Reviewer’s report

Title: The importance of social environment in preventing smoking: An analysis of the Dead Cool intervention

Version: 0 Date: 05 Sep 2018

Reviewer: Melissa B. Harrell

Reviewer's report:

Many thanks for the opportunity to review your interesting work! I hope you find the comments, below, helpful. Point (b) falls into the "major revision" category for me.

a) Why include the "stochastic actor-oriented models" if they didn't converge and provide useful information? This could be deleted from the paper (though I am certain that hurts a bit, since, no doubt, these models took some effort to run!). In these remaining regression models specific to "change" over time, I think it's important in the Results/Discussion sections to reinforce that these results are adjusted for the impact of the intervention; although, unfortunately, it was not significant, given the way the paper is framed, it's important to reinforce that you accounted for any potential impact here, before addressing this set of research questions. Note, too, in Table 4, that you do have a significant finding for "smoking presence - frequently"; this was ignored in reporting, but is important, as it is consistent with cross-sectional findings, so must be a key variable for us to pay attention to, in regards to understanding susceptibility further. It's a thread that you could/should pull through further into your Discussion; both Table 2 and Table 4 provide support for the UK ban on smoking in cars where children (defined as what age?) are present. Are there other policy or program implications of this finding?

b) Your definition, measurement, and analysis of "diffusion" of susceptibility intrigues me. But I am not convinced that "diffusion" is the right descriptor for what you have done, as you cannot assume the potential for or existence of any "causal relationship" between one student's susceptibility and others’? Rather, you seem to be simply measuring their social environment, in regards to their friends' (peer) susceptibility, in a novel and DIRECTLY OBSERVED way, given the way you've linked surveys and susceptibility constructs across students. Your other measure of peer use (friends who smoke) is about student's PERCEPTIONS. To reinforce, too, the first measure is specific to susceptibility (DIRECTLY OBSERVED), while the other is specific to smoking behavior (PERCEPTIONS). There is a body of literature specific to differences between the perceived environment and the actual (or observed) environment and their impacts, separately, on behavior; findings don't always align (like you see in your study, here!).
Therefore, I would suggest you step back and consider analyzing and writing about "diffusion" from this perspective, instead; and using another name for it. To ensure consistency/comparability, you could, instead (or in addition to) analyze peer smoking directly (instead of susceptibility), to facilitate this comparison, here.

c) Point b would help you address "transparency" better, which you allude to in the beginning of your Discussion, but isn't, in my opinion, developed appropriately here. In regards to "source," your study only provides support, at present, for the influence of peers upon behavior; parent use was not statistically significant in your models. The Discussion could be improved with more direct and in-depth discussion of this point; why allude to a need for a parental component to the intervention, when parent use was non-significant?

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.
Yes

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

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