Reviewer’s report

Title: Finding the keys to successful adult-targeted obesity prevention advertisements: an experimental audience testing study

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Reviewer: Janet Latner

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This study examined audience reactions to public-health television ads designed to alert and warn viewers about overweight and obesity. A large, national sample of Australians completed a survey rating several ads for message acceptance, argument strength, personalized perceived effectiveness, and negative emotional impact. Ads varied in their message content (e.g., health consequences) and in their style (e.g., graphic). Certain ads were identified that stood out on multiple outcome measures and perceived effectiveness for promoting behavior change. Analyses were conducted to examine effects on the subgroups of participants who were healthy weight vs. overweight and obese. The study design used methodology from other public health domains (anti-smoking). The study provides evidence suggesting which ad contents and styles might be further studied as part of obesity prevention campaigns. In particular, ads highlighting negative consequences of obesity and eliciting strong negative emotional responses are concluded to be most promoting of self-reported future behavior change. However, several major ethical concerns with the goals and methods of this study are described below.

Major concerns:

Much more work and discussion is needed on the stigmatizing nature of these ads. The lack of inclusion of a measure of stigma and internalized stigma in reaction to these ads is a major ethical omission and limitation of the study. The claim is made that previous unpublished data exist suggesting that these ads were not stigmatizing (p. 12). It is essential either that data on stigmatization be systematically reported in this paper, or published elsewhere so they can be referenced and reviewed by others, or that further data be collected on the stigmatizing nature of these ads, using appropriate measures. This issue is especially concerning given the strong, negative emotional reactions being elicited AND SOUGHT here – and the much stronger reactions among obese individuals. It seems very possible that this negative emotional reaction is based on internalized weight bias, which is known to be associated with numerous negative psychological, behavioral, and health problems. If the ads lead to stigma against other obese individuals aside from oneself, the outcomes of this stigma are even more well-documented, including many negative health-related consequences. These ads, intended to improve public health, could inadvertently be doing the opposite. The publication of this paper would give these ads a legitimacy that they currently lack and could lead to their being adopted on a
broad scale. First, do no harm.

Relatedly, the “toxic fat” ad that has been identified by the researchers as the most effective ad is extremely graphic and disgusting, as the authors note (assuming this is the ad they have studied: https://www.youtube.com/watch?v=pThTr83UWa8). Disgust is highly related to weight stigma. It is hard to imagine how this particular ad could fail to increase stigma and/or internalized stigma, possibly through the mechanism of disgust.

Similarly, the ad that ranked second, a negative testimonial called “measure up,” blames a man for his obesity and presents the narrow etiological explanation that his obesity was under his control and increased due to his poor choices. (Assuming this is the ad: https://www.youtube.com/watch?v=9dL4lN6GKi4). Blaming obese individuals for their weight is a well-established causal factor for weight stigma, and multiple experimental studies have documented the harmful stigmatizing effects of presenting blame-based, behavioral etiological causal models of obesity relative to other etiological models. Again, it is hard to imagine how such an ad could fail to increase stigma.

As a somewhat independent issue, an important clinical consideration is the aim of the researchers to develop strategies to cause distress among the public. A major concern with this approach, seeking to deliberately cause distress among the public, is its clinical and ethical implications. Negative emotional reactions were assessed by having participants rate how much each ad made them feel disgusted, anxious, ashamed, fearful, guilty, and sad. Many of these feelings are associated with mental illnesses and psychological distress, and the long-term effects of eliciting them in the general public and in at-risk individuals are unknown.

On a broader issue, the manuscript takes as a given the notion that ads that target obesity and obese individuals are a necessary part of health promotion and disease prevention. The comparison is made to smoking cessation ad campaigns. However, in smoking cessation campaigns, the villains are cigarettes, not people. Although it was not possible to view all the ads studied here, it is questionable as to why public health campaigns intended to promote the specific behaviors of healthy eating and physical activity in the public need to highlight obese individuals (and their bad decisions, regrets, fat cells, ways they are to blame for their weight, or negative reactions of others to them) rather than addressing the broader public and highlighting the behaviors desired in all individuals, without framing obese individuals as the guilty party. There are many other styles of useful campaigns that target physical activity and healthy eating that do not target a specific discriminated subgroup of the population. Indeed, research analyzing many ads has shown that the most effective ads are those that don’t focus on body weight or obese people, but instead emphasize specific health behaviors that viewers can engage in regardless of their body weight (Puhl, Peterson, & Luedicke, Int J Obes 2013;37(6):774-82; and Puhl, Luedicke, & Peterson, Am J Prev Med 2013;45(1):36–48). They also found that ads that were perceived to be stigmatizing instilled less motivation and self-efficacy for health behavior change, and that people viewed them to be inappropriate
(regardless of body weight or sociodemographic characteristics, as in the AJPM paper).

In light of these ethical and practical issues, it is necessary to question whether this study has conducted an adequate test of “effectiveness”, and to question how the authors are defining that construct. It appears that effectiveness was defined primarily as how much ads upset people, and how much people promised to change, along with how much people believed what they viewed. It is worth asking whether the conclusions based on these findings are appropriate.

More minor concerns:

The authors present the homeostatic model of obesity as the complete and only reason for excess body weight (p. 3, line 69). This is an incomplete causal model, as mentioned earlier, and should be qualified (e.g., at the very least add the words “in part” after “since excess body weight occurs”).

The ads are described as having been assessed and selected by the research team as “deemed applicable to the Australian context or have potential to be adapted for Australian audiences” (p. 6). More explanation of what this means and how this was assessed would be helpful.

It should be clarified whether people were told the titles of these videos (listed in the paper on p. 9).

There is an extra word in line 206.

The paper cites previous research in discussing the correlations between the extent to which eliciting negative emotion is associated with perceived personal efficacy. The present study could test that more directly by including correlations between the rating responses of personalized perceived effectiveness and negative emotional impact. More importantly, are any previous data available on the correlations between these and future behavioral improvements?

Level of interest: An article of limited interest

Quality of written English: Acceptable

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.