Reviewer’s report

Title: Population attributable fraction of type 2 diabetes due to physical inactivity in adults: a systematic review

Version: 2 Date: 24 December 2013

Reviewer: Edward Archer

Reviewer’s report:

Review: Population attributable fraction of type 2 diabetes due to physical inactivity in adults: a systematic review

This systematic review sought to provide a best estimate of the population attributable fraction (PAF) for type 2 diabetes mellitus attributable to physical inactivity and the absence of sport participation.

Major Compulsory Revisions:
1. This review is a potentially important addition to the literature but suffers from a number of resolvable issues.
   a. The paper needs a major re-write with a competent editor. The research questions are clearly posed but the paper’s structure inhibits a clear understanding of how the study addressed each portion.
      i. The overall structure and organization of the paper (at times) appears confused and redundant.
      ii. The paper should be re-organized to provide 1) a review of the variation that exists in PAF across the extant literature and 2) an analysis of the potential explanations for the demonstrated variation. At this point, neither point is entirely clear.
      iii. Writing & Grammar
         1. There are numerous grammatical and typographical errors throughout.
         2. Poor proofreading:
            a. E.g., In the abstract, the sentence in line 35-36 is duplicated in lines 36-37.
               i. Line 59: the word “activity” is missing after leisure-time.
               ii. Line 267: “There was no clear pattern emerged.”
               iii. Line 139: “Was clear definition provided…”
            3. Poor sentence structure:
               a. Beginning a paragraph with a conclusion without support.
                  i. E.g., Line 232: “This is the first reason…” To state that “this” is the reason before giving the reader any indication of what “this” refers to is troublesome and indicative of poor logical structure.
b. Second sentence on lines 232-233 is nonsensical.

4. Lines 62-67: This paragraph should be rewritten to emphasize what is known and why the present work is needed.

b. There are numerous statements that are suggestive of the importance of this work but the presentation detracts and obscures its value. (E.g., “Further this study provides an initial step toward developing criteria to report and evaluate PAFs in the future.”)

1. The criteria for developing a consensus based on the present data need to be clearly and explicitly articulated. At present, they are not.

2. Concerns that need to be addressed

a. Defend the “Quality assessment questions”:

i. How was the validity of the seven questions ascertained?

b. Explain the impact of the attenuation from questionnaire (i.e., self-report) vs. objective measures. What does this mean for the body of literature?

i. Ditto for T2DM.

c. Improve upon the explanation of the impact of the different operational definitions of inactivity on PAF and the necessity of the distinctions.

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Not suitable for publication unless extensively edited

Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.

Declaration of competing interests:

I declare that I have no competing interests.