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The relationship of trait negative urgency and negative affect to disordered eating in men and women

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ABSTRACT

Many theoretical models of disordered eating have not been evaluated utilizing male samples. Individual differences in negative urgency (i.e., the tendency to act impulsively during distress), are associated with eating pathology, but very few studies have examined the interaction of negative mood states and negative urgency on disordered eating. The current study tested the hypothesis that the influence of negative moods on disordered eating would be strengthened by individual differences in negative urgency, and examined the potential moderating effects of this relationship by sex. Structural equation modeling was used in a sample of 884 undergraduate men and women to test whether or not the relationships between urgency and affect were invariant across sex. Negative urgency did not strengthen the association between mood states and disordered eating. Additionally, associations between negative urgency, affect, and eating pathology differed by gender. Individual differences in both negative urgency and mood states made unique contributions to binge eating, but negative urgency contributed significant variance to other disordered eating symptoms only for women.

1. Introduction

Disordered eating[‡] (DE) behavior consists of dietary restriction, binge eating, inappropriate compensatory behaviors, and distorted thoughts about the importance of weight and shape (American Psychiatric Association, 2000). Approximately 44% of adolescent girls exhibit some eating pathology, and the prevalence of binge eating behaviors in college women is approximately 16–25% (Ackard, Fulkerson, & Neumark-Sztainer, 2007). Body image dissatisfaction and binge eating appear also to occur in a substantial amount of men (Cafri et al., 2005; McCabe & Ricciardelli, 2006).

Psychosocial theories of risk and maintenance for DE in men have focused on the increasing pressure to achieve muscular ideals, body dissatisfaction, and weight loss practices (O'Dea and Abraham, 2002; Ricciardelli, McCabe, Williams, & Thompson, 2007) whereas emotion regulation models of DE in men have received less attention (Lavender & Anderson, 2010). However, there is some initial support for the role of affect regulation in DE in men (Lavender, Anderson, & Gratz, 2012). Well-documented gender differences in emotion regulation strategies are postulated to account for differences found in various forms of psychopathology including DE (Nolen-Hoeksema, 2012). Given the limited studies with male samples in the extant literature, and the purported gender differences in emotion regulation strategies, additional empirical investigation of these variables in conjunction with DE in men is warranted.

1.1. Negative affect

The emotion regulation model proposes that maladaptive eating behaviors provide short-term relief from extreme negative mood states (Heatherton & Baumeister, 1991). Short-term relief from negative moods consequently increases the likelihood that these behaviors will be used again and decreases the likelihood of more adaptive responses (Hawkins & Clement, 1984). Several ecological momentary assessment (EMA) studies support this model; female participants report high levels of negative affect on days that include a binge and/or a compensatory behavior and report increasing levels of negative affect before a BN event (Smyth et al., 2007; Wegner et al., 2002). These models suggest that DE behaviors manifest as avoidant coping methods in individuals with difficulty regulating intense emotions (Ferriter & Ray, 2011).

Specific negative emotions (e.g., fear, anger, depression, guilt) are positively associated with DE (e.g., Fox & Froom, 2009; Fulton et al., 2012; Milligan & Waller, 2000; Mond, Myers, Crosby, Hay, & Mitchell, 2008). However, little work has expanded upon these

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‡ DE refers to disordered eating.

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findings to examine how individual differences (e.g., personality traits) may moderate the influence of specific emotions on DE, and most of these studies were conducted using samples of women.

The data on negative emotions and DE in males is more inconsistent. Masheb and Grilo (2006) examined the role of distinct negative emotions on binge eating in treatment-seeking overweight adults and found that men and women differed only slightly in their propensity to overeat and binge eating in response to these emotions. However, when comparing the role of discrete negative emotions on binge eating in a sample of men and women with binge eating disorder, Tanofsky, Wilfley, Spurrell, Welch, and Brownell (1997) reported that women were more likely to endorse emotional eating than men. Conversely, recent studies suggest that broad-based negative affect, and maladaptive emotion regulation strategies are significantly associated with DE in a sample of undergraduate men (Lavender, Anderson, & Gratz, 2012; Lavender & Anderson, 2010).

1.2. Negative urgency

The precise relationship between impulsivity and DE has been difficult to determine because many studies employ conflicting definitions of impulsivity (Fischer, Smith, & Cyders, 2008). Whiteside and Lynam (2001) proposed that impulsivity consists of four distinct trait factors which they labeled sensation seeking, lack of planning, lack of perseverance, and urgency. Urgency, or the propensity to act rashly when distressed, accounts for significant variance in various maladaptive behaviors including binge eating (e.g., Anestis, Selby, & Joiner, 2007; Fischer, Smith, & Cyders, 2008; Miller, Flory, Lynam, & Leukefeld, 2003; Smith et al., 2007). Negative Urgency (NU)[§] appears to be a unique predictor of eating pathology above and beyond other facets of impulsivity (Miller, Flory, Lynam, & Leukefeld, 2003; Smith et al., 2007), with moderate to large effect sizes (Fischer, Smith, & Cyders, 2008). Although a consistent relationship between NU and DE has emerged in women, only a few studies have investigated the correlation of NU and DE behavior in men (Anestis, Selby, & Joiner, 2007; Fischer & Smith, 2008) and in boys (e.g. Pearson, Combs, Zapolski, & Smith, 2012), each of which specifically found that NU accounted for unique variance in frequency of binge eating. To our knowledge no study has yet examined the conjoint influence of NU and specific types of negative affect on both global eating pathology and binge eating in either men or women.

1.3. Current study

Individual differences in NU are thought to interact with negative mood states to influence DE behavior. Negative mood states motivate one to regulate affect in conditions of distress and decrease motivation to focus on long-term goals (Tice, Bratslavsky, & Baumeister, 2001). Intense emotional states interfere with decision-making processes (Cyders & Smith, 2008). Thus, negative affect both disrupts focus on goal directed behavior and makes it more difficult to make rational, adaptive decisions. However, there are individual differences in the tendency to respond impulsively to negative affect (i.e. Whiteside & Lynam, 2001). Individuals with high levels of NU appear more likely to display DE behavior, such as binge eating (Davis & Fischer, 2012), likely because this immediately accessible behavior reduces distress more quickly than other coping mechanisms. Thus, it is plausible that individual differences in NU moderate the influence of negative affect on DE behavior.

[§] NU refers to Negative Urgency.

The purpose of this study is to examine the association of specifically defined negative affect subtypes (i.e., fear, anger, guilt, and sadness) with DE and investigate if differences in NU moderate these relationships. We hypothesize that the influence of NU on DE behavior will be more robust in conjunction with negative affect. Additionally we examined whether or not the main effects of NU and negative affect on DE behavior are moderated by gender. We explored this for two reasons. First, the few studies that have examined the influence of NU on disordered eating in males have only focused on binge eating, and second, data suggests that males and females experience emotions differently.

2. Methods

2.1. Measures

2.1.1. PANAS-X: positive and negative affect scale-expanded form (Watson & Clark, 1994)

The PANAS-X is a 60-item measure in which words representative of various negative (i.e., fear, hostility, guilt, sadness) and positive mood states are rated using a 5-point scale ("very slight or not at all" to "extremely") to indicate the level of each emotion that a participant has felt over the past week. The factor structure of the PANAS has been replicated across multiple populations and over various lengths of time (e.g., "moment," "past few days," "past year;" Watson & Clark, 1994). In the current study, we used the "Basic Negative Emotion Scales": Sadness ($\alpha = 0.86$), Hostility ($\alpha = 0.76$), Fear ($\alpha = 0.80$), and Guilt ($\alpha = 0.87$).

2.1.2. UPPS-R: negative urgency scale (Whiteside & Lynam, 2001)

The UPPS-R is a 44-item, 4-point Likert scale ("agree strongly" to "disagree strongly"). The UPPS-R was developed through factor analyses of various personality scales of impulsivity to reveal 4 facets: urgency, lack of planning, lack of perseverance, and sensation-seeking. Multi-trait, multi-method analyses have indicated that each facet accounts for unique variance in different impulsive behaviors, and that these relationships are not accounted for by similar measurement methods (Smith et al., 2007). In this sample, $\alpha = 0.88$ for the NU subscale.

2.1.3. EDE-Q (EDE-Q: Fairburn & Beglin, 1994)

The eating disorder examination-questionnaire (EDE-Q) is a self-report version of the eating disorder examination (EDE) interview, which reliably assesses eating disorder symptoms and frequency of DE behaviors over the previous 28 days (Fairburn, 2008; Luce & Crowther, 1999). In the current study, we used the global score ($\alpha = 0.95$ for this sample). The EDE-Q assesses subjective and objective binge eating by asking participants a series of questions regarding amount of food eaten, loss of control, and how often these eating episodes occurred. We used the frequency count of loss of control over eating episodes to create a variable representing total binge episodes, that included both subjective and objective binge episodes (Mond, Latner, Hay, Owen, & Rodgers, 2010). Studies utilizing community and clinical samples have shown no significant differences in eating disorder severity and comorbid psychopathology between individuals with subjective versus objective binge eating (e.g., Latner, Hildebrandt, Rosewall, Chisholm, & Hayashi, 2007).

2.1.4. Demographics

A demographics questionnaire was used to assess for a participant's sex, age, and self-reported ethnicity.