Reviewer’s report

Title: Defensive reactions to threatening health messages

Version: 2 Date: 8 August 2012

Reviewer: Anna Good

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Discretionary Revisions

1. The sample size for some tests is very small (e.g. 11 smokers). The manuscript might be improved if power calculations were reported.

2. Simple effects analyses are shown – but there is no reporting of the significance of the interaction between smoking and booklet on this measure. Tests of interactions could be reported prior to tests of simple effects.

3. The manuscript could benefit from further proof reading for checks on the use of English. While the writing is generally good there are some slightly awkward phrases – e.g.

a) ‘In a recent meta-analysis by Peters et al., only studies were included that independently manipulated…’ should be rephrased. It could be rephrased to ‘In a recent meta-analysis by Peters et al., only studies that independently manipulated…were included’.

b) I’m not sure about the term ‘health threatening messages’ – it suggests messages that threaten health in some way! I’d prefer ‘threatening health messages’ or ‘high threat messages’.

c) p.5 ‘remains well-accepted, also among professionals’ # ”remains well-accepted amongst researchers and professionals’?

4. The introduction and discussion imply that high threat messages should not be used. While the data in this paper does generally support this, I feel that a more balanced approach should be taken. The authors cite a meta-analysis by Peters et al. showing that high threat messages can be beneficial when combined with efficacy messages, and efficacy messages are only effective under high threat conditions. Since message recipients may need prompting by threat to consider the ease and effectiveness of action, this should be acknowledged in the manuscript. Indeed, in the ‘real world’ threatening health messages are generally accompanied by efficacy enhancing content. The authors may also wish to mention techniques such as self-affirmation which can enhance the impact of high threat messages (e.g. Good & Abraham, 2011).

5. The text describing participant flow is a bit hard to follow – I suggest referring to the figure earlier on and reducing the detail provided in the text.
6. Consider reporting Cronbach’s alpha separately for each scale – maybe alter scales with low alphas (e.g. 0.59)?

7. There could be some discussion about whether people perceive others to have higher efficacy than they actually do... if high efficacy is imagined it might be reasonable that the participants suggest that high threat messages will work. This might also be an interesting area for further research.

8. There could be some discussion about why the difference in the perceived impact of high and low threat smoking messages only appears amongst participants who were smokers.

Minor Essential Revisions

1. There are errors in the Ns reported in Figure 1 (e.g. a total of 93 participants, with 43 in the smoking condition and 44 in the alcohol condition). The numbers in the figure are also at odds with the text at the top of page 7 (e.g. 49 in the smoking condition, 44 in the alcohol condition).

2. I think there may be errors on p.13-14 where it says ‘no significant effect was found for gender or age, or smoking status’ in reference to alcohol messages? Since this is about the alcohol message, should it say that there was no significant effect for alcohol intake’?

3. There are inconsistencies in the capitalization of ‘Cohen’s d (p.13-14)

4. There are some typos – e.g.
   p.4 ‘evaluated the messages more negative’ (should be ‘negatively’).
   P.11 ‘et al’ should be ‘et al.’
   p.11 ‘self efficacy’ should be ‘self-efficacy’
   - check for spaces before full stops (e.g. p.7) and use of commas (e.g. p7)

5. On p.15 it implies that no differences were found in T1 evaluations of the effectiveness of high and low threat smoking messages. But smokers did perceive the high threat messages as being more effective.

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

**Quality of written English:** Needs some language corrections before being published

**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