (Lines 69-74)

Response: At the first step, we randomly selected two operating rooms (random sampling method) with the aim of making the results comparable. Four (out of nine) hospitals had the two selected operating rooms. We used the census method in order to study all the circulating nurses who worked in the hospitals.

3. Methods. What kind of hospitals were selected? (private or educational). Please explain.

Response: The hospitals were educational (public). (Lines 70-71)

4. Methods. Please explain the number of items for each sub-scale, separately. And also explain the range of scores for the questionnaire and its sub-scales.

Response: We provided a brief explanation regards number of items for each sub-scale, and their scores. (Lines 82-89)

5. Methods. Cronbach's alpha was "estimated" or "computed" not "measured". Please revise it.

Response: We changed "measured" to "computed". Thank you. (Line 99)

6. Methods. Please report ICC instead of Pearson correlation coefficient for reliability.

Response: We reported ICC instead of Pearson correlation coefficient. (Line 101)

7. Results. Please add an extra column to tables 2 and 3 to report the related proportion (%) of the total score in each sub-scale and item. It could make a better understanding and insight of the findings.

Response: We added a column to both tables (2 and 3) based on your comment. (Tables 2&3)

8. Results and Methods. Please explain in more detail about scoring the responses in section methods. As there were 20 items with the 5-rate score, it seems the paper has computed the means instead of sums of the items in total and in each sub-scale. It is not clear.

Response: Based on the main article in which the tool has been published, we used the mean scores for each item and subscale. We added a sentence to the methods section. (Lines 86-89)

9. Results. Report the means for significant sub-scales for different genders and educational levels separately. (line 124-130).

Response: We added two tables (5 & 4)to address this comment. (Tables 4&5)

10. Results. The paper has employed a t-test for comparing the means of genders. Since the scores are ordinal variables (the total score for each sub-scale was from 1 to 5), it's suggested to use appropriate nonparametric statistical tests. Also, revise the ANOVA test.

Response: We revised the methods of using the tests. We employed Mann-Whitney and Friedman tests. (Lines 114-116, 133-136, 138-140)

11. Results. As the items are in the ordinal scale, please report the median in another added column in tables 2 and 3 too.

Response: We added another column to the tables 2 and 3 reporting median and IQR. (Tables 2&3)

12. Discussion. The paper has mentioned (line 135) that "The circulating nurses' aseptic practice scores were at a high level in all of the three subscales". The question is that how did the author categorize the responses in high? I did not see any categorization in section methods or other sections! Please explain or add.

Response: You are completely right. We mistakenly wrote the sentence. We mean higher than average score (3). We revised it in four occasions within the manuscript. (Abstract and discussion sections).

13. Discussion. Please revise the English writing of the sentence (line 134): The circulating nurses' aseptic practice scores were at a high level in all of the three subscales. However, in some behaviors, they had lower scores than average.

Response: We sent the manuscript to an English edit service center. The mentioned sentence was corrected. Thank you for your nice and useful comments.

Reviewer 2:

1. It is better that the references are up to date. 10 items are below 2010.

Response: We added several newer references instead of some the older ones (6 references). Furthermore, we benefit from other new references (2 references).

2. Despite the operating room field, are nurses still used in the operating room?

Response: The answer is yes. The nurses also work in the operating rooms, especially who have participated in courses related to the operating room nursing. We provided brief discussion in methods section (Lines 71-72).

3. Is this done on operating room nurses or on surgical and orthopedic nurses?

Response: This study has been conducted on operating room nurses. In Iran, surgical technologists work as operating room nurses. The operating room (surgical) technologists work as scrub nurse and circulating nurses. This study has been conducted on circulating nurses. (Lines 71-72).

4. Modify the word orthopaedic to orthopedic in the text.

Response: We changed the word orthopaedic to orthopaedic in the text (five words). Thank you for your nice comments.

Reviewer 3:

This manuscript is of relevance in the area of the infectious disease epidemiology. However, there are some areas that need to be modified to improve the relevance of the manuscript.

1. Title: I would recommend including the geographical setting in the title as it is not clear what the study area was.

Response: We added the geographical setting to the title. The study has been conducted in the public hospitals of Shiraz.

2. Abstract: Similarly, I would recommend including the time period and geographical setting in the methods section of the abstract.

Response: We added the time period and geographical setting in the methods section of the abstract. This work has been conducted during 2020 summer. (Line 8-9)

3. English needs some editing. For instance line 51: “circulating nurses (12), which is one step forward to address the aseptic technique better.” And Line 77:“This tool evaluates the agreement of circulating nurses regards different aseptic practices.” It is suggested to do a grammar and spelling checking on the manuscript.

Response: We sent the revised version of the manuscript to an English edit service center and we did a grammar and spelling checking on the manuscript. The changes we noted the changes with the red-colored Font within the text.

4. Methods section: What is the logic behind choosing only general surgery and orthopedics wards?

Response: This study is a part of an inclusive project. The selection of the studied wards was randomely. Fortunately, the work precedure in general and orthopedic surgeries are almost similar. We prefered to assess limited type of surgery because the validation and use of the used tool for other special surgery parts might be different. For example, for robotic surgery the precedure of work

is compeletely different. We added to the limitation section that the results are genarizable to the two studied wards. (Lines 69-74)

5. Data collection has been conducted through self-administered questionnaire. What measures have been taken to reduce reporting bias in data collection?

Response: Reporting bias takes place when only a selection of results or outcomes are captured in a data set. In this study, we used the census sampling method. In this way, we tried to both prevent reporting bias and have an exclusive measures in two types of surgery. We ensred that everyone is answering the questionnares in the same way and we avoided prompting the respondents to answer. The results are representative of the situation we are trying to investigate. Insted, we added the genarizability to the other surgeries in the limitations. Furthermore, we add some explanations to the methods section in this regard. (Line 74, 109-111)

6. Please present data for independent T test and the one-way ANOVA test in a separate Table.

Response: We added the required information within a seperate table. Regarding the comments of reviewer 1, We rused Friedman and mann-whitney tests. (Table 4&5).

7. Discussion: Line 140: Please consider reporting bias when dealing with self-reported performance data.

Response: We added the explanation to the methods section and limitation section (comment five). (Lines 205-109-111)

8. In general, this is a well-written manuscript but needs some modifications to make it suitable to be considered for publication in this journal.

Response: Thank you very much for your useful comments. We do our best to modify the manuscript and publish in your high-quality journal.

OPEN PEER REVIEW

Revision (1)

REFEREE : Reviewer — 4 Jun 2022

Dear AE
It was good.
Good luck

REFEREE : Reviewer — 8 Jun 2022

Dear AE
This revised manuscript shows great improvements, and it is suitable for publication.
KIND REGARDS

REFEREE : Reviewer — 18 Jun 2022

Dear AE
The authors have revised the manuscript based on comments. The English writing needs to be checked grammatically with more precision. I suggest it for publication.

BEST REGARDS

REFEREE : Associate Editor — 18 Jun 2022

Dear EIC
Based on the editorial and reviewers' opinions, this manuscript is acceptable for publication in this journal.

Best regards.

Hamidreza Kouhpayeh : EIC — 18 Jun 2022

Dear Author
Congratulations
Hereby, we announce that your manuscript has been accepted for publication in the International Journal of Infection. The manuscript would be available online in future issues.
Wish you all the best
EIC