Author's response to reviews

Title: Social media use by community-based organizations conducting health promotion: A content analysis

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Author's response to reviews: see over
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Natalie Pafitis
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Dear Dr. Pafitis:
Thank you for the opportunity to revise and resubmit our article entitled, “Social media use by community-based organizations conducting health promotion: A content analysis,” for publication in BMC Public Health.

We have addressed the reviewers’ comments, as described in the attached itemized list. We have expanded our discussion of the rationale for studying social media use in low-resource settings / targeting underserved groups. We believe that this is an important area of inquiry given the potential of new technologies to create and exacerbate health disparities. In addition to the theoretical justification, we have also added data describing the socio-demographic characteristics of the communities served by organizations in our study. We have also added clarifying details throughout.

Our sincere thanks to you and the reviewers for the thoughtful and important feedback; we believe that the manuscript has become stronger as a result. We hope you and the reviewers agree with our assessment.

Sincerely,

REMOVED FOR REVIEW
**Reviewer 1**  
**Comment 1:**  
Consider in your use of websites and search terms to generate your list of eligible organizations to augment your terms to include faith-based organizations, community development corporations, and neighborhood associations. Many of these organizations engage in public health activities which directly involve the community. Admittedly many of the activities these organizations engage in may not address health directly but issues such as housing, employment, and hunger are proximate determinants with health implications. This also suggests you may want to consider detailing what you mean by health promotion.

**Response:**  
We agree with the reviewer that a wide range of organizations are involved in improving the health of communities, whether directly or indirectly. Our list intentionally included organizations that may not have a primary focus on health, but engage in health promotion activities. An example is a housing program that addresses asthma concerns. Your comment prompted us to revisit our description of the list generation process and we realized that we did not communicate our holistic approach effectively, so we have rewritten this section and have also added a level of detail regarding what we mean by health promotion. These changes can all be found in the beginning of the Methods section. While we agree that additional organizations, such as those addressing employment, have an impact on health, it was beyond the scope of our study to conduct research on them if they did not explicitly have programming related to health promotion.

**Comment 2:**  
May want to augment/rethink basis for assessing frequency of postings. Authors refer to recommendations from the social media platforms themselves rather than considering the many nuances to determining recommended posting frequency. Although this may have been beyond the study may need to consider currency and durability of the post and other qualitative aspects which would lead one to reconsider recommendations from Facebook and Twitter.

**Response:**  
We agree that there are many factors that drive posting frequency. Given the dearth of recommendations for the non-profit sector, we sought to provide reference points from both the platforms and available research. To address this comment, we referred back to the literature and have added additional detail about frequency of postings to provide reference points. For example, we have added data from Zhang and colleagues (2011) about recommendations for frequency of posting on Twitter and the potential impact on consumer engagement. As to assessments of the currency and durability of the posts / tweets, this was beyond the scope of this project, but is certainly worthy of inquiry.
Comment 3:
What is the relative value of brand promotion for a non-profit? If most of the posts dealt with self-promotion should consider digging deeper into what that represents. If it represents a notification that certain services are available and their audience should use them then frequent (ideally automated posts) make sense - if promotion is simply promoting the name or brand then less frequent posts would make sense. It was not clear with the definition provided if service offerings and availability is part of self-promotion.

Response:
Organization promotion (referred to as self-promotion in the earlier drafts, but renamed for greater clarity) is an important part of the communication mix for a non-profit in the same way as for a for-profit organization. Here, organization promotion included notification of service offerings as well as information about past events. We have added detail to Table 2 (for this and the other categories) so that it is easier for readers to understand our classification scheme.

Comment 4:
Although unfamiliar with the demographics of the 3 locations you may want to consider referring to data (Census?) that represents number of Internet users. If CBOs are concerned directly with the health of the poor it is less likely this audience will be accessing social media (compare census data on poverty with internet users and your audience is likely to be smaller). Therefore you would want to consider CBOs use of SMS in reaching audience (and particularly clients) comparing that with reach of social media platforms that require Internet access. Harder to draw conclusions from this study without first considering demographics and capacity for Internet access of targeted audience.

Response:
We thank the reviewer for this important prompt for the data describing the population. This was an oversight that we recognized after submission and we appreciate the opportunity to present this important data. We have added socio-demographic data to describe the population and created a new Table 1.

We also appreciated the larger point about appropriateness of social media for these specific communities. Although we were unable to find specifics about Internet penetration for the three communities under study, we have expanded our discussion (in the Introduction and Methods sections) about the appropriateness and utility of studying social media in these types of communities. We view communication inequalities (differences in ability to access, use, and act upon information) as a potential driver of health disparities and suggest that as access grows, these technologies have the potential to be used as tools to reduce and eliminate disparities. Thus, understanding current trends and ensuring that non-profits serving the underserved are primed to use these technologies is an important way to protect against creation or exacerbation of disparities. We have also added some data to highlight promising trends in smartphone access among minority populations, as well as recent evidence from a randomized controlled trial we conducted that emphasizes the important role social media plays once access issues are resolved.
Reviewer 2

Minor Essential Revisions

1. There appears to be a citation error in the introduction, paragraph four: the CDC guidelines for organisations to use social media are reference number 17, but the in-text citation given is number 16.

Response:
Thank you, we have corrected the error.

2. This paper focuses on CBOs conducting “health outreach” yet health outreach is never defined. This should be stated in the methods i.e. what does health outreach consist of (as outreach in particular has different meanings within different health sectors).

Response:
We appreciate the prompt to consider our terminology. We have replaced “health outreach” with “health promotion” and have included a definition in the methods section.

3. Methods, codebook: I believe that each unit of information could have been coded under more than one category (it took me some time to realise this) – this should be explicitly stated for clarity.

Response:
We have simplified our description of the coding and have stated this explicitly. We also added an example. This is also in the notes for the table to ensure it is clear to the reader.

4. Results, paragraph two: It is unclear if the one-third refers to the total universe of organisations surveyed or to those with a Facebook account. This should be made clearer e.g. by including numerator and denominator for this figure.

Response:
The one-third referred to the total universe of organizations and we have clarified this in the text.

5. Table Two: it is unclear whether the numbers in the tables refer to the number of posts or proportions – from the main text I understand it to be proportions. This should be made clearer to the reader (e.g. inclusion of % symbol, more descriptive caption, etc.).

Response:
We have reworked the title of the table and the column headings to emphasize that we are reporting percentages.

6. The data for this study was gathered from November 2011 to January 2012. As this covers a holiday period, it would be very useful for the authors to comment on if and how they believe this timing may have effected their results, especially given each organisation was evaluated in two day blocks (i.e. one might expect the frequency and content of posts in the 30 days prior to
January 10th to be different to what would have been obtained had the same organization been evaluated for the 30 days prior to November 10th)

Response:
We have added a few lines in the limitations portion of the discussion to acknowledge that there might have been variation due to the holiday period. We attempted to mitigate this challenge through random assignment of data collection order and through use of a 30-day collection window, but this is ultimately a limitation of the data and we have identified it as such.

Discretionary Revisions
1. The authors may wish to briefly explain the different type of Facebook pages, and thus why some organisations had “likes” and others “friends”. This is important for readers less familiar with Facebook, particularly as “like” has two meanings in this paper (one, number of people following the page, the other, an ‘interaction’ with an individual post). The two meanings of likes should probably also be made clearer in the methods section.

Response:
We have added a layer of detail in the methods section to describe overall engagement. To that end, we described the different types of pages and “likes” for Facebook, defined “followers” for Twitter, and defined “subscribers” for YouTube.

2. As the data on engagement is very skewed, I would suggest it is more meaningful to report medians and minimum/maximum values, rather than just averages in the results section

Response:
This was a very helpful suggestion and we have added this for the key engagement metrics.

3. The authors may wish to cite the following review also published in BMC Public Health that addresses the use of social media within health, and finds similar findings in relation to user engagement (or lack thereof) Gold J, Pedrana AE, Sacks-Davis R, Hellard ME, Chang S, Howard S, et al. A Systematic Examination of the Use of Online Social Networking Sites for Sexual Health Promotion. BMC Public Health 2011;11(1):583

Response:
We appreciate the suggestion and have added the citation to our paper to strengthen the Methods and Discussion sections.