

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)	Knowledge and practice of nurses with respect to perioperative hypothermia prevention in the Northwest Amhara Regional State Referral Hospitals, Ethiopia: a cross-sectional study
AUTHORS	Woretaw, Ashenafi; Yimer Mekkonen, Bezenaw; Tsegaye, Netsanet; Dellie, Endalkachew

VERSION 1 – REVIEW

REVIEWER	Soysal, Ganime Esra Bolu Abant İzzet Baysal University, Nursing
REVIEW RETURNED	30-Nov-2022

GENERAL COMMENTS	<p>It is a study that will contribute to the literature.</p> <p>I didn't know if it was necessary to give the hospital locations. It would be more meaningful to give the hospital capacity, the number of surgical procedures and the policies for hypothermia. If there are heating methods they use, they can be written.</p> <p>The introduction should be rearranged and current sources should be used. 72 – there is a typo 75- abbreviations expansion should be written in the first place 197 line : Eligibility criteria empty</p>
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REVIEWER	Kameda, Norihiro St Luke's International University, Graduate School of Nursing Science
REVIEW RETURNED	29-Mar-2023

GENERAL COMMENTS	<p>Thanks for inviting me for the review of the manuscript entitled "Nurses' Knowledge, Practice, and their Associated Factors regarding Perioperative Hypothermia Prevention at Northwest Amhara Regional State Referral Hospitals, Northwest Ethiopia" It was a well-written manuscript, with an important, simple issue that is often faced by nurses. This is my suggestion for improving</p> <ol style="list-style-type: none">1. Lines 71-72: Does the author want to discuss "perioperative hypothermia"? Or do you want to discuss "intraoperative hypothermia"?2. Lines 75-76: It should be mentioned that the study did not use active warming devices. This cited study has a significant bias regarding temperature management methods.
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	<p>3. Lines 92-95: The reference is outdated and should be reconsidered for correctness as a recent outcome for temperature management.</p> <p>4. Lines 107-109: The purpose of the research is clear and understandable. How will the results of this study be used to improve perioperative temperature management for nurses?</p> <p>5. Lines 209-210: Why did you set the median or above as having good knowledge?</p> <p>6. Lines 229-231: This research targets nurses working in numerous departments such as operation rooms, surgical wards, and ICUs. There are some questions about knowledge and practice that have nothing to do with their affiliation, how did they answer them? (especially about practices)</p> <p>7. Lines 380-385: Are there any differences in systems such as nursing education and nursing licenses in these countries?</p> <p>8. Line 426-428: What are your thoughts on OR nurses? The most important point in perioperative temperature management is immediately after induction of anesthesia.</p> <p>9. Line 453-456: Is this research only available for Ethiopia? Or is it possible to generalize it globally?</p>
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VERSION 1 – AUTHOR RESPONSE

Reviewer: 1

Dr. Ganime Esra Soysal, Bolu Abant İzzet Baysal University

Comments to the Author:

*It is a study that will contribute to the literature.

Response

Thank you Doctor for your constructive suggestion, and we hope so this study contributes for researchers, policy makers, hospital administrators, nurses, and for patients too.

*I didn't know if it was necessary to give the hospital locations. It would be more meaningful to give the hospital capacity, the number of surgical procedures and the policies for hypothermia. If there are heating methods they use, they can be written.

Response

Thank you again Dr. for your comments. We accepted and tried to modify the comments as much as possible. But we assumed that some points were showed in result section like availability of guidelines and preventive materials. In addition to what and how much they have the materials, we also assessed how much they practically used/applied these materials.

*The introduction should be rearranged and current sources should be used.

Response

We accepted and tried to revise our introduction part. We know that we used some outdated/old literatures. The reason why we used these literatures is due to having inadequate or shortage of literatures specific to our study.

*72 – there is a typo

Response

Accepted and corrected it.

*75- abbreviations expansion should be written in the first place

Response

Accepted and corrected as University of Gondar Comprehensive Specialized Referral Hospital (UoGCSRH)

*197 line : Eligibility criteria empty

Response

Accepted and we have put eligible criteria under Inclusion and exclusion criteria sub heading.

Reviewer: 2

Dr. Norihiro Kameda, St Luke's International University

Comments to the Author:

Thanks for inviting me for the review of the manuscript entitled "Nurses' Knowledge, Practice, and their Associated Factors regarding Perioperative Hypothermia Prevention at Northwest Amhara Regional State Referral Hospitals, Northwest Ethiopia"

It was a well-written manuscript, with an important, simple issue that is often faced by nurses. This is my suggestion for improving

Thank you Doctor for your suggestions, comments as well questions in general

1. Lines 71-72: Does the author want to discuss "perioperative hypothermia"? Or do you want to discuss "intraoperative hypothermia"?

Response

Thank you very much again doctor for your constructive comments.

We accepted and revised it. Really most of the literatures that we used were describe the magnitude of intraoperative hypothermia only. So, we amended it to the perspective of raised comments because intraoperative hypothermia might over/underestimation of the finding perioperative hypothermia.

2. Lines 75-76: It should be mentioned that the study did not use active warming devices. This cited study has a significant bias regarding temperature management methods.

Response

The main intentions of the previous two studies were to determine the magnitude and its determinant factors of perioperative hypothermia, not assessing/determining the nurses Knowledge and practice level. Regarding to the two literatures, our intention also to show the magnitude of hypothermia among perioperative patients but not to show how much they were used or effectiveness of the preventive warming materials. Of course if the health care provider (nurses) does not used appropriate warming devices to surgical patients, the occurrence of hypothermia will be high. This is supported by the study conducted in Tikur Anbessa, Ethiopia, showed the magnitude of hypothermia in patients who were given more than 2 liters of cold crystalloids was higher than those who received less than 2 liters of cold crystalloids. Whatever it is, different literatures revealed that hypothermia was very common on surgical patients and they needed special attention. That is why we intended to study nurses' knowledge and practice on perioperative hypothermia prevention.

3. Lines 92-95: The reference is outdated and should be reconsidered for correctness as a recent outcome for temperature management.

Response

Actually we know, we used some old and outdated reference because of lack/shortage of recent source. But the comment is really appropriate and accepted, and we try to maximum efforts to update it as much as possible.

4. Lines 107-109: The purpose of the research is clear and understandable. How will the results of this study be used to improve perioperative temperature management for nurses?

Response

Thank you for your constructive questions of course we recommend the nurses and other responsible body to improve perioperative temperature management based on our finding. For a nurse we have recommended

- Better to attend perioperative hypothermia workshops or in-service training and
- Better to read updated evidence related to hypothermia in order to enhance their knowledge and practices.

5. Lines 209-210: Why did you set the median or above as having good knowledge?

Response

We know that if we have standard cutoff points, it will be very nice. But, there is no cutoff point to say good or poor. Because of absence of cutoff point, we have to go other option that is mean/median depending on the nature of data. When we checked the data by graphically (histogram) as well as statistically (Shapiro Wilk test) the data was skewed/not normal distributed. That is why we used median, the cutoff point scores equal to or above the median said "good" and below the median "poor" as evidenced by previous literature. Some of the evidence/previous literature that used such operationalize definition were listed below;

"Level of Knowledge and Associated Factors of Postnatal Mothers' towards Essential Newborn Care practice at Governmental Health Centers in Addis Ababa, Ethiopia, 2018"

"Knowledge and Attitude Towards Non-Pharmacological Pain Management and Associated Factors Among Nurses Working in Benishangul Gumuz Regional State Hospitals in Western Ethiopia, 2018",

"Compliance with standard precautions and associated factors among undergraduate nursing students at governmental universities of Amhara region, Northwest Ethiopia, 2021"

"Knowledge, Practice, and Associated Factors of Preoperative Patient Teaching Among Surgical Unit Nurses, at Northwest Amhara Comprehensive Specialized Referral Hospitals, a Mixed Method Study, Northwest Ethiopia, 2022"

6. Lines 229-231: This research targets nurses working in numerous departments such as operation rooms, surgical wards, and ICUs. There are some questions about knowledge and practice that have nothing to do with their affiliation, how did they answer them? (especially about practices)

Response

In addition to every phase of perioperative questions, there were also a general knowledge questions so the nurse has expected to have knowledge regarding hypothermia prevention among surgical patients wherever they do in a specific area. But in practice all questions were prepared or asked on his or her working units in according to the recommended guidelines. For example, a nurse working in operation rooms fulfill how much they were practice hypothermia prevention in intraoperative patient in operation rooms not in surgical wards or ICUs. So, all practice questionnaires was prepared based on their specific working areas.

7. Lines 380-385: Are there any differences in systems such as nursing education and nursing licenses in these countries?

Response

Nursing education- is a professional education, which is consciously and n systematically deliberate and implemented through guidance and discipline.

- It aims the harmonious improvement of, intellectual, emotional, spiritual energy of students to give professional nursing care.

Nursing licenses- is formal permission document given by a governmental or other constituted authority to do something, as to carry on some business or profession.

- This certificate/document is given when after the nurse taken the Licensure Examination/competency assessment

8. Line 426-428: What are your thoughts on OR nurses? The most important point in perioperative temperature management is immediately after induction of anesthesia.

Response

Really you are right Doctor. In Most literatures including studies conducted in our country revealed that most patients developed hypothermia during intra operative phase due to induction of anesthesia and other factors. So, OR nurses and also other nurses (surgical and comprehensive nurses) who are working in operative room should emphasis on preventing hypothermia by controlling and managing the overall activities like managing OR temperature, warming IV fluids, applying preventive materials specially nurses who are assigning as circulatory nurse.

It is also important to give more emphasis or strengthen specialty program like OR nurses.

9. Line 453-456: Is this research only available for Ethiopia? Or is it possible to generalize it globally?

Response

I don't think so, the generalization of the finding is basically on its study setting, Ethiopia. While it is important for not only Ethiopia but also in other countries (global level) will serve as an essential input for policymakers to design proper strategies and to give as baseline information about the knowledge and practice of nurses regarding hypothermia prevention.

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COI statements:

Reviewer: 1

Competing interests of Reviewer: [None indicated].

Reviewer: 2

Competing interests of Reviewer: No conflict of interest.

VERSION 2 – REVIEW

REVIEWER	Soysal, Ganime Esra Bolu Abant İzzet Baysal University, Nursing
REVIEW RETURNED	16-May-2023

GENERAL COMMENTS	<p>Perioperative hypothermia is very important and has a huge impact on the healing process. The language needs to be edited. In particular, I made markings on the file he uploaded. Please review these sections. I suggest that the paragraph with the results of the study be transferred to the discussion section and interpreted together with the findings. Why is the corrected part added at the end of the article?</p> <p>(The reviewer provided a marked copy with additional comments. Please contact the publisher for full details.)</p>
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REVIEWER	Kameda, Norihiro St Luke's International University, Graduate School of Nursing Science
REVIEW RETURNED	22-May-2023

GENERAL COMMENTS	<p>1. BMJ is an international journal, not your country's national journal. If you want to talk about the magnitude of hypothermia among perioperative patients, you need to show the data practiced according to international standards. The results of postoperative hypothermia rates above 50% are too high in current practice to be reviewed as current findings. https://doi.org/10.1186/s12871-023-02084-2 https://doi.org/10.1007/s00101-017-0384-3</p> <p>2. L417-419: Nursing practice varies greatly depending on the education received by each countries. Are there any common or unique problems compared to the countries listed here? This is what is needed to generalize this research. For example, it is of great interest for this research to compare whether perioperative management is included in university curricula.</p> <p>3. Your response to my question "Line 453-456: Is this research only available for Ethiopia? Or is it possible to generalize it</p>
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	<p>globally?" was " I don't think so, the generalization of the finding is basically on its study setting, Ethiopia. While it is important for not only Ethiopia but also in other countries (global level) will serve as an essential input for policymakers to design proper strategies and to give as baseline information about the knowledge and practice of nurses regarding hypothermia prevention.". Regarding this, clearly showing the limits and utilization is an important point in determining the value for publishing as an international journal.</p>
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VERSION 2 – AUTHOR RESPONSE

Reviewer: 1 [PLEASE SEE ATTACHED FILE FOR ADDITIONAL COMMENTS FROM REVIEWER 1 IN STICKY NOTES ON THE MANUSCRIPT]

Dr. Ganime Esra Soysal, Bolu Abant İzzet Baysal University

Comments to the Author:

Dear Author;

*Perioperative hypothermia is very important and has a huge impact on the healing process.

Response

Really doctor different literature showed that all patients undergoing surgery are at risk of developing hypothermia reaches up to 70% and this Inadvertent hypothermia is associated with complications such as prolonged recovery, impaired wound healing, increased blood loss, cardiac arrest, impaired immunity, and increased risk of wound infection. Therefore, prevention of hypothermia not only reduces the incidence of complications but patients also experience a greater level of comfort, and avoid postoperative shivering and the unpleasant sensation of feeling cold. That is why it is very important and has a great impact on patients' health conditions.

*The language needs to be edited. In particular, I made markings on the file uploaded.

Response

Thank you very much again Dr. for your unreserved support. We got and edited it.

*Please review these sections. I suggest that the paragraph with the results of the study be transferred to the discussion section and interpreted together with the findings.

Response

Accepted and we revised as much as possible.

Reviewer: 2 Dr. Norihiro Kameda, St Luke's International University

Comments to the Author:

1. BMJ is an international journal, not your country's national journal. If you want to talk about the magnitude of hypothermia among perioperative patients, you need to show the data practiced according to international standards. The results of postoperative hypothermia rates above 50% are too high in current practice to be reviewed as current findings.

Response

Thank you very much again Dr. for your constructive comments.

Accepted and incorporated the listed studies. But, we know that BMJ is not only an international journal but also it is the best (Q1 publisher) among other journals and, we tried to show according to international standards as much as possible. We have reviewed and shown literature (studies conducted in Brazil, Australia, Turkey, Thailand, and Ethiopia) about the magnitude of hypothermia in perioperative patients specifically. Maybe it is not enough because our primary objective was to study nurses' knowledge and practice regarding hypothermia prevention among surgical patients but not the magnitude of hypothermia in perioperative patients. We want to let you know that we can still add more if it becomes necessary to do more reviews.

2. L417-419: Nursing practice varies greatly depending on the education received by each countries. Are there any common or unique problems compared to the countries listed here? This is what is needed to generalize this research. For example, it is of great interest for this research to compare whether perioperative management is included in university curricula.

Response

I think lines 417-419 of our manuscript stated that nurses' knowledge regarding perioperative hypothermia prevention in the current study is much lower than those of studies conducted in Gambia, Turkey, Brazil, America, Ireland, etc. and the possible justification for this difference might be due to staff training, adopted recommended guidelines, socioeconomic status. So it is obvious that if nurses take additional training, use the recommended guidelines, and get access to everything, their knowledge and quality of healthcare will be improved.

If I understood your question, Dr. in general

Although professional nurses learn by a well-developed curriculum, have a scope of practice, and have common goals which are to provide quality care for their patients, nursing education, standards, competencies, and qualifications vary globally.

3. Your response to my question "Line 453- 456: Is this research only available for Ethiopia? Or is it possible to generalize it globally?" was " I don't think so, the generalization of the finding is basically on its study setting, Ethiopia. While it is important for not only Ethiopia but also in other countries (global level) will serve as an essential input for policymakers to design proper strategies and to give as baseline information about the knowledge and practice of nurses regarding hypothermia prevention.". Regarding this, clearly showing the limits and utilization is an important point in determining the value for publishing as an international journal.

Response

Really I strongly apologize for the previous response

The generalization of the finding is basically on its study setting which is Northwest Amhara Regional State Referral Hospitals, Northwest Ethiopia. So this study does not generalize at the global level, even at the national level because this study was not conducted outside the regional hospitals or no sample was taken other than Amhara region referral hospitals.

Thank you very much for your help and consideration.

VERSION 3 – REVIEW

REVIEWER	Kameda, Norihiro St Luke's International University, Graduate School of Nursing Science
REVIEW RETURNED	13-Sep-2023
GENERAL COMMENTS	<p>Thank you again for the opportunity to review this article. There were enough arguments for what I suggested.</p> <p>We were unable to confirm the addition of respect to generalizability beyond the specific study setting to limitations of the study. Please request additions if the editor deems them necessary.</p>

VERSION 3 – AUTHOR RESPONSE

Reviewer: 1

Dr. Norihiro Kameda, St Luke's International University Comments to the Author:

Thank you again for the opportunity to review this article. There were enough arguments for what I suggested.

We were unable to confirm the addition of respect to generalizability beyond the specific study setting to limitations of the study. Please request additions if the editor deems them necessary

Response

Thank you very much again Dr, for your constructive comment and suggestions. As per your recommendations, we have accepted and put in place the limitations of the study.

Reviewer: 2

Competing interests of Reviewer: There are no competing interests.

Thank you very much for your help and consideration.

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