Reviewer's report

Title: Randomised controlled trial of an intervention to improve parental knowledge and management practices of fever

Version: 1 Date: 19 Aug 2019

Reviewer: Research Square

Reviewer's report:

STATISTICAL REVIEWER ASSESSMENT:

Is the study design appropriate for the research question (considering whether the analyzed population accurately reflects the design and whether you see any problems with control/comparison groups, e.g., likely confounders)?
Yes - overall design, population, and control groups are appropriate

Are methodologies adequate and well implemented (considering whether assumptions are addressed and whether analyses are robust)?
No - there are minor issues

Are the analyses adequately communicated (considering whether reporting details are adequate and whether figures and tables are well labeled and described)?
No - there are minor issues

Does the interpretation accurately reflect the analyses without overstatement (considering whether limitations/bias are acknowledged and whether accurate descriptors, e.g., 'significant', are used)?
No - there are minor issues

Could an appropriately REVISED version of this work represent a statistically sound contribution?
Probably - with minor revisions

STATISTICAL REVIEWER COMMENTS:

The

REQUESTED REVISIONS:

Abstract
Background: "We have previously ……….. " is not a good start for the background information.
Methods: A convenience sample was purposively selected. This seems to be an error; the sample size was scientifically determined as described in the main methods section. The methods section didn't mention the endpoint or primary outcome measure. T1 and T2 are coming for the first time and so they should be defined. Sample size per group should also be mentioned.
Results: The findings were not well reported as it should be for an RCT. Comparisons were mentioned without p values.

Conclusion: Fever knowledge, concerns and anxiety appeared for the first time in the conclusion and there are no results to support them in the results section of the abstract.

Main Text
Sample size was described here but a convenience sample was mentioned in the abstract. A multi center trial was mentioned therefore sample size per center may be important. Authors need to report how quality control was assessed and standardization of instruments considering that it was a multi center trial. Authors reported that instruments contained information on pharmaceutical products, concerns, attitudes and beliefs but these results cannot be found in the results section. Also parental behaviors and expectations were mentioned. On data treatment, it is important to mention the dependent variable in the univariate logistic regression. However, the analysis would have been better if a GEE was conducted. This would have taken into consideration the two data points.

Flow diagram is good but the subtitle of consort 2010 may be deleted.

Results: Table 1: No need to show mean, median and range. Mean is required with SD if data is normal. Otherwise median is required. On nationality, Is it not sufficient to just categorize as Irish and non Irish?

On primary outcome analysis. It is not desirable to start a sentence with a figure. First sentence: 76% versus 28%. May need to give a p value for this comparison.

Table 2: p values are necessary too.

Under study outcomes, primary outcome was given as increased knowledge of correct definition of fever but in the results, under primary outcome analysis, …. there was no association between primary outcome, correct definition of fever, …… and other socio demographic factors. These sentences need to be reconciled.

Secondary outcome analysis. It is not desirable to start a section with a table.

Table 3: Significant differences were mentioned but no p values were reported.

Table 4: The interpretation: "learning between the two time points is obvious for both arms……" sounds like a discussion. Authors should take to the discussion.
Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

No

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

Yes

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

No

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics

Quality of written English
Please indicate the quality of language in the manuscript:

Acceptable

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