Reviewer's report

Title: Protocol for systematic reviews of determinants/correlates of obesity related dietary and physical activity behaviours in young children (preschool 0-6yrs): evidence mapping and syntheses

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Reviewer: Devan Kansagara

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The proposed review aims to systematically evaluate both quantitative and qualitative bodies of literature examining factors associated with obesity-related health behaviors. This is an important topic for which few comprehensive syntheses are available. Strengths of the proposed review include its comprehensive approach, robust review methodology, and incorporation of qualitative data.

However, the feasibility of the proposed review is uncertain. The scope of what the authors propose is enormous – an evidence map (presumably to help identify major gaps and strengths in the literature), a review of interventions studies, and a review of the association of risk factors with behavior. Not only is the reported abstract yield very high, the protocol also promises detailed data abstraction and quality assessment of both quantitative and qualitative bodies of literature. The proposed review would then also combine what is learned from both bodies of literature into a single comprehensive synthesis. Though such an approach sounds theoretically promising, I have concerns that this will ultimately yield too much disparate data for a cohesive synthesis of results.

For instance, various observational studies may focus on different hypotheses and, therefore, test a heterogenous set of associations. Some authors may focus on racial disparities, others may focus exclusively on effects of local government policy. And in each of these studies, authors will consider different sets of potential confounders. In the end, I suspect it will be difficult to organize the results in a way that will be informative to researchers, policy makers and others. Consider organizing the study selection and data reporting according to the conceptual framework you identified in the introduction (the socio-ecological model). It would be useful to know the robustness of literature examining each level of determinant (individual, family, community etc). I would also consider focusing on studies that were testing pre-specified hypotheses, rather than studies reporting various post-hoc associations.

It would be useful to say something more about evidence mapping in the background and/or methods. Currently the background is lengthy – the essential points that the determinants of obesity-related health behaviors have not been well-studied in pre-school age children could be summed up more succinctly. This will leave room to expand on evidence mapping (whose content and
purpose will probably be unfamiliar to many readers).

A few other points worth clarifying:

- page 9, methods, intervention studies – I’m not sure I understand the rationale for defining high-quality as any study meeting more than 3 quality criteria rather than consideration of whether or not the identified methodologic deficiencies carry a high risk of bias. A study could meet 3 or more of these criteria and still carry a high risk of bias.

- Page 7, inclusion criteria – how will you define “modifiable and non-modifiable” factors. This could certainly be a subjective determination. Poverty could be associated with some of these behaviors and, presumably, could be considered by some to be a modifiable factor and non-modifiable by others.