Reviewer's report

Title: Recruitment of Young Adults for Weight Gain Prevention: Message Development, Methods, and Costs

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Reviewer: Melissa Napolitano

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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.

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.
- 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

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.
- 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 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? 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?
- 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.

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

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.
- 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.
- 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.)
- 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?
- 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.