Reviewer's report

Title: Effects of pediatric first aid training on preschool teachers: A longitudinal cohort study in China

Version: 2 Date: 3 April 2014

Reviewer: Michael Thompson

Reviewer's report:

To the Author(s):

This manuscript summarizes an analysis of data obtained from multiple waves of a stratified random sample of teaching undergoing first aid training in China.

Unintentional injuries are a prevalent and important risk factor for child health. Decrement in knowledge and skill retention, particularly among seldom used skills, is a concern to ensuring appropriate teacher response when confronted with injuries.

The manuscript is of moderate interest and importance, adding to our knowledge of these effects in an understudied, vulnerable population.

As detailed below, this manuscript would benefit from modest revision, editing, and reorganization to present the information more concisely. Passive voice construction unduly weakened several sentences. More careful editing would strengthen this paper prior to its publication.

Title: The title is adequate.

Abstract: The abstract adequately summarizes the main points of each section of the paper. Modest revisions reflecting changes in the body recommended below will need to be incorporated.

[Minor essential]

Background: The introduction provides a concise overview of the main literature relating to the importance of childhood injuries, the role of schools in mitigating this problem, and the effectiveness of first aid training programs in this setting. The idea of emotional preparedness, explored in the study, is not developed. While the literature in this area is likely scant, the idea should be introduced and developed here.

[Minor essential]

Method: The methods are appropriate for the stated objectives, however additional details are needed.

• Clarify if the sample for each stage (3-5) were independently drawn from the same 1,067 sampling frame, or if participation in one follow-up precluded selection for another
• Clarify the targeted sample size for each phase (3-5)… the phrasing ‘were available…’ implies these numbers represent the respondents from some larger frame.

• The term quasi-interventional is used to describe the design. This meaning is not defined/explained. {To my use of the terminology, it would be a stretch to describe this design as a quasi-experimental time series as only one pre-intervention measure was taken; alternately no untrained group was concurrently measured as a comparison. I have a similar concern with the use of ‘quasi-experimental’ in the limitations section.}

[Minor essential]

Results: The results are systematically presented and utilize appropriate statistical analyses for the research questions being addressed. Some discussion content amplifying or explaining the results is misplaced in this section (e.g., P7, line 2-5). Too much detail is replicated in the text that is presented in the tables/figures. The ideas and data could be better organized and presented to more concisely convey the expected pattern of a marked increase following training to modest decay over time stabilizing at a level significantly higher than the baseline.

Tables & Figures:
[Discretionary Revision]
Table 1. Given the research question’s emphasis on examining decay trends over time, I suggest adding the phrase Comparison of mean scores “within each stage..” to the title to make explicit the comparisons being made.

Figure 1. Revise to include sampling frame information requested under methods comments

Figure 2. Make explicit that the maximum score is 40 (or convert presentation to percentages)

[Minor essential]

Discussion & Conclusion: While not tightly edited, the discussion effectively highlights most of the main findings related to knowledge retention, grounds them in the related literature, and draws appropriate inferences.

The discussion (and to some extent the results) related to emotions, however, does not address the dip below baseline at 9 month and its recovery to a more expected level at subsequent assessments. While the literature is lacking on this aspect, this dimension is one of your novel contributions and deserves comment regarding the importance of further exploring this dynamic and the relationship between knowledge, emotion, and willingness to act.

References: References are adequate/appropriate.

Recommendation: REVISION
Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Needs some language corrections before being published

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

I declare that I have no competing interests.