Reviewer’s report

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

Version: 1 Date: 24 January 2008

Reviewer: Frances E Thompson

Reviewer’s report:

This is a very interesting paper, well-designed and well-written, and of practical relevance to intervention studies. I would recommend further clarity about some of the methods and more thorough discussion of some of the issues.

Major Compulsory:

1. Please distinguish between social approval bias and social desirability bias, as they are two different constructs.

2. It’s not clear to me that the bias you are measuring is that due to either social approval bias or social desirability bias. These are conceptualized as personality traits. To establish that a bias is due to social desirability bias, isn’t it necessary to measure that type of bias in the respondents and compare the relationships between people with high SD bias vs. those with low SD bias? Perhaps it’s more appropriate to refer to what you studied as unspecified general reporting bias, which could be due to many factors, including SD bias. I would change the title accordingly.

3. Was the telephone interview by appointment? If so, please state explicitly, as that would give respondents the opportunity to eat well at that time. This would also allow more clarity in how you interpret and discuss bias in FFQ and recalls. Do you think that respondents ate differently both over time (what time period was used in the FFQ question?) and also specifically for the day prior to the telephone interview? You might point out, also, that because of this biasing effect, most recommend that 24HRs be done without prior notification. You might also clarify that the two instruments have very different response structures and that estimates of intake from them are not directly comparable.

4. Another explanation of the results could be that the diets between these two groups were different, not just on that day. You are assuming that two groups of ~80 people eat the same frequency of fruits and vegetables. Is n=80 enough to safely make that assumption? This should at least be mentioned as an assumption that is being made.

5. You don’t directly address the real dilemma in intervention studies. That is, what is the bias in reports of diet over time (i.e. at least two time points), between intervention and control subjects? Change is measured as the difference in the intervention-control differences over time. So, even though baseline diets for the intervention group may be biased at baseline, they may be similarly biased at
followup, thus negating that bias. The problem is that any difference in intake between baseline and followup is not easily interpretable as being from additional bias due to participating in the intervention or due to actual change. Please address in some way in the discussion.

6. The cognitive psychologists term the different types of memory required for recalls vs. FFQs as specific vs. generic. Perhaps you could use those terms consistently throughout the manuscript and define each at first mention. If it is helpful, here is a quote from Coulston AM and Boushey CJ, Nutrition in the Prevention and Treatment of Disease, Second Edition. Chapter 1, Dietary assessment methodology, Thompson FE and Subar AF, Elsevier Inc., 2008.

"There is an important distinction between specific and generic memories of diet. Specific memory relies on particular memories about episodes of eating and drinking, while generic memory relies on general knowledge about the respondent's typical diet. A 24-hour recall relies primarily on specific memory of all actual events in the very recent past, whereas a FFQ that directs a respondent to report the usual frequency of eating a food over the previous year relies primarily on generic memory. As the time between the behavior and the report increases, respondents may rely more on generic memory and less on specific memory [471]."


Minor Essential:

1. Race is more appropriately referred to as race/ethnicity.
2. References should be consistent in format.

Discretionary Revisions:

1. Were there any differences in meal eating patterns between intervention and control subjects? If one group eats more times during the day, it is likely to have more F&V.
2. How were differences in eating patterns controlled for in comparisons between the two groups? What are the denominators?

What next?: Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

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

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.