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An investigation of negative affect, reactivity, and distress tolerance as predictors of disordered eating attitudes across adolescence

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ABSTRACT

The current study examined internalizing symptoms, affect reactivity, and distress intolerance as prospective predictors of increases in eating disorder (ED)-attitudes during adolescence. Adolescents (n = 206) took part in a six-year longitudinal study examining the development of psychopathology. Latent growth curve analysis was used to examine associations between predictors and later ED-attitudes. Distress intolerance and internalizing symptoms were associated with ED-attitudes at baseline, but did not predict increases over time. Affect reactivity, however, was significantly associated with increases in ED-attitudes over time. Baseline affect reactivity did not interact with baseline distress intolerance to predict increases in ED-attitudes; however higher baseline internalizing symptoms interacted with distress intolerance to predict increases in ED-attitudes across adolescence. These results are among the first to document that affect reactivity alone and the combined effect of high internalizing symptoms and high distress intolerance early in adolescence are risk factors for the later development of ED-attitudes.

Introduction

Eating disorders (EDs) are life-threatening conditions that are often associated with significant psychological comorbidity (Swanson, Crow, Le Grange, Swendsen, & Merikangas, 2011) and premature mortality (Keshaviah et al., 2014). Although EDs occur across the age spectrum, anorexia nervosa and bulimia nervosa have the highest incidence and point prevalence during adolescence (Lewinsohn, Striegel-Moore, & Seeley, 2000). In the cognitive-behavioral model of EDs (Fairburn, 2008), the overvaluation of and concern about shape and weight (i.e., ED-attitudes) is a core maintenance factor in the development and maintenance of ED symptoms and behaviors. Indeed, the presence of ED-attitudes in early adolescence significantly predicts continuation of symptoms in late adolescence and early adulthood (Killen et al., 1994; Kotler, Cohen, Davies, Pine, & Walsh,

Abbreviations: ED, eating disorder; BIRD, Behavioral Indicator of Resiliency to Distress; COEDS, College Eating Disorders Screen; PANAS-C, Positive and Negative Affect Schedule for Children; RCADS, Revised Children's Anxiety and Depression Scale.

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2001). Despite the high risk for ED symptom development during adolescence (APA, 2013), few longitudinal studies have examined the developmental course, and predictors of ED-attitudes in youth (Bakalar, Shank, Vannucci, Radin, & Tanofsky-Kraff, 2015). Identifying psychological predictors of ED-attitudes in youth can be critical for informing prevention and early intervention targets.

Negative affect-related variables and EDs

Negative affect has long been hypothesized to predict the onset and maintenance of ED pathology. In adolescents, negative affect is cross-sectionally (Stice, 1998) and prospectively (Leon, Fulkerson, Perry, Keel, & Klump, 1999) related to disordered eating. In addition to chronic negative affect, internalizing disorders (e.g., depression) prospectively predict increases in EDs during adolescence (Holm-Denoma, Hankin, & Young, 2014; Measelle, Stice, & Hogansen, 2006), suggesting that negative affect and internalizing symptoms serve as risk and maintenance factors for ED behaviors and attitudes.

Negative affect and internalizing symptoms might be particularly likely to contribute to the later onset of ED symptoms when an individual is unable to tolerate distressing internal experiences. Specifically, distress tolerance, or the capacity to withstand an aversive internal state (Linehan, 1993) has been posited as an etiological mechanism of ED risk. Those with high distress intolerance are driven to engage in behaviors that reduce emotional distress in the short-term, even when such actions eventually result in negative consequences (Simons & Gaher, 2005). Thus, the relation between negative affect and ED psychopathology may depend on one's level of distress intolerance, such that those with high distress intolerance show the strongest relation between negative affect and ED psychopathology. Supporting this notion, several investigations have reported that individuals with eating pathology are more distress intolerant (Corstorphine, Mountford, Tomlinson, Waller, & Meyer, 2007; Hambrook et al., 2011; Lavender, Happel, Anestis, Tull, & Gratz, 2015) and engage in maladaptive eating behaviors in order to down-regulate negative emotions (Dir, Karyadi, & Cyders, 2013; Racine et al., 2013).

Relatedly, recent research suggests that *changes* in negative affect in response to a stressor (i.e., affect reactivity) may be particularly important in the development of EDs (Lingswiler, Crowther, & Stephens, 1987; Smyth et al., 2007; Goldschmidt et al., 2014). For instance, utilizing momentary sampling, Goldschmidt et al. (2014) found that increases in negative affect in response to a stressor immediately preceded incidents of binging and purging. It follows that distress intolerant individuals may experience greater increases in negative affect following a stressful event that, in turn, may predict the use of disordered eating behaviors.

Despite a growing body of evidence suggesting that internalizing symptoms, distress intolerance, and affect reactivity contribute to the development and maintenance of ED thoughts and behaviors, numerous unanswered questions remain. For example, the significance of affect reactivity as a predictor of ED symptom development in youth has not yet been evaluated. Additionally, no studies have examined the relationship between distress intolerance and ED symptomology in youth, either cross-sectionally or prospectively. Perhaps most importantly, to our knowledge, no investigations have directly examined the potential moderating role of distress intolerance in the prospective or concurrent relation between negative affect, affect reactivity and ED symptomology.

Current study

In the current study, we examined internalizing symptoms, affect reactivity, and distress intolerance as predictors of ED-attitudes in a longitudinal community sample of children and adolescents. We hypothesized that ED-attitudes would increase over time and that early internalizing symptoms, distress intolerance, and affect reactivity would predict later increases in ED-attitudes. We also examined interactions between early distress intolerance and both internalizing symptoms and affect reactivity on changes in ED-attitudes over time. Specifically, we hypothesized that the combination of higher internalizing symptoms and higher distress intolerance would predict increases in ED-attitudes over time and the same would be expected for higher distress intolerance and greater affect reactivity.

Method

Participants and procedures

The current study included youth recruited from a metropolitan area who are taking part in an ongoing longitudinal study examining the development of psychopathology. Youth and their families were recruited for the larger study from the community. Participants were required to be proficient in English and be able to commit to taking part in yearly assessments. The original sample included 277 (46% female) children and their parents; however, because key measures pertaining to the current study were not introduced until the third year of enrollment for participants, the current study utilized data only from those adolescents who completed all measures at this wave (Wave 3 for the parent study, relabeled T1, for clarity in the remainder of the manuscript). Thus, the current sample included 206 adolescents between the ages of 11 and 15 ($M_{age} = 13.03$, $SD_{age} = 0.89$) at T1. Retention of participants over the course of this study was good; out of the original sample of 206 youth, 193 ($M_{age} = 14.00$, $SD_{age} = 0.89$) participated in Wave 4 (T2), 175 ($M_{age} = 15.02$, $SD_{age} = 0.95$) participated in Wave 5 (T3), 152 ($M_{age} = 16.06$, $SD_{age} = 0.89$) participated in Wave 6 (T4), 130 ($M_{age} = 17.00$, $SD_{age} = 0.95$) participated in Wave