Reviewer's report

Title: Severity and susceptibility: measuring the perceived effectiveness and believability of tobacco health warnings

Version: 1 Date: 05 Aug 2017

Reviewer: Michelle Amaral

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I have a few follow-up comments regarding some of my initial suggestions.

1. Previously I suggested: "This study uses a convenience sample to look at the effectiveness and believability of health warning labels as applied to multiple health states. Additional justification and explanation throughout the paper would provide a stronger argument." and the authors responded "We have provided more justification for our methodology in the Introduction, Methods, and Discussion Section." This however is not the case. The Introduction and Discussion sections do not mention the type of statistical method used let alone any justification and the Methods section only states "ANOVA was run for both believability and effectiveness ratings." While the authors provided justification for the methods in their response to the reviewers comment they did not include any justification for the methods in the paper. Justification for and explanation of the type of statistical methods used needs to be included throughout the paper.

2. Previously I suggested: "Section '3.2 Believability and effectiveness ratings' refers to the mean believability and effectiveness scores being correlated but nowhere are the means (or standard deviations) reported." The authors responded that "For simplicity, these results are presented in Figure 1." While it may be sufficient to present this information in a figure, I do not believe Figure 1 (as it is currently) does this. The problem is that it is difficult for the reader to determine the exact mean from the figure. If the means were added as labels to the figure it would be a huge improvement.
3. Continuing with the topic of figures and readability, the 95% confidence intervals are difficult to see for the non-smokers making it impossible to gauge if the confidence intervals overlap between smokers and non-smokers. This applies to both figure 1 and figure 2. Adding the means as labels for figure 2 would also improve its readability.

4. Previously I stated: "Section 3.3 refers to the "main effect" but does not explain what is meant by the "main effect" or why what is measured is actually capturing the "main effect". Additional explanation is needed in this section." The authors responded in the comments by explaining "By `main effect,' we mean the effect of an independent variable (e.g. smoking status) on a dependent variable (i.e. effectiveness or believability), averaging across the levels of other variables (e.g. outcome and/or presentation). We have added some additional clarification in the manuscript in the first paragraph of section 3.2." I appreciate that the authors explained what was meant to me but their addition in the text did not explain "main effect." The authors merely added seven words "on our dependent variables effectiveness and believability." That does not explain what main effect is or captures. Additional explanation of the main effect is necessary otherwise the use of "main effect" is unwarranted.

5. I appreciate that the authors addressed my point "In the Section 4 Discussion you discuss the limitations of the study. This is good but the first limitation discussed (p.8 lines 35-37) can be addressed through multivariate regression and is an argument for multivariate regression with population weights." They did use an alternative method, ANCOVA. Their response states "As described above, we have conducted an ANCOVA with education and income as covariates. This did not impact the interpretation of our results, but we have described this analysis in our analysis and discussed it in the limitations section (paragraph 3 of the Discussion)." I was not able to find where the authors described the analysis. I was only able to find a statement that they did the analysis. "ANCOVA with income and education as covariates did not meaningfully change these results." was added to section 3.2. This does not describe the analysis or why it would be of use to include. The paper would benefit from a description of what this analysis is, what it adds beyond ANOVA, and the results. If the authors are not willing to add the results, they should at least make them available on request.
6. I realize that my previous comment, "Throughout the paper acronyms are used but no list of acronyms appears at the end of the paper. It would be helpful if a list of acronyms was included. For statistical terms it would especially be helpful to know what the abbreviations in the text stand for. For example, in section 3.3 the authors include (M=4.01, SD=1.64) for one of the outcomes but don't specify what M stands for. Mean, Median and Mode all begin with M and this is count data so it is not illogical that the Median or Mode might be reported. The same goes for (rs>0.25,ps<0.001) vs (r=0.16,p=0.001) and (rs<0.08,ps>0.045). The reader needs additional guidance as to what the abbreviations stand for. A table including correlations may be helpful.," contained many points. The authors did include a table of correlations in Table 2 as they state in their response "'M' has now been changed to mean in the first instance it's used. The correlations are now shown in Table 2 in the Supplementary Materials and described in Section 3.3." I do not however see where 'M' has been changed to mean. I do see that much of the material I provided as examples has been deleted. In addition, many of my other comments have been ignored. There is still no list of acronyms at the end of the paper, many of the statistical terms use acronyms without any description of what they stand for.

**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.

Unable to assess

**Are the conclusions drawn adequately supported by the data shown?**

If not, please explain in your comments to the authors.

Unable to assess

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