Author's response to reviews

Title: Integrating an Ecological Approach into an Aboriginal Community-based Chronic Disease Prevention Program: A Longitudinal Process Evaluation

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Author's response to reviews: see over
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Dear Dr. Jigish Patel,

We are pleased to submit a revised version of the research article entitled, "Integrating an ecological approach into an Aboriginal community-based chronic disease prevention program: A longitudinal process evaluation."

The authors would like to thank the two reviewers for their insightful comments. We feel that our responses to these comments, as outlined below, have strengthened the integrity of the manuscript. Changes to the manuscript have been highlighted in yellow. We note that upon a final review of the manuscript, our community reviewers asked that “household” setting be changed to “family” setting to reflect the essence of their culture. We hope this change will be acceptable to you and the reviewers.

We look forward to your response on this revised version of the manuscript.

Warm regards,

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Response to Dr. Kim Raine:

Query re: the ecological complexity score: “A score of 0 was given to an organisation that employed only one intervention strategy, independent of setting and type of strategy.” Could you please clarify. I would expect that if only one intervention strategy was applied, but it was at a high level distant to the individual (e.g. policy change to promote adequate income) that this single intervention would deserve a higher complexity score, as the implications, although perhaps not explicit, would be important for the individual (e.g. Adequate income to afford healthier foods). Would such an intervention have been coded as a 0, or would the implications on the individual (HP – POL- IND) be recognized in the coding scheme?

This point is well-taken. Important public health wisdom and best practice principles, as noted by the reviewer, are not adequately captured by the algorithm. We see that this and other adaptations are necessary to the algorithm, which could have been made more explicit in the limitations section of the manuscript. The following text has been added:

“Moreover, intervention strategies that include distal POL targets (e.g., HP→ POL → IND) in which participants are recruited from societal or supranational settings carry the same weight as an intervention strategy in which clients are directly targeted (HP→ IND) through a proximal organisational setting. The coding algorithm as it stands may not adequately discriminate between and/or differentially weight such types of intervention strategies, particularly at the low end of the scale. This study has inspired further development of the ecological algorithm.”

Please refer to Table 4 early in the results section so that the reader can get a flavour of the types of interventions implemented. (Table 4 may have to become Table 1)

We moved Table 4 to Table 2, to follow identification of the intervention targets in Table 1.

With respect to the barriers to implementing an ecological approach, do these conclusions arise from data collected or are they derived from the research team’s reflections on the process? If they are reflection, please identify them as such.

Thank you - the following text has been added to qualify that these barriers are reflections. “These barriers represent the reflections of the study co-authors, which include two community members.”

In Background, Paragraph 2, The example given for “Environment-focused strategies modify one or more aspects of a priority population’s social, political and/or physical environment” is unclear. How does the “development of a school garden to facilitate nutrition education among children” illustrate an environment-focused strategy? Please be explicit.

The first example on environment-focused strategies has been elaborated upon and the second example on person-focused strategies has been clarified (in bold): “One example is schools establishing a school garden to increase the availability of fruits and vegetables for classroom snacks and for healthful foods to be sold at break and lunch by the canteen. Person-focused strategies engage the priority population in activities that modify
their knowledge, attitudes or skills related to one or more behavioural risk factors like, for example, teachers providing students with information on healthy foods.”

In the abstract, I would recommend the statement “It is the first such study of its kind.” Other studies have attempted to analyze application of ecological models in health promotion, and these have recently been systematically reviewed (see Richard, Gauvin & Raine. Ecological Models Revisited: Their Uses and Evolution in Health Promotion Over Two Decades, Annual Review of Public Health, Review in Advance first posted online on December 21, 2010. DOI: 10.1146/annurev-publhealth-031210-101141).

We take the above to mean removing the statement “It is the first such study of its kind” from the abstract which we have done.
Response to Dr. Stacie Metz:

Abstract:
- Results subsection: May wish to define what the ‘X’ or ‘X-X’ mean or leave out for the abstract

We edited the abstract to clarify the meaning/definition of the strategy types.
“Direct (HP → IND) and indirect intervention strategies (i.e., HP → INT → IND, HP → POL → IND) were used most often; networking strategies, which link at least two targets (i.e., HP → [ORG-ORG] → IND), were used the least.”

Methods:
- Page 8: Explicitly define the 'X' - insert (X) into the sentence... “Where there is a proximal target designated for change (X), the intervention pathway is specified as ‘indirect’ and intervenes on the ultimate target through another medium (e.g., HP > X > IND).”

Thank you - we have incorporated this change.

- Page 9: Describe in more detail what the networking intervention strategy entails, and note what the ‘X-X’ means

Thank you for pointing this out. The following text has been added.
“A networking strategy involves the linking of at least two targets by the program team (HP → [X-X] → IND). One such example is bringing together organisations in a coalition to create a bike path to benefit school children (HP → [ORG-ORG] → IND) [14].”

Table 2:
- Add superscripts (1, 2, 3) to Year 1, 2, and 3 as done in Table 3

Thank you for pointing this out in the review. We have added the superscripts to the table.