Reviewer's report

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

Version: 0 Date: 22 Jun 2017

Reviewer: Michelle Amaral

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General Comments:
This study uses a convenience sample to look at the effectiveness and believability of health warning labels as applied as applied to multiple health conditions. Additional justification and explanation throughout the paper would provide a stronger argument. I urge the authors to consider an alternative statistical model (an ordinal logistic regression model) to help control for some of the characteristics of individuals in their data so they can identify the specific effect they are looking for.

Major Comments:
1. In section "2.4 Statistical Analysis" the authors provide no justification as to why ANOVA is the appropriate method for analysis. Regardless of the statistical method used, justification for that method needs to be included. Have the authors considered multivariate regression? This would allow the analysis to control for demographic and health characteristics of individuals. Because the outcome variables are integer values (1-10) an Ordinal Logistic regression model would be more appropriate than typical ordinary least squares.

2. Section "3.1 Characteristics of Participants" does a nice job describing requirements for inclusion in the sample and some of the characteristics of the sample however many of the key characteristics discussed were not presented in Table 1 and the information in Table 1 was not discussed in Section 3.1. Including the health history in Table 1 or creating an additional table with participant health history would be helpful for the reader. Also discussing key information from Table 1 in the text would add to the paper.
3. 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.

4. In Section 4 Discussion the authors 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.

5. In section "2.2.2 Believability and effectiveness ratings" the authors refer to "These three effectiveness examples …" I found this to be unclear. In re-reading the sentence above, the confusion was from "using the single question 'How effective is this health warning?' and participants were given additional text '(e.g., in encouraging smokers to quit, increasing concerns about smoking, and discouraging youth from starting to smoke)' to help inform their answer." I read the "e.g." as an example of the types of things to think about when answering the ONE question 'How effective is this health warning?' but was I supposed to read the "e.g." to mean there were THREE separate questions? One question for 'How effective is this health warning in encouraging smokers to quit?', one for 'How effective is this health warning for increasing concerns about smoking?', and one question for 'How effective is this health warning for discouraging youth from starting to smoke?' This needs to be clarified.

6. 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 be especially 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 for these as well.

7. Adding to that summary statistics are reported in the text for perceived susceptibility in section 3.3 but not for believability or effectiveness with regard to health outcomes or presentation format. Consistency in presentation format is helpful when reading a paper.
8. 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.

9. For all tables the notes need to specify which tests were conducted, meaning that stating "as appropriate" is not specific enough.

10. For figures, the 95% confidence intervals are helpful but adding * next to the label if there is a statistically significant difference would add additional clarification. It would also help if means were added to the tables. Notes with a brief explanation of what was done should be added as well. Both tables and figures should be able to be read on their own without text.

**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.
No

**Are the conclusions drawn adequately supported by the data shown?**
If not, please explain in your comments to the authors.
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