Author's response to reviews

Title: Effects of social approval bias on self-reported fruit and vegetable consumption: A randomized controlled trial

Authors:

Tracy M Miller (tracymarie.miller@state.co.us)
Madiha F Abdel-Maksoud (madiha.abdel-maksoud@uchsc.edu)
Lori A Crane (lori.crane@uchsc.edu)
Al C Marcus (Al.Marcus@uchsc.edu)
Tim E Byers (tim.byers@uchsc.edu)

Version: 2 Date: 21 May 2008

Author's response to reviews: see over
To: Editor, Nutrition Journal
From: Tracy Miller, Madiha Abdel-Maksoud, Lori Crane, Al Marcus, and Tim Byers
Re: 5864240591689644 – Effects of social approval bias on self-reported fruit and vegetable consumption: a randomized controlled trial
Date: 20 May, 2008

We hereby submit this revised paper for your consideration for publication in Nutrition and Cancer. All co-authors have approved these revisions. Following are our detailed responses to the 6 major points and 4 minor points raised in the critique:

1. We now explain the difference between social approval bias and social desirability bias in the first paragraph of the Introduction section.

2. We think either of these types of bias could be used to describe the biasing prompt we have delivered in this intervention, but we think this is best described in terms of social approval. Though the reviewer is correct to point out that these biases are usually regarded as personality traits in observational studies, the critical point here is that this is a randomized trial testing the effects of potentially biasing prompts directly. We have not made measures of personality traits here, as our inference of bias is related directly to our intentional insertion of a biasing prompt by randomization into the study. Hence, this substantial difference in reported intake we observed associated with the randomized factor (whether the subject thought this was a fruit and vegetable study or a more general diet study) is best interpreted as a direct response to the biasing prompt. Though personality traits probably did affect the size of this bias among different people, it was not our intent to attempt to measure these traits, but instead to estimate the group-level effects of the biasing prompts. Thus, although most of the prior literature considers social approval bias as a personality trait, this study begins with the assumption that such a bias is an inherent aspect of human nature, and that we are simply trying to measure the potential size of that bias using a randomized intervention design.

3. We have now clarified that the interviews were not by appointment (see methods section, top of page 6), hence change in diet prior to the interview is unlikely. We also point out the very different measurement units in the FFQ vs the recall (described on page 8).

4. Yes, it is possible that we were simply unlucky and that randomization gave us two groups of 80 each that were substantially different in diet. This (remote) possibility is acknowledged now in the Discussion, pages 12-13, but we believe this is very unlikely. These two groups did not differ in respect to demographics or other traits (Table 1), nor did they differ regarding dietary habits other than fruits and vegetables (Table 2). In fact, the p values could be taken as the
expressions of the probability that chance alone (not bias) accounted for the group differences (less than 1 chance per 1000, Table 2).

5. We do not agree that in an intervention the baseline measures of the intervention group would reflect bias. Indeed, it is the intervention per se that would have the biasing potential, and that would be delivered after baseline. Differences between groups in chance (as in point #4 above) would be taken care of that way, but not differences due to bias from the intervention messages. The reviewer is correct, of course, that changes over time cannot be separated as true change from biased reports. This is exactly the dilemma we point out here in this paper, and discuss on pages 10 and 11.

6. We thank the reviewer for this detail, which we have now added to page 4.

Minor points:

1. We have changed race to race/ethnicity

2. References are now consistent in style

3. Meal eating frequency patterns were not assessed. As this is a randomized trial, it is unlikely that chance differences in meal patterns would have been observed between the two groups to account for the differences we observed.

4. The likelihood of any potential eating pattern differences between the groups was limited for by the randomization step in the trial (p<.001, see above).

We have also combined two tables (previous Tables 3 and 4) into a single table here for simplicity, and have made sure the font, sectioning, and referencing styles are as requested for Nutrition Journal.

We would like to thank the reviewer for her valuable comments, and thank you for your consideration of this revised manuscript.

Authors