Reviewer’s report

Title: A pragmatic lifestyle modification programme reduces the incidence of predictors of cardiometabolic disease and dysglycaemia in a young healthy urban South Asian population. A randomised controlled trial

Version: 0 Date: 01 May 2017

Reviewer: Melinda Carrington

Reviewer's report:
This paper compared a 3 monthly versus a 12 monthly lifestyle modification program on the incidence of new onset cardio-metabolic disease. Findings showed that more frequent lifestyle modification resulted in a reduced incidence of cardio-metabolic risk factors, specifically less glucose abnormalities in both young (6-18 years) and middle-aged (18-40 years) participants and lower BP in younger individuals. There was less evidence for what caused these effects however with no weight changes, a strong reliance on self reported physical activity information over the past 7 days and no dietary changes reported. Absolute (adjusted) differences were modest and not clinically significant between the groups. Results should be interpreted with caution considering low endpoint information in some cells (e.g. new onset T2DM in <18 years). There is uncertainty that the intervention accounted for the differences shown.

Other considerations are:

1. Could the authors comment on the likelihood of early onset diabetes being type 1 and not type 2 given the young age of the cohort? There may be the potential that they are seeing the very early stages of the condition (type 1) develop and the suggestion of T2DM per se may be incorrect.

2. The intervention involved quite specific dietary advice yet there were no data regarding change in diet over time. The sentence at the end of the Discussion (pg 16, line 53) should be modified to correct this overstatement.

3. Was the IPAQ long or short form used? How was this administered for the younger children/teenagers given it is recommended for use in 15 to 69 year olds?
4. At what point in the assessment were participants asked about their readiness for behaviour change - before or after becoming aware of their results? The timing of this could have a significant impact on their response.

5. Despite reference to the ADA criteria for diabetes diagnosis, the cut-offs used would be useful to be documented in the manuscript. Same for JNC7 definition of hypertension for <18 year olds.

6. The Discussion is too long and efforts to shorten it should be made.

7. Table 1 - include CIs and p-values.

Minor suggestions:

8. Page 4, line 51. Add years of follow up + [range].


10. Page 8, line 46. Reference to a "fail-safe outcome" is confusing. What is meant by this? Clarify.

11. Page 8, line 54. Death (all cause?) seems to be an outcome (Table 2) but is not documented in the Methods. Consider mentioning it in Methods also.

12. Page 11, line 15-20. Add smoking and alcohol consumption to Table 1.

13. Table 1, line 50. Total cholesterol for control lifestyle modification group needs correction.

14. Supplementary Table 3. What is meant by "Increased PA (pre-action to action phase)"? Clarify.

Are the methods appropriate and well described?

If not, please specify what is required in your comments to the authors.

Yes

Does the work include the necessary controls?

If not, please specify which controls are required in your comments to the authors.

Yes

Are the conclusions drawn adequately supported by the data shown?

If not, please explain in your comments to the authors.

Yes
Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
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