Reviewer's report

Title: Impact of a parent-child sexual communication campaign: results from a randomized trial of parents

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Reviewer: Marc Boulay

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The manuscript titled “Impact of a parent-child sexual communication campaign: results from a randomized trial of parents” has the potential to make several valuable contributions to the health field. The study’s use of an experimental design goes beyond traditional observational studies or quasi-experimental approaches used to evaluate health communication projects and obtains more credible (at least to some) evidence of the effect of these activities. Second, by identifying the factors associated with parent-child communication, this study fills a gap in the literature and may inform future programs seeking to promote parent-child communication as a strategy to influence adolescent behaviors.

However, there are also several aspects of the manuscript that can and should be improved.

Major Compulsory Revisions

1. While I understand the authors’ rationale for using relative change scores in their analysis, the use of these scores obscures the actual levels of the key study variables and the changes that occurred. It would be helpful if the authors could include an additional table that includes the distributions for each of the five main study variables.

2. When describing the data presented in table 5, the authors refer to the presence of a dose-response effect for short-term and long-term outcome expectations. The basis for this inference seems to the significant difference between the booster treatment group and the control group for these variables. However, my understanding of the concept of dose-response implies a significant difference between the lower dose (i.e. the normal treatment) and the higher dose (i.e. the booster). To claim a dose response, the authors would need to demonstrate that the booster group differs from the normal treatment group. In the same vein, the authors should explain the apparent non-dose relationship for self-efficacy at the 6-month follow up.

Minor Essential Revisions

3. I think the authors need to be more up-front that this study is an efficacy study of a set of campaign materials rather than an evaluation of a campaign. These are different things. Yet, the abstract presents this study as a campaign evaluation and it is not until page 6 of the text that the reader has some notion of
the nature of the study.

4. The rationale supporting the analysis presented in table 4 is unclear. One question I had concerned the reason why this analysis only compared baseline attitudes with behaviors 18 months later. I suppose that this possibly demonstrates the consistency in attitudes and possibly accounts for the time ordering of attitudes and behavior, but the reasons for this need to be more clearly described. I was also unclear about the decision to include a variable measuring if parents reported discussing with their child at baseline. I understand the desire to control for this behavior, but I also wonder if stratifying the analyses by parent-child communication or limiting the analysis among parents that did not talk to their child at baseline would be a more effective approach.

5. Finally, attrition was fairly severe. The authors should comment on whether the main study variables at baseline differ between those who remained and those who dropped out of the study.

Finally, I had some additional concerns with the study that can’t be changed but should be considered as possible limitations.

6. The social norm variable seems problematic. First, it is not really an element of SCT. Second, I wonder about the variation in the responses, i.e. do some parents really think that children should wait until 12 before having sex? Third, it seems to me that a descriptive normative measure might be a more useful predictor – at what age do they think boys and girls actually start to have sex. Wouldn’t parents be more likely to talk with their children if they thought that adolescents start having sex at a younger age and that their children might follow suit?

7. The study seems to assume that all parents assigned to the treatment conditions dutifully paid attention to all of the campaign materials that they were assigned to watch. It does not appear that the study included any validity checks to see if treatment group actually paid attention to the materials. This should be included as a limitation of the study.

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

**Quality of written English:** Acceptable

**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.