Author’s response to reviews

Title: Patient satisfaction with nursing care in Ethiopia: A systematic review and meta-analysis

Authors:

Henok Mulugeta (mulugetahenok68@gmail.com)
Fasil Wagnew (fasilw.n@gmail.com)
Getenet Dessie (ayalew.d16@gmail.com)
Henok Biresaw (henok22@ymail.com)
Tesfa Habtewold (tesfadej2003@gmail.com)

Version: 1 Date: 12 Mar 2019

Author’s response to reviews:

Souraya Sidani, Ph.D (Reviewer 1):

Overall, the research topic is of interest / relevance to nurse researchers and managers, worldwide. Determining aspects of care with which hospitalized patients are satisfied and factors that contribute to satisfaction is informative and has the potential for guiding quality improvement initiatives. The focus on satisfaction with nursing care in particular countries such as Ethiopia is meaningful, providing data for cross-country comparison and identification of contextual factors that may influence implementation and satisfaction with nursing care. The methods for conducting the systematic review and meta-analysis are appropriate. The reporting is consistent with the PRISMA guidelines.

Answer: Thank you very much, this is very motivating.
The following are points for consideration:

1. The Background section can be streamlined by integrating statements / sentences that repeat the same idea and presenting the ideas in a logical sequence that build a strong argument for the study. For instance, the ideas can flow from the importance of assessing satisfaction, the centrality of satisfaction with nursing care, and the utility of examining satisfaction with different aspects or elements of nursing care and predictors or factors influencing satisfaction. The utility can be related to guiding quality improvement initiatives. It also is helpful to contextualize, in more depth, the study; this could be done by describing in more depth the features in the Ethiopian healthcare system in general and nursing practice in specific.

Answer: Thank you. We tried to revise the background by adding some sentence for better argument in logical manner. We start the background by defining patient satisfaction then the importance of assessing level of satisfaction. Further, we tried to highlight different aspect of nursing care and associated factors. The health care delivery and nursing practice in relation to patient satisfaction in Ethiopian context also described briefly (background section, line 58-104 on the revised manuscript).

2. It would be helpful to have a separate section, or subsection within the Background section, that presents the conceptualization of satisfaction with nursing care. The conceptualization can identify, define, operationalize and specify the relationships among 1) factors that influence satisfaction, 2) aspects or element of satisfaction with nursing care, and 3) consequences or effects of satisfaction on outcomes. It also is important to recognize the different conceptual definitions of satisfaction (e.g. appraisal of care relative to expectations) and realize that these definitions have led to variations in the operationalization and measurement of satisfaction with nursing care. Variability in measurement is a key methodological factor that could have accounted for the heterogeneity of the findings and should have been examined in the meta-analysis. Further, the factors listed in the third paragraph under Background could be categorized into patient and context related factors and those found / known to influence satisfaction with nursing care are emphasized and defined.
Answer: Thank you. We revise the background with separate paragraphs. For example, the first paragraph is about the relationship of quality of care and patient satisfaction. The second paragraph is about definition and operationalization of patient satisfaction in different perspectives. We also try to link the different aspect or elements of satisfaction with nursing care and their influence. The third paragraph is about measurement of patient satisfaction in relation to measurement tool and its effect on variability of result. The fourth and the fifth paragraph states about the important of assessing patient satisfaction with nursing care and its impact of satisfaction on patient outcome respectively. Then we tried to describe the patient and context related factors that influence patient satisfaction (background section, line 58-89 on the revised manuscript).

3. The rationale for focusing the systematic review / meta-analysis on the Ethiopian context could be strengthened. Some may argue that the limited number of studies, and the inconsistent and inconclusive findings across studies do not warrant or justify a systematic review or meta-analysis.

Answer: Thank you. Corrected based on the comment. In systematic review/meta-analysis we combine multiple similar studies to estimate the mean effect size. In Ethiopian context most studies conducted with small sample size due to financial issue. This combining data from many studies increases the sample size and power, which increases the validity of the evidence better than a single study finding. Moreover, to assess the dispersion of result across the studies might be another reason to perform meta-analysis. We consider the above to conduct this review (background section, line 105-112 on the revised manuscript).

4. Please clarify the study selection criteria and the data extraction related to "overall patient satisfaction with nursing care". It is important to explain: if different instruments have been used to measure satisfaction; if the measures were unidimensional or multidimensional (assessing one or more aspects of nursing care); if multidimensional measures were used, how was a score quantifying overall satisfaction with nursing was calculated; and what criterion was used to determine high level of satisfaction within each study and across studies. Also, specify the factors that influence satisfaction that were of interest and for which pertinent data were extracted.
Answer: Thank you. We tried to clarify the selection criteria as follows. Some of the inclusion criteria in this review were: studies reporting the reporting the level of patient satisfaction with nursing care among admitted patients in irrespective of some issues (instrument, dimension, scoring system, and other demographic characteristics), studies reporting determinant factor with nursing care, studies with English language regardless of date of study/publication. We excluded studies with poor quality, without full text and those studies reporting satisfaction other than nursing care (method section, line 126-135 on the revised manuscript). Newcastle satisfaction with nursing care scale (NSNS) was used in most of the studies. Two studies used inpatient patient satisfaction questionnaire (IPSQ). Only one study used another standardized patient perception and satisfaction with nursing care scale adapted from different literatures. Newcastle satisfaction with nursing care scale measures various aspect of nursing care using a 19 items with Likert scale (1: Not at all satisfied, 2: barely satisfied, 3: quiet satisfied, 4: very satisfied, 5: completely satisfied), (Result section, line 190-202 on the revised manuscript). Some studies categorized 4 and 5 as fully satisfied and 1, 2, and 3 as not fully satisfied with nursing care. Some studies used the mean score to determine the level of satisfaction (above the mean as high level and below the mean as low satisfaction with nursing care), and one study use demarcation formula as a cutoff point. We investigated multidimensional factors including availability of assigned nurse in charge of individual care, residence, history of hospitalization, and presence of other disease. All those independent variables are described in operational definition section of method part (method section, line 136-142 on the revised manuscript).

5. More information is needed to understand what data were extracted to quantify: level of satisfaction, prevalence, and association or relationship between each factor and satisfaction. It would be helpful to identify the key criteria for evaluating the quality of the studies (for readers who may not be familiar with the guidelines mentioned), to report on the quality of the studies reviewed, and to explain how the quality of the studies was accounted for (e.g. were low quality studies excluded from the systematic review / meta-analysis or was quality included as a methodological factor accounting for heterogeneity?). Did all studies report the OR to quantify the association between the factors and satisfaction or did some report the correlation / regression coefficient (which is most likely when a total score is usually used to quantify level of satisfaction); in the latter care, what formula was used to convert the correlation / regression coefficient into an OR? Estimating an OR requires dichotomizing the outcomes; this practice may not be well accepted / justified as dichotomizing a continuous variable has been found to reduce the richness of the data and to lower statistical power.
Data on author/s name, year of publication, study area/Region, health institution, study design, sample size, instrument used, prevalence and determinant factors were extracted from each included article by three independent authors. Newcastle–Ottawa Scale adapted for cross-sectional studies quality assessment tool was used. Based on the scale, the key criteria for assessing the quality of studies were representativeness of the sample, response rate, measurement tool used, comparability of the subject, appropriateness of the statistical test used to analyze the data. In the case of cross-sectional study, NOS consists of 10 points with 3 categories (selection, comparability, and outcome). We considered a study which scored ≥ 6 a high-quality study based on different literatures. We excluded studies with low quality. We include all this on the manuscript based on the comment (method section, line 151-156 on the revised manuscript). Since factors are not consistent across all studies, we select a number of studies for which similar factors in a similar fashion were addressed. Then, we extract the factors with their respective OR to estimate the pooled OR. Of course, all studies report OR to quantify the association between the factors and patient satisfaction. Yes, dichotomizing a continuous variable lower the statistical power. However, the included studies in this meta-analysis used different ways to dichotomized the satisfaction score so as to run binary logistic regression. For instance, Newcastle satisfaction with nursing care scale measures various aspect of nursing care using a 19 items with Likert scale (1: Not at all satisfied, 2: barely satisfied, 3: quiet satisfied, 4: very satisfied, 5: completely satisfied). Most of the included studies categorized 4 and 5 as fully satisfied and 1, 2, and 3 as not fully satisfied with nursing care. Some studies used the mean score to determine the level of satisfaction (above the mean as high level and below the mean as low satisfaction with nursing care), and one study use demarcation formula as a cutoff point.

6. Why was a fixed effect model used to describe the level of overall satisfaction when the authors explain that a random effect model was used in the data analysis section? Did any study report on satisfaction with specific aspects or elements of nursing care?

Answer: Thank you. Initially, we used the default fixed effect model to estimate the level of patient satisfaction with nursing care. However, the result showed a significant heterogeneity across the studies. Therefore, we performed the analysis with a random effects model which is recommended when there is a significant heterogeneity since it consider and adjust the observed variability across the studies.
7. The rationale for conducting the subgroup analysis by region is not justified. It should be part of the analysis to examine factors that may account for heterogeneity. Further, the investigation of heterogeneity is a bit confusing as the list of factors is not consistently presented across sections. For example, patient socio-demographic characteristics are mentioned in the Background and Discussion sections, but not in the Results sections. It is worth noting that methodological factors (e.g. sample size, type and reliability of measures) were not explicitly included as possible determinants of heterogeneity, knowing that measurement is a well-recognized factor and should have been accounted for in the data analysis and most importantly, in the discussion.

Answer: Subgroup analysis was conducted to compare the level of patient satisfaction with nursing care in different regions of the country. It is also useful to investigate source of heterogeneity for the level of patient satisfaction. To investigate the source of heterogeneity, we also performed meta-regression using sample size and publication year as a covariate. Presence of a significant heterogeneity among studies, no known source of variability is discussed as a limitation of this meta-analysis in discussion section (discussion section, line 312-320 on the revised manuscript). Almost all included studies used similar instrument, so that it was difficult to perform subgroup analysis using measurement instrument.

8. Although the OP reported for the factors under investigation were statistically significant, they are not clinically meaningful - most OR are close to 1.0. This point should be acknowledged and discussed.

Answer: -Thank you: corrected based on the comment. We revise the interpretation of clinically non meaningful OR in the result and discussion.

9. The discussion focuses primarily on restating the factors and reporting on findings from other countries for comparison. There is, however, limited interpretation of what the findings mean, discussion of methodological and/or conceptual factors that could possibly explain the differences in findings across studies, and presentation of implications for practice and/or future research.
Answer: Thank you. we tried to modify the discussion section based on the comment. Some justifications to explain the difference in findings added. Interpretation of the factors also modified. Even though patients’ residence, availability of assigned nurse in charge, previous history of admission, and the presence of other diseases had an influence on the patients’ satisfaction with nursing care in this study, all are not statistically significant. This was very difficult to interpret and discuss in detail in the discussion section. So we simply highlighted them in the discussion. Implication of the finding for practice also included on the manuscript (discussion section, line 321-328 on the revised manuscript).

Elisa Ambrosi (Reviewer 2):

The manuscript is focused on a very interesting and relevant topic. Nevertheless, there are some issues need to be addressed:

1) In the methods section it would be useful to add a conceptual and an operational definition of patient's satisfaction and to describe better all the factors that have been used as independent variables in the statistical analysis.

Answer: Thank you we add the operational definition of the outcome on the method part and all independent variables included in this review were described based on the comment(method section, line 136-142 on the revised manuscript).

2) In the results section it would be important to add some more information about included studies, e.g. characteristics of the sample, a brief description of the instruments used to measure satisfaction.

Answer: Thank you. We tried to describe the instruments used in the included studies in the result part (Result section, line 190-202 on the revised manuscript) and the specific instrument were identified and included on table 1 of characteristics of included studies(Result section, line 206 the revised manuscript).
3) In the discussion it would be interesting to add possibly explanations for the differences in findings across studies and of implications for practice and/or future research.

Answer: Thank you. The discussion is revised and implications of the finding for practice and future research included in the discussion based on the comment (discussion section, line 321-328 on the revised manuscript).