Reviewer's report

Title: Factors affecting acceptability of an email-based intervention to increase fruit and vegetable consumption.

Version: 3
Date: 11 July 2014
Reviewer: Devon Golem

Reviewer's report:

Thank you for your manuscript submission. The topic is extremely relevant to the field and this journal. The main question addressed in this manuscript is consistent with the title in that various factors of acceptability of a fruit/vegetable promotion intervention were assessed.

However, some Major Compulsory Revisions to the manuscript are needed:

1. Many factors of acceptability were rated per Table 3. The only one appearing to have a significant difference between the low-frequency and high-frequency intervention groups appears to be frequency of intervention (“too many emails”). Seeing that this factor of acceptability was the only difference between these two groups (as content remained the same), the study was designed to evaluate the effect of this factor only and differences among the other factors should not be anticipated. However, it would be interesting if a change in frequency led to a perception of decreased content quality. Nevertheless, the discussion appears to misrepresent this finding.

   a. Line 143-145: Please consider changing the statement “invention acceptability (with the exception of the view that the intervention consisted of “too many emails”) was not influenced by the frequency of intervention contact is pertinent.” It appears that frequency of the emails in the high-frequency intervention was not acceptable to the majority of subjects in that group.

   b. Line 145-147: Here it is argued that very frequent contact did not affect overall acceptability. There does not appear to be a total acceptability score nor could this be developed as too many of the acceptability factors focus on content and only 1 focuses on frequency. The results indicate that the only issue the subjects had with the intervention was the frequency of emails, so it is hard to say that this did not have an effect on the acceptability. In fact, again, frequency of emails was the only designed difference between the two intervention groups…and the only factor in which poor acceptability ratings were provided. The significant difference between groups should reveal that there was an issue with “very frequent contact” and that less frequent contact was more acceptable.

2. The control group was mentioned on line 75, but not described nor included in the rest of the manuscript. A change in fruit/vegetable consumption without the presence of an intervention would indicate that other confounding factors may play a role in this behavior. Or vice versa, the lack of change in F/V consumption behavior without the intervention would provide support for the effectiveness of
this intervention in changing actual behaviors. Please explain the control group procedures and results. Did the control group receive any non-nutrition related emails? At what frequency? Explain how this group served as a control. Consider including this data in the analysis.

3. The focus of the manuscript was clearly on the factors of acceptability and their ratings, but correlations between these acceptability ratings and intervention effectiveness (behavior change) as well as individual characteristics (attitude and intention, etc.) were evaluated without providing these findings alone. What were the baseline characteristics in terms of behavior (especially as it relates to F/V consumption), intention, attitude, subjective norm, and planned behavior change? What was the effect of the intervention on these characteristics? What was the effect of the intervention on fruit/vegetable consumption? Please report these findings. Readers will not be interested in the acceptability of an intervention that is not proven effective. Did this intervention effectively change fruit and vegetable consumption?

a. The differences between the 15-day and 30-day Fresh Facts interventions were highlighted in Table 1, yet the current study only focused on the 30-day intervention with varying frequency. Was the 30-day intervention effective?

4. The methods section needs to be expanded greatly to include how all measures were assessed? F/V consumption, beliefs, intentions, attitudes, subjective norms, PBC, etc. Please include the assessment of each of these measures in the methods section.

a. Line 77: “Participants completed measures of fruit and vegetable intake (servings/day) and TPB variables…” Please expand upon this. How exactly was F/V intake measured? By weight? By food diary? By food frequency questionnaire? How were TPB variables assessed? Using a valid and reliable survey or index? Which one?

b. Lines 79-80: Please expand on the acceptability rating tool. Interesting, credible, logical, easy to understand, personally relevant, useful, complete, too long, and confusing are acceptability variables clearly related to the content. While “Too many emails” is the frequency variable. “Annoying” could be applied to frequency or content. Please explain the inclusion of these variables and explain the manner in which these were presented to the subjects.

5. Lines 156-157: “…threat to the dissemination of the intervention, since it would appear that the intervention is best received by those who have the least need for it.” I appreciate that this limitation was included in the discussion, but it reveals that data are being withheld from this manuscript. What was the baseline F/V consumption, intention, attitude, PBC, etc.? How were these affected by the intervention?

a. Line 72: Are these nutrition, exercise, or health-type students? What courses were these students recruited from?

b. Clarify the absence of coercion if the (line 72) “students received course credit for participation in this study”. If student grades are dependent on their participation in this study, then the outcomes may be flawed in that students...
could feel pressured to maintain compliance and compliment the intervention despite informing them otherwise. Explain what measures were taken to prevent false positive ratings from students looking to earn high grades.

Please consider these main issues in your revision.

**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.

**Declaration of competing interests:**

I declare that I have no competing interests.