Title: The changing demographic profile of eating disorder behaviors in the community

Version: 1
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Reviewer: Sarah E Racine

Reviewer’s report:

This paper compared rates of disordered eating behaviors (i.e., objective binge episodes, extreme dieting, and purging) in 1998 and 2008 according to various demographic factors, including gender, age, income, and residency. The authors report that disordered eating increases from 1998-2008 were generally greatest in men, older adults, and individuals with below-median household income. Further, among individuals with disordered eating, health impairment tended to be greatest in 2008 compared to 1998 in the less stereotypically eating disordered groups. The authors conclude that disordered eating symptoms are increasing across demographic groups, but at faster rates in males, lower SES, and older participants. Further, disordered eating is associated with greater impairment in underserved groups in more recent years.

The findings from this paper are important in suggesting that groups typically assumed to have low levels of disordered eating may be showing the greatest increases in these behaviors over time. This has implications for the development of prevention and intervention efforts that specifically target underrepresented groups. Additional strengths of this study include large samples that were selected to be representative of the population of Southern Australia. Further, eating disorder symptoms were assessed via interview questions, which is rare in a sample of this size.

Despite these strengths, I found that the paper was lacking necessary methodological and statistical details which made it hard to follow and fully understand the results at times. I actually went and pulled the 2008 paper by Hay and colleagues in order to find some of the information I felt was needed. Most of the suggested revisions are designed to help improve the “readability” of the paper.

My other main concern was related to the cross-sectional nature of the data and the use of the term “change” rather than “difference”. Because these are data from sequential cross-sectional surveys administered in 1998 and 2008, it is not exactly accurate to say that the prevalence of disordered eating changes over time (or that there are changes in health-related quality of life). I think it would be more accurate to describe the results as differences between the 1998 and 2008 survey responses. Along these lines, the fact that these data are cross-sectional and an acknowledgement of how this impacts the interpretation of the results should be included in the limitations section of the discussion.
Minor Essential Revisions

Abstract

1. The abstract should specify that, for example, binge eating was associated with greater mental health impairment in 2008 compared to 1998 in males (but not females), as it was the sex by survey year interaction that was significant. The way that the results are written, it is unclear that the term “greater” refers to the difference between 2008 and 1998.

Methods

1. More information is needed under the “Sample selection and interview procedure” section in order for the reader to understand how sample definitions influence statistical analyses. Specifically, how were the metropolitan versus regional “collector” districts defined? Perhaps the authors could provide information such as the population size requirements for these different residency categories.

2. More information about the interview questions used to assess eating disorder symptoms is needed. I would suggest including the specific questions in this section, as done by Hay et al. (2008). Also, were participants asked to give a representative example of a binge episode or were they provided with any information to help with the definition of “an objectively large amount of food”?

Statistical Analysis

1. Why were #2 tests and multivariate logistic regression analyses used to compare the prevalence of eating disorder behaviors in 1998 and 2008? I am assuming that the multivariate logistic regression analyses included the covariates listed in this section and that the OR and second p columns in Table 2 present these multivariate logistic regression results. However, this is not clear from the text or the table. The analysis section should more clearly state why both #2 and multivariate logistic regressions were employed, and the note in Table 2 should indicate that the OR was adjusted for X,Y,Z, covariates (if this is indeed the case).

2. Please describe “the method by Altman and Bland” and, when first presenting these results in the text, remind the reader that the z scores are derived from this method (if this is true).

Results

1. I strongly believe the results section would be significantly improved if the discussion of the results in the text and the presentation of the results in Table 2 followed the same order. Specifically, the text is organized based on demographic factors, and the table is organized based on eating disorder behavior. It appears to me that the overall pattern of the results suggests that purging is less likely to show greater differences across time in under-represented compared to over-represented groups and, for this reason, it
might make the most sense to re-organize the text to discuss the results by eating disorder behavior.

Tables

1. Please indicate in Table 3 that the numbers represent the mean SF-36 scores, with the standard deviation in brackets.

Discretionary Revisions

Abstract

1. There is no need to include the significance values of the results in the abstract. This does not provide the reader with an accurate indication of the size of the effects, although effect sizes could be added if the authors see fit.

Introduction

1. In setting up the rationale for the study, it would be helpful to explicitly state why it is important to understand whether the prevalence of eating disorders in underrepresented groups is stable or is increasing.

2. The authors should define the term “residency” when it first appears in the description of the study’s aim.

Discussion

1. In the discussion of findings by sex, the term “self-induced vomiting” should be changed to purging, as the study examined all forms of purging combined.

2. Perhaps the authors could add a paragraph that speculates as to why the greatest increases in eating disorder behaviors occurred in traditionally underrepresented groups. A discussion of possible mechanisms for this effect could help pave the way for future studies and the development of prevention and intervention efforts.

Tables

1. I would suggest including an “Obese” BMI Group to help further characterize the sample for comparisons to other studies.

Level of interest: An article of importance in its field

Quality of written English: Acceptable

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.