Author's response to reviews

Title: Recruitment of Young Adults into a Randomized Controlled Trial of Weight Gain Prevention: Message Development, Methods, and Cost

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Author's response to reviews: see over
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Dear Editors:

Thank you for the opportunity to revise and resubmit the manuscript entitled “Recruitment of Young Adults into a Randomized Controlled Trial of Weight Gain Prevention: Message Development, Methods, and Costs”. We gratefully acknowledge the comments and suggestions from the reviewers and editors and feel that they were very helpful and constructive.

We have made all requested changes to our manuscript and believe the paper is considerably strengthened by these revisions. As requested changes are noted in the revised manuscript with track changes and point by point responses to the revisions are provided below to each reviewer.

Please feel free to contact me via email at dtate@unc.edu if you have any questions regarding this manuscript or to call Karen Erickson at 919-966-5853.

Sincerely yours,

Deborah Tate, PhD
Associate Professor
Editorial requests:

1. Please include the date of registration with your trial registration number at the end of your Abstract.
   Included

2. Please include the names of all ethical bodies that approved your study in the various centres involved, along with the reference numbers given with approval. If you do not wish to list them all in the methods section, please include the list as an additional file and refer to this in the methods section.
   Included

3. Please include a Conclusions section after your Discussion. This should state clearly the main conclusions of the research and give a clear explanation of their importance and relevance. Summary illustrations may be included.
   Included after the Discussion section.

4. Please include a list of abbreviations used and their meanings, after your Conclusions.
   A list of abbreviations is now included after the newly added Conclusions.

5. Please include a Competing Interests section after your list of abbreviations. If the authors have no competing interests, please state: "The authors declare that they have no competing interests."
   This statement has been added.

6. For completed randomised controlled trials, Trials requires the submission of a populated CONSORT checklist and flow diagram. If appropriate, please provide the flow diagram and checklist as additional files (http://www.trialsjournal.com/authors/instructions/research#preparing-additional-files). A Word file of the checklist and flow diagram can be downloaded here: http://www.consort-statement.org/consort-statement/.
   Our trial is not completed and this paper does not report our main results. We will include a consort checklist in the main results paper.

Reviewer 1:

Reviewer's report:
This is a very well written paper examining recruitment methods and costs for young adults for a trial of weight gain prevention. The study is novel and addresses the major challenge of recruiting young people for a prevention study. It has relevance for the reasons pointed out by the authors, particularly to prevent the huge problem of obesity. The study is clearly described, the methods are appropriate, the discussion is well balanced.

I do not have any further comments or suggestions to improve the paper.

Thank you for your comments.

One minor point: Last paragraph in Results: stated that $350 is the cost for mass mailing, 6th paragraph in Discussion, $360 is stated. Please correct.
The recruitment costs have been carefully reworked to adjust the flyer costs from the print costs associated with mass mailing, so this has changed throughout.

**Reviewer 2:**

Reviewer's report:
This manuscript describes the strategies, yield, and costs for recruiting participants for a weight gain prevention program. Importantly the authors examine strategies to recruit young adults, a hard to recruit population. They also examine success of each recruitment strategy based upon percentage of individuals recruited and cost per individual. The comments below are minor essential revisions, which I believe will help strengthen an already outstanding paper from a sound research team.

Abstract
- The abstract provides a good overview of the aims of the manuscript. Both the abstract and subsequent sections refer to a “recruitment plan,” however, what appears to be missing in this description is the qualitative work and message development. The title references message development, which is a significant strength on the manuscript, however, that seems to get lost in the abstract, introduction and discussion.

In the abstract, introduction and discussion we now refer to the qualitative work and message development piece of the study.

Introduction

The introduction provides a comprehensive overview for explaining importance of weight gain and the associated risks; however, there is no real mention of current recruitment strategies/efforts. What are the limited data mentioned on page 3, line 16? - Please provide literature, if any, currently regarding general cost of recruitment strategies.-

The third paragraph of the introduction has been expanded to describe two weight gain prevention studies that have documented the difficulties of recruitment for weight gain prevention and one that described associated costs per participant recruited to provide context for the present study.

Providing an outline for the following three goals was helpful to orient the reader to the purpose of the paper. However, as mentioned above, Goal 1 needs to be better detailed.
1. Describe development of recruitment plan specific to young adults and weight gain prevention
2. Present data on recruitment strategies used and their yield
3. To report on costs associated with recruitment

Goal 1 has been slightly reworded to better reflect our aims. It now reads 1) to describe the development of recruitment messages and a general recruitment plan. Greater detail has been provided on both of these and they each have a heading in the Methods Section. A new section was added called “Recruitment Plan”.

Methods

The formative phase is a significant strength of the current manuscript. However, it is unclear if this is part Goal 1? The authors should consider including this as separate goal, as well as providing more information in the discussion section regarding these findings. I think this formative work will be of significant interest to others in the field.

As noted above, we have included the formative phase as part of Goal 1 of the paper as we conceptualized the formative phase as informing both message development and contributing to
our overall recruitment plans. This has been clarified and expanded. Discussion of the formative work and its use in our study has been added to the discussion.

We agree that the formative was a strength of this work and will make a valuable contribution to the field. With this recognition we expanded our qualitative methods (e.g., detailed transcripts were coded and more formally analyzed) well after our study recruitment was launched. We have prepared a separate manuscript (Bordogna et al., in preparation) devoted the findings of this work, particularly with regard to young adults perceptions of weight gain.

Additionally, more specific detail is needed as to the specifics of the recruitment plan. Some detail regarding the recruitment is provided (e.g., health fairs, sending emails), but a rationale for each of the selection of each of these strategies was not provided. For example, why were email lists chosen as a target, and why were ones that charged a fee decided upon? Also, what was the frequency/timing of the different types of recruitment strategies, and how were those determined?

A detailed recruitment plan section with the rationale we chose is now added to the methods section. We also provide specific rationale for the selection of a paid email list in our last cohort in the email section. The frequency and timing of each recruitment strategy is displayed on Figure 2. We followed a continuous recruitment strategy, using real-time recruitment yields to guide our efforts. This information is now added to the text.

Finally, the descriptors in the text don’t match Figure 1. For example is a “community event” what you refer to in the text as a health fair?

Thank you. We have corrected this in the text and figure to match.

The structure of the methods could have been improved by an additional heading or two to help clarify to link the various subsections of the Methods back to the three primary goals.

New headings have been added to help link the subsections with the goals.

Results:

This does an effective job of linking the reader back to Goals 2 and 3. –

Table 2: Why is there no cost associated with flyers and community events? One would presume there would likely be costs associated with printing flyers and personnel to distribute/post? Also, the authors might consider using “$0” rather than “N/A” since individuals were actually recruited using these methods? (With not applicable it makes it seem like these recruitment methods were N/A, not that they were cost-free.)

As noted above, we have adjusted the allocation of costs to reflect printing costs of flyers but have not included personnel costs of any recruitment methods for the reasons previously provided.

(Minor Edit: Typo on page 12, line 11: 13 to 25 # 13 to 25.)

Thank you. This has been fixed.

Discussion:

The discussion explains the progression from formative work, to message development and recruitment planning, but it seems the recruitment plan still isn’t as clear. Similar to other points mentioned above, the
discussion could be enhanced by a further description of the overall recruitment plan and what recommendations this study team would have for future trials in this area.

As suggested, we have added details about the recruitment plan.

The authors mention that messaging for males could be more specific. I am curious as to whether the qualitative data provided some insight regarding this point.

We have added additional discussion to address this issue.

Can you explain why specific recruitment efforts were made for men and minorities? (Perhaps even answer that sooner in the introduction so as to help readers understand the importance of the desired recruitment of 25% for men and 25% for minorities.)

The rationale for specific recruitment efforts has been added to the introduction and methods sections.

Please provide some context regarding the overall cost of the recruitment plan. Specifically, is $144,000 typical for a study of this size and scope?

Recruitment costs for this study (without personnel costs) were approximately $141,000. We have added reference to published costs of other studies in the discussion.

Finally, dovetailing recruitment for another study with this one enabled referrals between the two. While this was $0 expense, this strategy yielded 2% of the sample. It might be useful to discuss this strategy in more detail, and how other studies might be able to capitalize on this approach.

We have addressed this in both the methods and the discussion sections.