

Peer Review Report

Review Report on Ideal Weight and Weight Discrepancy: A Study of Life Course Trajectories and Intercohort Change in the Netherlands

Original Article, Int J Public Health

Reviewer: Frank Heiland

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EVALUATION

Q 1 Please summarize the main findings of the study.

The paper analyzes the relationship between age and birth cohort (main ind. vars) and ideal BMI and weight satisfaction (dep. vars) by sex in nationally representative 2007–2018 data from the Netherlands. Ideal BMI and satisfaction are found to be (positive) linear and u-shaped in age, respectively. Across birth cohorts (controlling for age), there is evidence that ideal weight increases (modestly) while satisfaction with weight declines. The former relationship appears to be mediated by own BMI.

Q 2 Please highlight the limitations and strengths.

Strengths: The paper provides an original analysis of the relationship between age and birth cohort (main ind. vars) and ideal BMI and weight satisfaction (dep. vars) by sex in nationally representative data from the Netherlands. The analysis uses large longitudinal samples. For the most part, the analysis is carried out competently and the discussions are insightful.

Weaknesses (See comments to author for details): (1) The paper only explores person's BMI as potential mechanism variable. No other intervening variables and covariates are used. Consequently, the study does not go very far in terms of analyzing what drives generational changes in the Netherlands. It would be significantly strengthened by discussing results from some additional analyses using models with both personal and (cohort) mean BMI (testing more directly for weight-related norm changes and thereby expanding on important earlier related work such as Burke, Heiland and Nadler 2010, see full reference below) and results from models using socioeconomic predictors of weight satisfaction and ideal weight such as educational attainment, race/ethnicity/immigrant status, etc. (2) A related concern is that important theoretical and empirical contributions to the literature on weight norms and perceptions are missing (see Q8). (3) The model specifications in the weight satisfaction analysis are inconsistent (Tables A4 and A5).

Q 3 Please provide your detailed review report to the authors. The editors prefer to receive your review structured in major and minor comments. Please consider in your review the methods (statistical methods valid and correctly applied (e.g. sample size, choice of test), is the study replicable based on the method description?), results, data interpretation and references. If there are any objective errors, or if the conclusions are not supported, you should detail your concerns.

Major comments:

1. The paper explores the relationships with age and cohort (by sex), but only considers person's BMI as potential mechanism/intervening variable. Consequently, the study does not go very far in terms of analyzing what drives generational changes in the Netherlands. It would be significantly strengthened by discussing results from some additional analyses using models with both personal and (cohort) mean BMI (testing more directly for weight-related norm changes and thereby expanding on related work such as Burke, Heiland and Nadler 2010, see full reference below) and results from models using socioeconomic predictors of weight satisfaction and ideal weight such as educational attainment, race/ethnicity/immigrant status, etc.

2. The model specifications in the weight satisfaction analysis are inconsistent. Tables A4 and A5 use different specifications for the cohort trend and interactions by sex and dependent variable. The reasons for not having consistent specifications is unclear but may reflect sample size constraints and statistical significance and model fit considerations. These should be noted and justified carefully. For proper comparisons across models (e.g., males vs females) the same covariate specifications should be used and they should be theoretically justified. Not showing results with comparable quadratic cohort terms and/or interactions terms because the estimated coefficients on these terms are not statistically significant for one subpopulation is not appropriate.

3. The author pays short shrift to key parts of the relevant literature. Important theoretical and empirical contributions to the literature on weight norms and perceptions are missing. For example, there has been important work looking at generational weight-related norm changes and body weight satisfaction that is not mentioned at all (including the aforementioned Burke, Heiland and Nadler 2010). While much of that literature is US-based and the present analysis is on the Netherlands, it provides important context and informs model specifications in the present analysis. In turn, this literature will enhance the contribution of the present work. It will be familiar to the international audience at this journal and needs to be incorporated carefully in the introduction, analytic strategy, and discussion sections. This literature includes the following articles:

- Rand CS, Resnick JL. The "good enough" body size as judged by people of varying age and weight. *Obes Res* 2000;8:309-316.
- Chang VW, Christakis NA. Self-perception of weight appropriateness in the United States. *Am J Prev Med* 2003;24:332-339.
- Burke MA, Heiland F. Social Dynamics of Obesity. *Economic Inquiry*, 2007, vol. 45, issue 3, 571-591.
- Burke et al. From "Overweight" to "About Right": Evidence of a Generational Shift in Body Weight Norms. *Obesity*, 2010, 18, 1226-123.
- Christakis NA, Fowler JH. The spread of obesity in a large social network over 32 years. *N Engl J Med* 2007;357:370-379.
- Johnson F, Cooke L, Croker H, Wardle J. Changing perceptions of weight in Great Britain: comparison of two population surveys. *BMJ* 2008;337:a494.
- Garner DM, Garfinkel PE, Schwartz D, Thompson M. Cultural expectations of thinness in women. *Psychol Rep* 1980;47:483-491.
- Wiseman CV, Gray JJ, Mosimann JE, Ahrens AH. Cultural expectations of thinness in women: an update. *Int J Eat Disord* 1992;11:85-89

Minor Comments:

Overall, the paper is well written. Some minor typos/issues that I caught that should be addressed:

Line 136: "deviations in younger age" -> "at younger age"

Line 332-333: Incorrect syntax/grammar

Lines 331-340: citations are missing

Table 1 bottom row just above Line 447: need to use comma to delimit 1,000 in sample sizes (e.g., "7.269" should be "7,269")

PLEASE COMMENT

Q 4 Is the title appropriate, concise, attractive?

yes, but I suggest the author adds "in the Netherlands" at the end of the title to make it more informative

Q 5 Are the keywords appropriate?

yes, but I suggest the author adds "Netherlands" or "LISS panel data"

Q 6 Is the English language of sufficient quality?

The paper is well written. Some minor typos/issues that I caught:

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Q 7 Is the quality of the figures and tables satisfactory?

Yes.

Q 8 Does the reference list cover the relevant literature adequately and in an unbiased manner?

The author pays short shrift to the related literature. Important theoretical and empirical contributions to the literature on weight norms and perceptions are missing. This includes the following articles:

Rand CS, Resnick JL. The "good enough" body size as judged by people of varying age and weight. *Obes Res* 2000;8:309-316.

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QUALITY ASSESSMENT

Q 9 Originality



Q 10 Rigor



Q 11 Significance to the field



Q 12 Interest to a general audience



Q 13 Quality of the writing



Q 14 Overall scientific quality of the study



REVISION LEVEL

Q 15 Please make a recommendation based on your comments:

Major revisions.