Author’s response to reviews

Title: Emergency Nurses’ Knowledge, Attitude and Perceived Barriers Regarding Pain Management in Resource Limited Settings: Cross Sectional Study

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Author’s response to reviews:
Response to the reviewers´ Comments

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BMC Nursing

First and foremost, we would like to use this opportunity to thank the editors for giving us a chance to submit the revised draft of our manuscript. We heartily appreciate your time and efforts to providing your constructive feedback and information to make our manuscript more valuable. We would also like to express our deepest appreciation to the reviewers for their careful reading of the manuscript and their thoughtful comments and productive suggestions. We fully trust that the comments and suggestions given by the reviewers will have a significant impact on the quality of the manuscript.
We have included the reviewer comments immediately after this letter and responded to them individually, indicating exactly how we addressed each concern or problem and describing the changes we have made in the text. Most of the revisions suggested by the reviewers’ comments are minor and require no further explanation than what appears in my responses below, but we did want to bring Table 2 and language edition to your attention. In our response, we added one table to clarify how the result scores on knowledge and attitude were converted to a hundred. Therefore, the previous table numbers are changed in the revised manuscript. Furthermore, during the reviewing process, one of the reviewers recommended some language correction of the manuscript. Therefore, to improve the manuscript’s language integrity and clarity it has been reviewed again during the revision period by Dr Pamela Chambers who is a native English speaker.

We hope the revised manuscript will better suit the BMC Nursing but we are happy to consider further revisions, and we thank you for your interest in our research.

Sincerely,

Desale Tewelde Kahsay

Date: 25 August 2019
To: BMC Nursing Editorial Office
From: Desale Tewelde Kahsay
Subject: Submission of a Revised Manuscript

Comment from Ejaz Ahmad Khan (Reviewer 1)
Comment: Please add missing tables in the text.
Response: We are sorry to say it but, we are not quite sure which missing tables the reviewer is asking about. But if it is about Tables 2 (now 3 ) and 5 (now table 6) we placed them at the end of the document text file rather than in the appropriate location within the text to respect the journal guideline which says:¨¨Tables larger than one A4 or Letter page in length can be placed at the end of the document text file. Please cite and indicate where the table should appear at the relevant location in the text file so that the table can be added in the correct place during production¨¨.

Comment: You need to give details of your sample size estimation.

Response: Even though we tried to explain the sample size of the study, we agree with the reviewer that it needs more clarification. Therefore, this issue is modified in the text as follows ( methodology sections, page 6, lines 23-38).

Change in the text: The population of the current study was all nurses (150) working in the seven emergency departments of the national and regional referral hospital of Eritrea. Due to the small population size, all nurses working in the emergency departments who fulfilled the inclusion criteria were conveniently targeted to be studied. Therefore, from the 150 distributed questionnaires, 130 were returned from which four were incomplete and were discarded to avoid participants with missed data. Therefore, at the end 126 (84%) questionnaires were found to be correctly filled and were entered for analysis. Therefore, no sample size calculation was needed.

Comment from Siti Khuzaimah Ahmad Sharoni (Reviewer 2)

I. Abstract

Comment: Please refine the intro, and about the "resource-limited setting".

Response: The introduction in the abstract is refined as follows (Abstract, page 2, lines 2-14). We wish to add more information in the introduction of the abstract, but the word limit of 350 doesn´t allow us to do it so.

Change in the text: Pain is a common phenomenon among emergency patients which may lead to chronic pain conditions and alteration of physiological function. However, it is widely reported that proper pain assessment and management, which is often accomplished by adequately trained nurses can reduce the suffering of patients.

Comment: Methods; seven hospitals in Finland?
Response: Unfortunately, the reviewer misunderstood the country where the data was collected. It has been mentioned that the data were collected from Eritrean hospitals. But we apologize that we did not mention it right from the beginning. It might be the reason why the review asked us to refine and explain the resources limited setting as it is a logic that Finland is not expected to have resource-limited referral hospitals.

Comment: Which department? When was the data collection?

Response: The department, month and year of data collection is added in the abstract section as follows (page 2, lines 23& 25 respectively).

Change in the text: Emergency Departments, in August and September 2017

Comment: Results; "Nurses with bachelor's degree scored significantly higher than the nurses at the diploma and certificate (95% CI = 7.1-16.7 and 9.4-19.1; p <0.001) respectively." - knowledge/ attitude/ Perceived Barriers?

Response: Corrected as follows (Abstract, page 2, line 38):

Change in the text: knowledge and attitude

Comment: "The highest perceived barriers to adequate pain management in emergency departments were overcrowding of emergency department, lack of protocols for pain assessment, nursing workload, and lack of pain assessment tools" -

Please write the value/ score for each variable.

Response: The Values are written as follows (abstract, page2, lines 50-55):

Change in the text: Overcrowding of emergency department (2.57±1.25), lack of protocols for pain assessment (2.45±1.52), nursing workload (2.44 ±1.29), and lack of pain assessment tools (2.43±1.43).

Comment: The conclusion should reflect to the results (implications).

Response: Conclusion in the abstract is modified as follows (page 3, lines 5-12)

Change in the text: The emergency nurses’ knowledge and attitude regarding pain management were poor. Nurses with higher educational level and nurses with previous training scored significantly higher knowledge level. This implies the need for nursing schools and the ministry of health to work together to educate nurses more about pain assessment and management. The most significant barriers for pain management were system related; therefore, policymakers of the ministry of health should take initiation to address the findings of this study.
II. Introduction

Comment: Please write some info regarding nurses' role of pain management in their country particularly in the emergency department, their local scenario (in Finland)

Response: We would like again to correct the misunderstanding of the country where the study was conducted. Data was collected from Eritrean hospitals, not from Finland hospitals. and there was no study done regarding emergency nurses’ role in pain management in Eritrea. However, from the experience of the principal investigator, we have included some facts regarding the role of Eritrean nurses regarding pain management as follows (Background, page 5, lines 6-38).

Change in the text: In Eritrea, nurses have a huge responsibility in caring for emergency patients. As physicians are not always available, nurses are the first health care professionals to face the challenge of patients pain in the ED. Therefore, in most cases, Eritrean emergency nurses initiate the management of pain even without a written order from a physician. In fact, unlike in many other countries, in most of the Eritrean hospitals, nurses who have achieved a bachelor’s degree and above are entitled to prescribe analgesic drugs including opioids. Despite this fact, no study has been found that has evaluated the Eritrean emergency nurses’ knowledge and attitude regarding pain management. Moreover, in resource-limited settings, nurses are encountered with enormous challenges to keep their knowledge updated and only a few highly motivated and resolute individuals manage to achieve new knowledge [1]. Furthermore, Eritrean nurses’ engagement in continuous learning activities such as attending continuing education programs regarding pain assessment and management is limited because such continuous training is seldom available.

III. Methodology -

Comment: Please provide sample size calculation

Response: This request is addressed above as it was also asked by the first reviewer

Comment: Please explain the reasons, why the hospitals/ the emergency departments were chosen, explain about "resource-limited setting"

Response: This issue is explained in the methodology section as follows (methodology section, page 6, lines 10-20)

Change in the text: As these referral hospitals were serving patients referred from all health care services of the country, nurses working in these hospitals were expected to provide care for patients with intense pain. Therefore, with the limited resources and time the researchers had they target nurses working in the emergency departments of these referral hospitals in order to provide baseline evidence for further study.
Comment: What was the sampling technique used?
Response: The sampling technique used is added in the methods section, page 5, line 58.
Change in the text: A convenience sampling technique was used to recruit participants.

Comment: When the date (month/year) of data collection?
Response: Month/year of data collection is added in the methodology section, page 7, line 16-18.
Change in the text: Data were collected in August and September 2017.

Comment: Inclusion criteria - please explain further (e.g., did all nurses involved? How about the nurse manager? / nurses who not doing any clinical work).
Response: This is modified in the text as follows (Methods section, page 6, line 47-52)
Change in the text: All nurses who were actively working during the data collection period and who agreed to participate were included in the study. However, nurses who were not doing clinical work and those who were not present during the data collection period due to any reason were excluded from the study.

Comment: Ethical consideration and Procedure – okay
Response: No response needed.

Comment: NKASRP tool - Please explain about the scale (e.g., Multiple Choice, Likert Scale)
Response: This issue is addressed the methods section, page 7 and lines 56-58 as follows.
Change in the text: In the current study, the NKASRP tool consisted of twenty-one true-false questions, ten multiple-choice questions and two case discussions of which each had two questions under it.

Comment: The scoring of mean (SD) value (in the result)
Response: The following is added in the text (methods section, page 9 and lines 5-10). A table which explains how the results were converted from 35 to 100 is also added in the text (Result section, page 13, lines 1-9,).
Change in the text: To compare the result with the acceptable passing mark of 80%, the sum score for each participant was computed to 100 using SPSS version 20 as ‘’sum score x 100 divided by 35’’.
Comment: Data analysis - any normality test done for the continuous data/ variables prior of data analysis?

Response: No normality test was employed assuming the sample size is large enough to use parametric test safely even if the data are not normally distributed. ‘The central limit theorem in statistics states that, given sufficiently large sample size, the sampling distribution of the mean for a variable will approximate a normal distribution regardless of that variable’s distribution in the population is’[2].

VI. Results

Comment: Table 2 - Items of knowledge (alone) or a combination of knowledge and attitude

Response: Corrected as showing below (page 32, now table 3, line 4).

Change in the text: knowledge and attitude

Comment: Table 3 - Level of knowledge (alone) or a combination of knowledge and attitude

Response: Corrected as showing below (page 15, now table 4, line 1)

Change in the text: knowledge and attitude

Comment: "Similarly, an independent t-test showed a significantly higher mean score of nurses who had previous training regarding pain management compared to those who had no previous training (95% CI = 1.82-8.99; p = 0.003)." - Please reconfirm the result (Table 3)

Response: The result is reconfirmed. Thank you so much for detecting this error. Values that are not converted to 100 were reported by mistake (Result section page 14. Now table 4, lines 37 and 38)

Comment: "Pearson's correlation analysis revealed that emergency nurses' perceived barriers are significantly and positively correlated with their knowledge level (r = 0.257, p = 0.004)." - please provide the knowledge level (mean and SD) in the descriptive results.

Response: The knowledge level (mean and SD from hundred) has been provided in the first sentence of the result. But more description including a table has been added during the revision period to show how the result was converted to 100 (Result section, page 12, lines 49-59 ; page 13, lines 1-9 ).
Change in the text: To calculate the mean score, correctly answered items were given a score of one while incorrectly responded questions were scored as zero. The total score was the sum of all correctly responded questions. In the end, to compare the result with the acceptable passing mark of 80%, the sum score for each participant was computed to 100 using SPSS version 20 ‘sum score x 100 divided by 35’ . The means and standard deviations for the total scores and percentage with the minimum and maximum score are displayed in Table 2.

V. Discussion

Comment: "nurses who reportedly had previous training regarding pain scored significantly higher knowledge level than those without previous training."

Response: The result is Reconfirmed. Thank you so much for detecting this error. This shows how meticulous you were when you read the manuscript. Values that are not converted to 100 were reported by mistake.

Comment: "This severe deficit in knowledge and attitude of Eritrean nurses might have arisen from the lack of attention given to pain assessment and management courses in the nursing schools." - should have more comparison with other previous studies so that we know how the respondents in this study performed

Response: This request is addressed in the text by searching and adding more studies to compare with our finding (Discussion section, page 18, lines 32-59 and page 19, lines 1-2).

Change in the text: Previous studies that assessed the knowledge and attitude of the undergraduate nursing student on pain management reported a very low level of knowledge and attitude in all aspects of pain management [3-5]. The findings here suggested that pain-related content of the curricula had not been enough to prepare these undergraduate nursing students to practice efficiently. Nurses who had frequent contact with patients had a higher level of knowledge and attitude regarding pain management [3]. Similarly, Aagaard et al suggested that a curriculum with specific pain component that includes a particular model of clinical reasoning might have an influence on the development of positive attitude and belief of health care professionals towards pain [6]. Despite its worldwide high prevalence and its burden to the public, pain education has been given less priority including in medical schools. For example, a study conducted in Europe reported that only 30 % of the medical schools from the representative countries had dedicated pain model in their curricula and it was compulsory only in 18% of them [7].

Comment: "The result showed that nurses with higher knowledge level regarding pain management were more barriers cautious than those who scored lower knowledge level." - please discuss further this, also the r value was 0.257 (small association).
Response: The first issue is addressed in the text by adding more discussion as it is shown below (Discussion section, page 24, Lines 57-59 and page 25, lines 1-19).

Change in the text: In general, participants in this study had a wrong perception of their knowledge level regarding pain management. Even though they scored a very low level of knowledge and attitude, only 14% and 20% of the nurses perceived lack of knowledge regarding pain management and familiarity with pain assessment tools as a routine barrier for proper pain management respectively. However, despite their higher knowledge level regarding pain management, nurses with bachelor’s degree seemed to have a better understanding of their knowledge deficit than the nurses with lower qualifications. For instance, only 18.5% of nurses with a bachelor’s degree denied lack of knowledge as a barrier to pain management while 30% and 26.5% of the diploma and certificate holders believe that lack of knowledge has never been a barrier to pain management.

The second issue (also the r value was 0.257-small association). We agree with the reviewer that the r value is small, but we still believe there is a significant association. A p-value 0.004 means that the correlation coeffi