

## Review of: "Obesity and life events: the hypothesis of psychological phenotypes"

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Potential competing interests: No potential competing interests to declare.

The article is engaging and on an interesting topic, aiming to identify psychological phenotypes of people with obesity based on traumatic life histories. However, I felt the article lacked a clear narrative structure. In particular, it was not really clear what the overall aim of the paper is and how each of the sections connect together, as they feel a bit disjointed. For example, it's not clear what the the relation of the "Obesity Metabolic Phenotypes" section is with the overall aim of the article?

It's good that the author recognises the complexity of obesity at the start of the article. However, following sections of article feels quite reductionist about the causes of obesity, limiting it to those who developed obesity because of a traumatic life event, and those who didn't. For those who's obesity is not caused by traumatic life events, they are considered to have been affected from obesity since birth, in a constant diet condition, and have a stable body image. This feels like quite a sweeping characterisation of a likely quite diverse group of people, who's reasons for developing obesity are nuanced, and who's experience of obesity are likely varied.

For people who develop obesity because of a "traumatic life event", some of these include childbirth, marriage, moving which may not be "traumatic" for everyone. It is also likely that there are people with obesity who don't fit into either group?

It would be good for the author to reframe the psychological phenotypes as only a small part of a big picture, and to try and explain more clearly the benefit of identifying the psychological phenotypes (e.g for clinical practice, early intervention/prevention?). It may also be better to reframe the second group as obesity caused by a "significant life event".

It would also be good if the authors could more clearly outline where the development of these two groups come from. In the conclusion they say they "The present findings add further empirical data to the literature", but the paper reads more as a literature review without presentation of any empirical data. It is unclear if the characterisation on phenotypes is based on their own clinical observations or just prior literature, as there is no description of methods used. This links back to the paper needing a clearer narrative structure and overarching aims.

Also related to this, the authors would also benefit from more clearly referencing throughout, particularly when explaining each of metabolic phenotypes. Again, quite a few sweeping statements are made (e.g. to say all women over 55 with a BMI <25kg/m<sup>2</sup> are normal weight obese (NWO)), and at the very least these should be referenced.



## A couple of specific minor points:

- I wouldn't say energy imbalance is a definition of obesity, more that it's a simplistic understanding of the cause of obesity.
- There's an implication that "physical inactivity, overeating, and high-fat dieting" aren't important causes of obesity I
  appreciate the authors are trying to highlight that the causes of obesity are complex, but a lot of the distal causes of
  obesity still effect weight status through activity patterns and diet.
- The final paragraph in section 2 is very long and could benefit from being broken up.
- It would be good to define what is meant by psychogenetic compared other similar terms used (e.g. psychological, psychosocial).
- The authors would benefit from rereading for typos/grammatical errors in some places the construction of sentences don't make sense, and it feels like words are missing.
- Could be good to explain what is meant by first- and second-generation studies.