Reviewer's report

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

Version: 3 Date: 18 July 2014

Reviewer: Anne E Mathews

Reviewer's report:

Dear Corresponding Author,

Your manuscript, “Factors affecting acceptability of an email-based intervention to increase fruit and vegetable consumption” is a valuable contribution to the field. In general, the manuscript is well written and the value of the work well-justified. The question posted by the authors is clearly defined, but there are some elements that could be improved upon to strengthen the scientific merit of the work. Prior to publication there are a few major and minor changes I suggest.

Major Suggestions

1. Intervention impact on fruit and vegetable intake. Determining the acceptability of an intervention is extremely important. Effectiveness on the targeted behavior, i.e. fruit and vegetable intake, is obviously of equal importance. This manuscript would be greatly strengthened by reporting the effect of the intervention on fruit/vegetable intake as well, even if the increase was not statistically significant. If the results of this are published elsewhere they are not referred to in the manuscript. In the abstract it states that acceptability was associated with intervention “success” – but the success is never defined (line 36). In the abstract, line 40, it states that results support ongoing use of email-based intervention to target fruit and vegetable consumption – this is not quite a valid statement without also showing the intervention had some impact on consumption rather than just being acceptable. I suggest adding this critical information to all aspects of the manuscript from abstract to methods to discussion.

2. Randomization. Participants were randomized yet there is a large difference between the numbers of participants in each group (102 versus 173). Please explain the randomization process. Were participants stratified by gender or any other characteristics? Given the size difference of the two groups, please edit Table 3. Demographic Characteristics, to report these characteristics by group and conduct statistical tests to determine if there are any differences between the two intervention groups by these characteristics.

3. Methods. The methods section is very brief and would benefit from added details. Specifically, it states that participants completed measures of fruit and vegetable intake and TPB variables. Please detail if participants completed a FFQ and if so which one or a 24 hour recall, etc. How were the TPB variables...
measured? A valid questionnaire? A reference is provided for the intervention acceptability assessment, but a very brief description is still necessary. For instance was this a Likert scale, what were the range of choices, etc. Also in general - were these all completed on paper in person or online? When and where were they completed? In class? Were all students from the same class and were they health majors? Who administered the questionnaires, etc.

Similarly, the intervention description outlines the frequency of messages but gives no description of the type of messages. If space is available providing a sample of messages would be ideal. Were there so many questions designed specifically to target the TPB variables? Were recipes provided? The reader does not have a sense of the intervention other than it was messages about fruits and vegetables.

4. Attrition. The overall rate of non-completers is stated as 21% on line 96. Please detail if there were differences between high and low frequency groups. The reader is referred to table 2 on line 96 for more information about attrition, but this information does not appear on table 2 or any other table. Please correct. I believe the authors meant for line 96 to refer to table 3.

5. Limitations. No limitations were identified by the authors. Please add to discussion.

Minor, but necessary, Suggestions

1. Line 94 – the percentage of females given here (77.3%) is not the same as that given on table 2.
2. Line 98 – was the rating of “too long” referring to the messages or the entire intervention?
3. Line 102 – Differences in attrition again referred to (now as table 3) but this is not on table 3.
4. Line 114 – fruit and vegetable consumption at baseline referred to, but never given at any timepoint.
5. Line 121 – PBC should be spelled out at first mention with acronym given in line 117.
6. Line 171 – refers to “…in other studies” but only one reference given. Either add more references to rewrite to refer to one particular study.
7. Table 1 – there are two Table 1s. Change second to Table 2. Then on Table 2, suggest editing title to read “Demographic characteristics of participants by randomization assignment” – and here compare by group rather than lumping all together given the difference in number assigned to each group.
8. Table 3 – Attrition missing from title and table but referred to in text. Need to report attrition by group. Also please briefly describe scale here and/or in text. Is this a scale of 1-5, 1-10? Consider omitting the Totals columns – I don’t think the total adds anything when you are comparing in this instance.
9. Tables 4 and 5 – have the exact same title. Please correct the title on Table 5.
Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Acceptable

Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.

Declaration of competing interests:

I declare that I have no competing interests.