

Ref.: Ms. No. PSM-D-18-01409

Emotional Instability as a Trait Risk Factor for Eating Disorder Behaviours in Adolescents: Sex Differences in a Large-scale Prospective Study  
Psychological Medicine

**Reviewers' and editor's comments:**

**Reviewer #1:** *This study examined risk pathways involving temperament and personality factors for purging and binge eating behaviors in youth, stratified by gender.*

*This is an important study. ALSPAC is a well-established birth cohort study of children's health and development, and serves as one of the few prospective, longitudinal studies that has systematically collected data on eating disorder behaviors. The data on the increase in binge eating and purging between ages 14 and 16 in girls—and the power of these behaviors at 14 to predict occurrence at 16—was alarming and has implications for the timing and aggressiveness of prevention efforts.*

*My first question is whether the authors consider their findings strong? Mention of effects was generally absent from the manuscript and I would encourage the authors to provide greater context in how they interpreted the strength of the findings.*

Yes - we find that results strong and agree that they are alarming, as you mention above. We have elaborated on the effect sizes in the Discussion on page 14 and have tried to emphasize the strength of the findings throughout the revision of the Discussion (pp. 13-20).

*The manuscript was well-written. However, some of the constructs and terms, such as emotional instability, emotionality, and emotional dysregulation, etc. seemed to be used interchangeably throughout the manuscript, becoming slightly detached from what was actually measured. This leaves quite a bit of wiggle room for the readers to interpret as they wish.*

We have clarified the definition of “emotional stability” (opposite of neuroticism) with reference to NEO PI factors in the Introduction on page 5. This relates to the actual IPIP measure of personality used in the ALSPAC study, i.e. emotional stability. Thereafter, we have simplified the language referring to this construct throughout the manuscript, using only “emotional stability/instability” and removing other terms that we agree may be confusing, i.e. affective, emotional dysregulation. We did keep the term “emotionality” on page 19 when discussing potential interventions for young children because it refers to the EAS emotionality factor that was measured at 3 years old and significantly predicted adolescent eating disordered behaviors in our path model (SEM). We clarified the use of the emotionality term there (p.19) and related it specifically to the EAS scale.

*Also, it became a bit confusing in the Results to remember the ages for the assessments-- perhaps the authors could revisit this section and add the information in parentheses (i.e., BPD features in childhood (age xx yrs)) or something similar.*

We have added the ages as suggested in the Results section (pp. 11-12).

*The paragraph (page 14) on the sociability pathway and low sensation-seeking findings came across as quite speculative.*

In the revision, we have noted that these interpretations of the results are speculative (pp. 15-16). While we think they are interesting ideas (though speculative), we can remove them altogether if the Reviewer prefers.

*Also, some of the attempts in the Discussion to summarize the main findings brushed broadly over important nuances. It might be worthwhile to tighten up the language in a revision. This would help to steer the interpretation and impact of the study. For instance, only binge eating and purging (vomiting, laxatives) were studied and therefore, this study can't speak to restrictive eaters (AN-R), who are clinically known to present with a different profile (harm avoidance, sensitivity to threat, perfectionism, rigidity, etc). The authors did explain this in a couple of places, but I would advise even greater care.*

We tried to tighten up the wording of the Discussion to highlight some more subtle findings and interpretations. Wording was added on p.17 to highlight that the eating disorder behaviours investigated in this study are limited to binge eating and purging, and results do not apply to AN-R for example which has a differential profile.

*Lastly, it seems there were differential pathways of risk for purging versus binge eating behaviors. I found this quite theoretically and clinically interesting, and says something about the function of these behaviors. The authors might opt to expand upon this finding, also in light of the finding that binge eating predicted purging but not vice versa.*

We thank the Reviewer for pointing this out – it is an interesting finding, and we have expanded upon it in the revision, as suggested. We discuss the theoretical aspects of the finding in the second paragraph on page 16, added a Figure 5, and provide clinical implications on pages 18-19.

**MINOR:**

*Were weight and height self-reported or measured?*

Height and weight were objectively measured. We have added a note in Table 1 to clarify this (p. 24).

*Did the BPD assessment rate binge eating as an impulsive behavior and could this have perhaps inflated that relationship?*

The BPD assessment did not rate binge eating as an impulsive measure.

*Reviewer #2: This is a beautifully written paper that longitudinally assesses temperament and personality factors as risk factors for bulimic behaviours (bingeing, purging) in a large population based adolescent sample from the ALSPAC cohort. A key strength is that the authors were able to look at boys and girls separately and identify different risk patterns. This findings are novel and important.*

Thank you.