Reviewer's report

Title: Associations of Body Mass Index, Weight-related Concerns and Behaviors With Eating Disorders Among Non-clinical Chinese Adolescents

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Reviewer: Lien Goossens

Reviewer's report:

Major concerns:

The authors succeeded in addressing most of the comments raised by the reviewers. This has definitively improved the manuscript. However, several important concerns remain. Overall, the most essential concerns that still remain are (1) the authors’ hypothesis of mediation and (2) the operationalisation of the main variables.

(1) The authors mention Stice’s model in the Introduction as a response to the request for more theoretical background. However, based on this model, one would expect overweight to lead to body dissatisfaction, which may in turn generate dietary restraint (or negative affect) and this may eventually lead to eating disorder (ED) symptoms. The authors however state that (see introduction page 6, last sentence) based on the Stice model, they hypothesise that weight control concerns and behaviors mediate the association between BMI and ED symptoms. In their analyses, the use the EDI scale Body Dissatisfaction as a possible ‘ED symptom’ (in other words: as an outcome variable), whereas in the Stice model, this variable is considered a cause of dietary restraint, rather than an outcome.

(2) This former issue brings me to my two concerns with regard to the operationalisation of the main variables:

- regarding the outcomes (ED symptoms), the authors use all EDI subscales. However, as they correctly mention in the methods section (page 10, first paragraph), only BD, B and DT relate to diagnostic criteria of EDs. The other subscales are to be considered psychopathological or personality correlates of ED symptoms, rather than real ED symptoms. Especially when investigating underlying (mediating) mechanisms of ED symptoms, it is important to only use real ED subscales as outcome (like the Bulimia subscale). The low self-esteem subscale for example may not be seen as an ED symptom. Especially since the authors base their hypothesis on the Stice model, low self esteem may rather be considered a mediator (affectregulation pathway) that an outcome variable.

- regarding the mediation variables: the authors are not always consistent. For example, in the first sentence of the abstract, they indicate that they will examine ‘weight-related concerns and behaviours’ as mediation variables. In the introduction (page 5, last paragraph), they provide a definition of this variable.
However, in their definition (and also in their questionnaire), the concerns are just the same as ‘thinking about a weight control behaviour’. This latter variable should then be defined as a ‘weight control concern’ instead of a ‘weight-related concern’. Those two concepts are alternately used throughout the entire manuscript, but are in fact two distinct concepts. Weight-related concerns are much more than thinking about weight control behaviour (see also: Fairburn, Cooper & Shafran 2003).

Minor comments:

Background:
- the introduction is very long, also as mentioned above, the concepts ‘weight related concerns’ and ‘weight control concerns’ are used in the entire manuscript but are in fact two distinct concepts.
- page 4, last paragraph: extreme emotions — serious emotional problems (repetition in the same sentence)
- page 6, second paragraph, last sentence (additionally….and behaviors): this is repetition from the last sentence of page 4 (overweight as risk factor for EDS)

Results:
- page 12: the EDI cronbach’s alpha’s should be integrated as part of the description of the EDI in Method section

Discussion:
- page 16: when describing the developmental path to EDs, the authors mention that increased body size may lead to increased body dissatisfaction, then to unhealthy weight control behaviours and ultimately to increased risk for negative psychological consequences. This idea is however not in line with the author’s main hypothesis, that is, that body dissatisfaction is an outcome of unhealthy weight control practices, rather that a cause. This should be clarified.
- page 17, second paragraph/page 18, first paragraph: be careful with the use of the term ‘predictor’ since results are cross-sectional
- page 18, second paragraph: the link between the results of the present study and the affectregulation pathway is unclear and should me clarified some more.

Level of interest: An article of limited interest

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