Reviewer’s report

Title: Title: A meta-analysis of weight gain in first year university students: the case for the Freshman 15?

Version: 1 Date: 10 March 2015

Reviewer: Chandra Jackson

Reviewer’s report:

I. Strengths
1. Of public health importance for a particular population
2. Clear objective
3. Study design – metaanalysis
4. Only prospective studies included
5. Clear public health implications that can be readily understood

II. Weaknesses:
1. Major points:
   i. Were there any language restrictions for study selection? Either way, this
   ii. How was missing data handled? Include a description in the manuscript.
      1. List how many studies were missing data and were not used in the analysis in
         the results section of the manuscript.
   iii. Include quality assessments for each study in Table 1.
   iv. In the discussion section, explain why (e.g. new independence, stress, restricted sleep) we think we’re observing weight gain.
   v. List lack of ethnic diversity and study duration as limitations.
      1. What ethnic makeup of each study mentioned. If so, include it in the table. If not, mention it as a limitation with regard to generalizability of findings.
   vi. Figure 1 needs to be better illustrated.
      1. “Records” needs to be replaced with something universally understood like “studies.”
      2. Authors needs to list categories for exclusion criteria instead of simply providing the number of excluded studies. Why were they excluded and how many fit into a particular category.
      3. I would suggest moving “records screened” and “records assessed” to the middle of the figure with the 2 “records excluded” boxes moved to the side of the page. The arrows should also touch from one box to the other. Otherwise, it takes unnecessary effort to understand what the authors are trying to convey.
2. Minor points:
i. The manuscript could be better written in general.
   1. The authors actions should be described in past tense (e.g. Our study aimed to…)
ii. There needs to be more detail added to the abstract.
   1. Add one sentence regarding the public health importance to the background section of the abstract.
      a. “Given adolescent weight gain is highly linked to overweight and obesity in adults,…”
   2. “Our metaanalysis aims at updating the literature” should be replaced with “aimed to update the literature.”
   3. Provide some examples of the databases used.
   4. Add average length (number of months) of studies
   5. Include subgroup results to the abstract results section
   6. “It is clear that across the globe” is far reaching as these studies were conducting in a limited number of regions.
   7. “Done in a systematic way” is colloquial. I would rather read the systematic approach than to be told that it was systematic.
   8. Attempt to add the average quality of the studies to the abstract
iii. In the Introduction, “teenage” should be replaced with “adolescent.”
iv. In the Introduction, “battle” seems to colloquial to me.
v. Provide a reference for the Ottawa-NewCastle scale the first time it is mentioned.
vi. Under the ‘analyses by quality of study’ subheading, “we used Owaatta-Newcastle scale to evaluate the quality of studies of all 32 studies meeting the inclusion criteria”….should be included in the methods section (and not results section) of the manuscript.
vii. The section labeled “Heterogeneity and bias analysis” should be listed before the subgroup descriptions.
   1. Under this subheading, replace “we also analyzed a publication bias…” with “we also analyzed the potential for publication bias…”
viii. The authors state that the 1.4 kg weight gain is five times higher than in the general population over a year.
   1. Is this true across the globe? What about general population in this age group vs. the general population of all ages.
ix. In Table 1, consider adding the standard deviations to the “mean weight gain (kg)” and “mean weight gain in weight gainers” columns.

III. Considerations:
a. The title should be edited. Perhaps, “A metaanalysis of weight gain in first year university students: is Freshman 15 a myth?”
b. Instead of claiming that some studies were excluded because of “poor” data reporting, it would be better to describe it as “less comprehensive” data reporting.

i. Consider citing the studies that were excluded

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

**Quality of written English:** Needs some language corrections before being published

**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**

I declare that I have no competing interests