

# ERP correlates of self-referential processing moderate the association between pubertal status and disordered eating in preadolescence

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June 26, 2023

## Abstract

Preadolescence is a critical period for the onset of puberty and eating-related psycho-pathology. More advanced pubertal status is associated with elevated eating pathology. However, it was unclear whether this association was moderated by self-referential processing, an important, modifiable cognitive risk for various forms of psychopathology, including eating problems. Further, no study has examined the neural correlates of self-referential processing in relation to eating pathology. To address these gaps, we examined how the association between pubertal status and disordered eating was moderated by self-referential processing in a community sample of 115 nine-to-12-year-old preadolescents (66 girls; Mean age/SD = 10.98/1.18 years; 87.5% White). Youths reported their pubertal status and disordered eating behaviors and completed an ERP version of the Self-Referent Encoding Task (SRET) to assess self-referential processing. A Principal Component Analysis of the ERP data identified an anterior late positive potential (LPP) in both the positive and negative SRET conditions. The LPP in the positive condition moderated the positive association between pubertal status and disordered eating behaviors, such that this association was significant for youths with a smaller LPP toward positive self-referential cues, but non-significant for those showing a larger LPP toward positive self-referential cues. These results suggest that a deeper processing of positive self-referential information, indicated by a potentiated LPP, may weaken the negative impact of pubertal status on disordered eating. Our findings also suggest that enhancing positive self-referential processing may be a useful tool in preventing the development of eating pathology in preadolescents, especially for those with more advanced pubertal status.

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