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Positive and negative eating expectancies in disordered eating among women and men

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ABSTRACT

Background: Deficits in emotion regulation are known to characterize disordered eating patterns including binge eating, purging, and dietary restraint, though much of this work has been conducted exclusively on women. Eating expectancies, or expectations regarding reinforcement from food and eating, constitute one cognitive mechanism that is thought to serve as a proximal influence on eating behavior. Previous research shows that eating to manage negative affect (a negative eating expectancy) is associated with eating pathology in women, but less is known about eating as a reward or for pleasure (a positive eating expectancy). In addition, no prior work has examined eating expectancies among men. This study examines the role of emotion regulation and eating expectancies on disordered eating in women and men.

Materials and methods: Participants were 121 female and 80 male undergraduates who completed self-report measures of emotion regulation, eating expectancies, and disordered eating.

Results: In women, body mass index (BMI), emotion regulation, and eating to manage negative affect directly predicted disordered eating in the final multivariate model, whereas eating for pleasure or reward was inversely associated with disordered eating. However, in men, emotion regulation predicted disordered eating, but not when eating expectancies were added to the model. In the final model, only BMI and eating to manage negative affect contributed significantly to the variance in disordered eating.

Conclusions: These findings suggest that some correlates of eating pathology, particularly eating expectancies, may vary by gender. Future research should continue to examine gender differences in the explanatory mechanisms underlying disordered eating.

1. Introduction

1.1. Emotion regulation and disordered eating

Deficits in emotion regulation, or the ability to identify and modulate internal emotional experience (Gross, 1998), are known to characterize disordered eating patterns. For instance, negative affect is a proximal antecedent of binge eating (Berg et al., 2013) and has also been linked to other eating pathology (Sim & Zeman, 2006). Eating disorder symptoms have also been associated with low emotional awareness, poor regulation of negative affect (Sim & Zeman, 2006), poor emotion recognition (Oldershaw et al., 2011), limited skills in cognitive reappraisal, and a greater tendency toward emotional eating (Danner, Evers, Stok, van Elburg, & de Ridder, 2012). Most prior work has exclusively examined women, but emerging evidence indicates that difficulties with emotion regulation also explain disordered eating in men (e.g. Ambwani, Slane, Thomas, Hopwood, & Grilo, 2014; Lavender & Anderson, 2010).

Although individuals with eating disorders exhibit greater emotion dysregulation than do healthy controls (Brockmeyer et al., 2014; Svaldi, Griepenstroh, Tuschen-Caffier, & Ehring, 2012), they generally endorse similar levels of emotion dysregulation compared to other psychiatric populations (Svaldi et al., 2012). Indeed, many emotion regulatory mechanisms such as emotional clarity (Vine & Aldao, 2014) and experiential avoidance (Chawla & Ostafin, 2007) have been shown to predict multiple psychopathologies. Thus, perhaps some facets of emotion regulation are associated with general psychopathology. Whether or not an individual develops a specific psychopathology, then, may require the presence of other, disorder-specific, risk factors.

1.2. Eating expectancies

One cognitive risk factor that may be specific to disordered eating is the endorsement of certain eating expectancies, or learned beliefs regarding reinforcement from eating (Hohlstein, Smith, & Atlas, 1998). Previous research has focused upon negative emotional eating expectancies, specifically, the belief that eating will alleviate negative affect. Endorsement of this particular eating expectancy is directly associated with the onset and maintenance of eating pathology (Combs, Smith, & Simmons, 2011; Fisher, Peterson, & McCarthy, 2013; Smith, Simmons,

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Flory, Annus, & Hill, 2007). One explanation is that eating to manage negative affect is not an inherent function of eating; thus, expecting food to fill a role for which it was not designed reflects a maladaptive learning history that can place an individual at risk for psychological distress (Combs et al., 2011). Among college females, this eating expectancy has been associated with binge eating and other symptoms of bulimia nervosa (BN) in both cross-sectional (Atlas, 2004; Fischer, Anderson, & Smith, 2004; Hayaki, 2009; Hohlstein et al., 1998) and longitudinal (Fisher et al., 2013) studies. Among adolescents, endorsement of this eating expectancy correlates with concurrent BN symptoms (Simmons, Smith, & Hill, 2002) and also predicts future binge eating and purging (Smith et al., 2007).

An emerging, albeit smaller and somewhat less consistent, literature indicates that disordered eating may be inversely associated with positive emotional eating expectancies, specifically, eating for pleasure or as a reward. According to Combs et al. (2011), expectations for positive reinforcement from eating parallel its role in human survival; eating naturally fulfills a physical need. Thus, this eating expectancy is thought to be unrelated to disordered eating patterns that interfere with survival. Preliminary research largely appears to support this notion. Women with active eating disorders report lower levels of this eating expectancy compared to both healthy controls (Bruce, Mansour, & Steiger, 2009; Fischer, Settles, Collins, Gunn, & Smith, 2012) and women fully recovered from an eating disorder (Fitzsimmons-Craft, Keatts, & Bardone-Cone, 2013). Endorsement of this eating expectancy also prospectively predicts social or celebratory overeating, or eating in a positive emotional context, but not binge eating, which is maladaptive and carries negative emotional valence (Combs et al., 2011). To our knowledge, only one study has associated this eating expectancy with disordered eating: Bohon and colleagues (Bohon, Stice, & Burton, 2009) found that greater levels of endorsement were associated with longer persistence of binge eating in a sample of women with threshold and subthreshold BN who were followed naturally for one year. Further research is necessary to elucidate the role of positive eating expectancies in adaptive and maladaptive eating behavior.

1.3. Gender differences in eating expectancies

Despite growing evidence for the role of emotion regulation and eating expectancies in disordered eating, questions still remain. With only a few exceptions, this research has focused upon women only. Although females still outnumber males with respect to diagnosed eating disorders (e.g. Allen, Byrne, Oddy, & Crosby, 2013; Flament et al., 2015), recent evidence indicates that eating pathology among men is both accompanied by clinical distress (Lavender & Anderson, 2010) and more common than previously thought (Striegel-Moore et al., 2009). Indices of general emotion regulation may also play a role in eating pathology in men, as it does in women (Lavender & Anderson, 2010), but this literature is not extensive. Nothing is known about associations between eating expectancies and disordered eating in men.

1.4. The present study

The purpose of the present study is to examine the role of general emotion regulation and eating-specific risk factors in disordered eating among women and men. Based on previous research, we expect that both general emotion regulation difficulties and eating expectancies will predict eating pathology in women. No prior research examines the role of eating expectancies in disordered eating among males. However, based on evidence that men and women share notable similarities in eating disorder characteristics (Bentley, Mond, & Rodgers, 2014; Núñez-Navarro et al., 2012), we might expect that the association between eating expectancies and disordered eating will exhibit similar patterns for men and women. Specifically, eating to manage negative affect may be positively associated with disordered eating, whereas eating for pleasure or reward may be inversely associated with disordered eating.

2. Materials and methods

2.1. Participants

Participants were 80 male (40%) and 121 female (60%) undergraduate students (mean age 18.81 years, *SD* .84) from a small Northeastern institution who were 80.6% Caucasian, 8.0% Asian, 5.5% Hispanic/Latino, 5.0% Black/African American, and 1.0% American Indian/Alaska Native. All participants were enrolled in introductory psychology courses and received optional course credit. Following informed consent, participants completed self-report measures of demographics, emotion regulation, eating expectancies, and disordered eating. The study was approved by the local institutional review board.

2.2. Measures

2.2.1. Demographic variables

Participants self-reported age, ethnicity, height, and weight (the latter two variables from which BMI was calculated).

2.2.2. Emotion regulation

The 36-item Difficulties in Emotion Regulation Scale (DERS; Gratz & Roemer, 2004) was used to measure several deficits in emotion regulation such as lack of emotional clarity, limited access to emotion regulation strategies, and lack of emotional awareness. Each item is rated on a 5-point Likert scale ranging from "almost never" to "almost always;" the total score (possible range 36–180) was used in this study. The DERS has demonstrated good psychometric properties in previous studies, including high internal consistency, good test–retest reliability, and adequate construct and predictive validity. The scale demonstrated high internal consistency in this sample, with Cronbach's alpha coefficients of .93 for both the female and male samples.

2.2.3. Eating expectancies

Positive and negative eating expectancies were assessed using the Eating Expectancy Inventory (EEI; Hohlstein et al., 1998), a 34-item Likert scale self-report measure with five subscales, each comprising a distinct eating-related cognition. For the purpose of this study, the 17-item Eating Helps to Manage Negative Affect negative eating expectancy (e.g., "Eating helps me forget or block out negative feelings, like depression, loneliness, or fear"; total score 17–119) and the 6-item Eating is Pleasurable and Rewarding positive eating expectancy (e.g., "Eating is fun and enjoyable"; total score 6–42) subscales were used. Both subscales demonstrated good to excellent internal consistency in this sample, with Cronbach's alpha coefficients as follows: Manage Negative Affect (women = .94, men = .94), Pleasure/Reward (women = .79, men = .83).

2.2.4. Disordered eating

Eating pathology was measured using the 7-item Bulimia scale of the Eating Disorder Inventory (EDI; Garner, Olmstead, & Polivy, 1983), which measures bulimic attitudes and behaviors, including tendencies toward binge eating and purging. Items are rated on a 6-item Likert scale ranging from "always" to "never" and are summed to generate a total subscale score, with higher scores representing greater pathology. According to the original scoring instructions, for each item, the most extreme eating disordered response is scored a 3, the next two responses a 2 and 1, respectively, and the remaining three responses are scored a 0. However, because this scoring method is thought to reduce sensitivity at lower levels of disordered eating, researchers have not transformed scores thus when studying nonclinical samples (Keel, Baster, Heatherton, & Joiner, 2007). For this nonclinical sample, nontransformed EDI item scores were used; possible scores on the Bulimia