Reviewer's report

Title: Steering Teens Safe: A Randomized Trial of a Parent-Based Intervention to Improve Safe Teen Driving

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Reviewer: Motao Zhu

Reviewer's report:

This article examined the effectiveness of Steering Teens Safe, a parent-focused program to increase safe teen driving in a randomized controlled trial of 145 parent-teen dyads. The main outcome was Risky Driving Score self-reported by teens. Because the Score was highly skewed, a generalized linear model based on a gamma distribution was used for analysis. The intervention decreased the Risky Driving Score by 21% (ratio: 0.79, 95% confidence interval CI: 0.55, 1.15). The article is well written. This paper addresses an important traffic safety and public health issue. It scientific findings are interesting with significant implications.

Major compulsory revisions

Because the study was underpowered, the authors estimated 95% CI, 90% CI and 85% CI. The presentation of these confidence intervals puts too much focus on statistical significance. It is not traditional to present 85% CI. I would suggest that the authors simply present the point estimate and 95% CI. The authors do not need to mention alpha level at all. For example, the ratio comparing intervention with control is 0.79 for Risky Driving Score, and the 95% CI is 0.55 to 1.15. The width of CI is 0.60 (0.45 is < 1 and 0.15 is > 1), and CI is more compatible with a protective effect for intervention (Modern Epidemiology, Rothman, Greenland, Lash, 3rd Edition, page 156-163). The imprecision of estimate can be demonstrated by the ratio of upper confidence limit to lower confidence limit: 1.15/0.55 = 2.09.

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

Quality of written English: Acceptable

Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:

I declare that I have no competing interests.