Author's response to reviews

Title: Team training in obstetric and neonatal emergencies using highly realistic simulation in Mexico: Impact on process indicators in a cluster randomized trial

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Author's response to reviews: see over
Dear Editors,

We appreciate the opportunity to resubmit the manuscript for: “Team training in obstetric and neonatal emergencies using highly realistic simulation in Mexico: Impact on process indicators.” All comments from Dr. Laopaiboon have been addressed, with changes made directly in the manuscript as needed. Below is a point-by-point description of the changes made and response to comments:

1. Even the authors presented that 50 questions and 88 were for knowledge and self-efficacy measures, it is unclear whether the answers would be only yes/no for each one or else. However, when consider the scores presented in table 2, the binary answers should not be for this situation. Scores at pre/post intervention of most categories of knowledge were higher than 50. It is also not clear if the scores are means values.

We apologize for our lack of clarity. In the case of the knowledge scores, the items themselves are coded in our dataset as dummy variables (0:incorrect, 1:correct), however, the “scores” are we call them are actually the percentage of correct answers by each particular individual in the sample. In the case of the self-efficacy items, the participants rate themselves on a scale of 0-100 in which 0 means total lack of self-efficacy and 100 means total self-efficacy; in this case the reported scores are means. We have modified the text (pages 6-7) accordingly.

Further the presentation of p value < 0.001-0.009 may be inappropriate. I would suggest to present the possible maximum score and the statistics of observed scores at pre and post of each category and changes with 95% confidence interval of change. This should be applied for other changes.

We thank the reviewer for the suggestion. We have modified table 2 to include changes (as defined by the beta coefficient in a fixed-effects regression model) with 95% confidence intervals. We also included means and standard deviations at the pre and post time-points and have removed p-values, as we agree they are not very informative. Also, in table 2 we corrected several figures for the “change”, as we noticed that simple differences were included in our previous version, instead of the fixed-effects model estimators, the difference is minor (in the decimals) and do not change the conclusions, we apologize for the inconvenience.

2. In table 1, what is the meaning of means and sd for male (vs. female) and other participant characteristics.
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We apologize for our lack of clarity. Since the variables such as “male/female” are coded as dummy variables with Bernoulli distribution, the means of such variables correspond to the proportion of the characteristic (p). Accordingly, the standard deviation is the squared root of (pq). We have added a footnote and modified the table for clarification; we also removed data of standard deviation to avoid any confusion as it is indeed not very useful in the case of dummy variables.

3. Most of changes of teamwork assessment are statistical significant but it is not clear if the changes are clinical significant. Mean (SD) at each period and 95% confidence interval of the change are more information.

We thank the reviewer for the suggestion and have modified table 4 to show descriptive statistics at each time point as well as confidence interval for the change.

4. How we interpret the results of table 6 and what the benefit of results to the research objective.

The objective of this sub-analysis was to identify factors associated with goal achievement, which corresponds to point 3 of the Methods section. Although the results were non-significant, in all likelihood due to the small n=12 sample (the unit of analysis is the hospital in this case), the large point estimates of the Odds Ratio for self-efficacy scores suggest there might be a relationship, which will need further research on a larger sample to confirm. This is explained in the fourth paragraph of the Discussion section. To further clarify, we have expanded the last paragraph of the Results section adding more information on the purpose, manner and main findings of this analysis.

Thank you for your consideration of this article. We look forward to hearing from you.

Sincerely,

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