

Associations among weight-based teasing distress, impulsive emotion regulation, and loss of control eating in racially and ethnically diverse young men

Maggie L. Osa^{a,b}, Lisa Bunn^{a,b}, Nicole R. Giuliani^{b,c}, Nichole R. Kelly^{a,b,*}

^a Counseling Psychology and Human Services, University of Oregon, Eugene, OR, USA

^b Prevention Science Institute, University of Oregon, Eugene, OR, USA

^c Special Education and Clinical Sciences, University of Oregon, Eugene, OR, USA

ARTICLE INFO

Keywords:

Men
Disordered eating
Binge eating
Loss of control eating
Teasing
Impulsivity

ABSTRACT

According to affect regulation models, distress associated with weight-based teasing may be related to loss of control (LOC) eating. Maladaptive coping strategies may further exacerbate this association, but such hypotheses have not been evaluated in men. The purpose of the current study was to examine the association between distress from weight-based teasing and LOC eating in racially and ethnically diverse young men. The degree to which men engage in impulsive behavior when distressed was investigated as a moderating variable. Exploratory analyses examined the proposed associations within racial/ethnic identity groups. The current study included 1011 young men (18–30 years, $M_{age} = 23.9 \pm 3.6$ y, 28.3% non-Hispanic White; 23.4% African American; 24.3% Hispanic/Latino; 23.8% Asian/Asian American). Participants completed an online survey with measures of weight-based teasing, LOC eating frequency, engagement in impulsive behavior when distressed, and demographics. After adjusting for age, race/ethnicity, and body mass index, there was a positive association between distress from weight-based teasing and LOC eating frequency ($p < .001$). In the full sample, the tendency to engage in impulsive behavior when distressed exacerbated this link ($p < .01$). Exploratory analyses revealed the moderating effect of impulsive coping on distress from teasing was significant in non-Hispanic White men, but was not significant for all others. These findings suggest that men are not immune to the negative correlates of weight-based teasing. LOC eating may function as a maladaptive coping mechanism, or may be an artifact of the disordered eating symptoms that can emerge during extreme efforts to obtain a thinner physique.

1. Introduction

Diagnostic criteria for binge eating disorder (BED) includes recurrent episodes of eating an amount of food larger than what most others would typically consume in the same context, accompanied by a sense of distress and a loss of control (LOC) over the amount or type of food consumed (American Psychiatric Association, 2013). These episodes, known as objective binge eating, are the hallmark symptom of BED (American Psychiatric Association, 2013). A sense of LOC while eating has also been reported alongside eating episodes which would not be viewed as objectively large, and these eating episodes are referred to as “subjective” binges (Fairburn & Cooper, 1993). Objective (OBE) and subjective binge eating episodes (SBE) are associated with similar levels of depressive symptoms, eating disorder pathology, post-meal distress,

and psychological and medical comorbidities (Goldschmidt et al., 2012; Kelly et al., 2018; Palavras et al., 2013). Given that OBEs and SBEs differ in clinical classification but share a perceived sense of losing control while eating, LOC eating may represent a more robust indicator of pathology severity than the size of the binge eating episode (Jones et al., 2015).

In contrast to other disordered eating behaviors (e.g., dietary restraint), data from community and college-based samples indicate that rates of LOC eating are comparable for men and women (Striegel-Moore et al., 2009). In some samples, young men reported slightly higher rates of LOC eating than women, 25% and 21.3%, respectively (Lavender et al., 2010; Luce et al., 2008). Cross-sectional findings suggest that LOC eating confers similar levels of clinical impairment for men and women, as well as significantly greater impairment when compared to adults

* Corresponding author at: Department of Counseling and Human Services, University of Oregon, Eugene, OR 97403, USA.
E-mail address: nicholek@uoregon.edu (N.R. Kelly).

who do not LOC eat (Striegel et al., 2012). Notably, one study demonstrated that health-related quality of life associated with LOC eating was significantly lower for men than for women (Mitchison et al., 2013). Given the deleterious correlates of LOC eating, it is imperative to identify individual factors that may augment vulnerability to engaging in this disordered eating behavior among men.

Theoretical models propose that LOC eating behaviors emerge from negative affect (Polivy & Herman, 1993). Specifically, the act of LOC eating enables an individual to narrow their focus to their immediate environment, allowing them to escape negative self-image and awareness (Heatherton & Baumeister, 1991). Negative self-image could be due, in part, to highly demanding societal expectations related to appearance. A large body of literature documents the centrality of meeting appearance standards to men's and women's self-concept, self-esteem, and overall affect (Baudson et al., 2016; Cordes et al., 2017; Green & Pritchard, 2003). Messages which communicate the value of appearance expectations are particularly evident in instances of weight-based teasing, whereby individuals are told that having a larger body size is unacceptable and, in fact, "bad". Weight-based teasing can prompt an array of negative affective experiences and is consistently associated with low self-esteem, poor body image, increased depressive symptoms, and suicidal ideation among adolescent boys and girls (Eisenberg et al., 2003). Thus, individuals may engage in LOC eating to escape the aversive self-image and distress that emerges from weight-based teasing.

Indeed, weight-based teasing is positively associated with LOC eating in adolescent boys and girls and adult women (Calogero et al., 2009; Haines et al., 2006; Libbey et al., 2008; Rojo-Moreno et al., 2013). Our prior work has identified a significant and positive link between weight-based teasing and a spectrum of disordered eating behaviors, including LOC eating, in a large sample of young men (Williamson et al., 2021). However, investigation of individual-level factors influencing the link between weight-based teasing and LOC eating among men is needed. This information would assist with identifying men who may be at greatest risk for LOC eating and informing specific intervention targets for this population.

Inherent to affect regulation models for LOC eating is the way in which individuals cope with and regulate negative emotions. Emotion dysregulation, in general, has been found to account for a significant proportion of the variance in the development and maintenance of LOC eating behaviors (Whiteside et al., 2007). One facet of emotion dysregulation that may be particularly relevant to LOC eating is the tendency to engage in impulsive behavior when distressed (Gratz & Roemer, 2003). Trait impulsivity is a key characteristic linking negative affect to disordered eating patterns, and may also play a role in LOC eating (Cyders & Smith, 2008; Fischer et al., 2013; Kelly et al., 2014; Lundahl et al., 2015; Racine et al., 2017; Smith, Mason, Crosby, Engel, & Wonderlich, 2019). Likewise, the tendency to engage in impulsive behavior when distressed is postulated to strengthen the link between negative emotions and LOC eating in women (Fischer et al., 2013; Smith, Mason, Crosby, Engel, & Wonderlich, 2019), whereas the ability to control impulses has been implicated as a protective factor for this disordered eating behavior (Culbert et al., 2015; Smith, Mason, Crosby, Engel, & Wonderlich, 2019). However, prior research has not studied these associations among men.

Broadly, men are more likely to engage in impulsive behaviors (Cross et al., 2011) and are more susceptible to deploying maladaptive emotion coping strategies compared to women (Exchenbeck et al., 2007). Gendered variations in emotion regulation may be due, in part, to male gender role expectations which denounce adaptive emotional expression (Gross, 1998). Similarly, studies have consistently documented that girls and women show greater emotional effortful control abilities than boys and men when distressed (see Else-Quest et al., 2006, for a review). These findings converge with a recent study which demonstrated that general emotion dysregulation is associated with LOC eating behaviors in men (Hayaki & Free, 2016). The tendency to engage in impulsive

behaviors when distressed may exacerbate the link between weight-based teasing and LOC eating, but these associations have not been evaluated in men. Given that weight-based teasing appears to increase as boys reach adulthood (Haines et al., 2013) and is linked to poor psychological wellbeing and negative self-perceptions (Eisenberg et al., 2003), the tendency to engage in impulsive behaviors when distressed may be an important mechanism underpinning LOC eating among young men during this phase of life (Cyders & Smith, 2008; Fischer et al., 2013; Kelly et al., 2014; Lundahl et al., 2015; Racine et al., 2017; Smith, Mason, Crosby, Engel, & Wonderlich, 2019).

As such, the primary objective of this study was to examine the association between weight-based teasing distress and LOC eating in a sample of young adult men. The tendency to engage in impulsive behavior when distressed was examined as a potential moderating variable. It was hypothesized that distress from weight-based teasing would be positively associated with LOC eating frequency. We further expected that the link between weight-based teasing distress and LOC eating frequency would be stronger among men who reported a greater tendency to engage in impulsive behavior under emotional distress. We also examined whether the proposed hypotheses varied within each racial and ethnic group. In light of the dearth of data examining the tendency to engage in impulsive behavior when distressed among men belonging to diverse racial and ethnic identities, these analyses are considered exploratory with the goal of expanding the empirical evidence investigating the connections among weight-based teasing, emotion dysregulation, and LOC eating.

2. Methods

2.1. Participants and procedures

These data were derived from a larger study on young men's disordered eating behaviors and cognitions (Kelly et al., 2018; Kelly, Smith, et al., 2018). In terms of data collection modality, sample, and measures, the current paper used methodology identical to the study conducted by Williamson et al. (2021). However, in this prior work, LOC eating was investigated as one of eight disordered eating variables related to weight-based teasing (Williamson et al., 2021). The following analyses represent a specific theoretical examination of the role of emotion dysregulation in the association between weight-based teasing distress and LOC eating.

Participants were recruited using Qualtrics Panels. Qualtrics Panels primarily uses market research panels and social media for recruitment from around the country. Respondents were men aged 18–30 years old due to the evidence of LOC eating being especially prevalent in this subpopulation (Lavender et al., 2010; Nicdao et al., 2007; Udo et al., 2013). Additional eligibility criteria included current residency in the United States, English proficiency, and "racial/ethnic¹ identity" (non-Hispanic White, African American, Hispanic/Latino, or Asian/Asian American). Interested participants followed a link to the online consent form which provided further detail regarding the purpose and duration (15–20 min) of the study. Consent was indicated with a radio button stating, "I consent to take the survey" or refused by clicking a button that read, "I do NOT consent to take the survey." The current study was approved by the Institutional Review Board at the University of Oregon.

2.2. Measures

2.2.1. Demographics

Self-report questions assessed age, race/ethnicity, height, and

¹ The American Psychological Association now recommends the separation of racial identity and ethnic identity. At the time these data were collected, the term "racial/ethnic identity" was used in the survey and thus is retained as such in the [Methods](#) and [Results](#) sections.

weight. Reported height and weight were used to determine body mass index (BMI) (kg/m^2). Geographic region, education, school status, marital status, employment status, annual income, immigration status, and sexuality were assessed via self-report questions to allow for an assessment of generalizability.

2.2.2. Weight-based teasing

Weight-based teasing was measured with the Perceptions of Teasing Scale (POTS; Thompson et al., 1995), which assesses the frequency and distress of any experiences with weight-based teasing. Frequency of weight-based teasing was measured with items including examples of experiences like “People made jokes about you being heavy” and was assessed on a 5-point Likert scale ranging from 1 (*never*) to 5 (*always*). Distress from weight-based teasing experiences was measured after each example with “You just said that people made jokes about you being heavy, when this happened how upset where you?”. This was measured on a 5-point Likert scale ranging from 1 (*not upset*) to 5 (*very upset*). The distress subscale ($r = 0.85$) has demonstrated acceptable test-retest reliability and validity among adult men and women (Thompson et al., 1995). In the current study's sample, Cronbach's alpha for the weight-based teasing distress items was good ($\alpha = 0.89$).

2.2.3. Impulsive behavior when distressed

The tendency to engage in impulsive behavior when distressed was measured with the 3-item Impulse Control Difficulties subscale of the 18-item Difficulties in Emotion Regulation Scale-Short form (DERS-SF; Gratz & Roemer, 2003). Frequency of engaging in impulsive behavior when distressed (e.g., “When I'm upset, I lose control over my behavior”) was measured on a 5-point Likert scale ranging from 1 (*almost never*) to 5 (*almost always*). The DERS-SF has high estimated internal consistency in a college student sample and adequate model fit when confirmatory factor structure models were used to compare the short form to the original scale (Kaufman et al., 2016). Cronbach's alpha for the DERS-SF in the current sample was good ($\alpha = 0.80$).

2.2.4. Loss of control (LOC) eating

LOC eating was measured with items assessing subjective and objective binge eating episodes in the past 28 days from the Eating Disorder Examination Questionnaire (Fairburn & Beglin, 1994). Consistent with prior research measuring LOC eating (e.g., Kelly et al., 2015), items assessing SBEs and OBEs were combined to calculate a total LOC eating frequency. Use of this measure to conceptualize LOC eating has been supported by latent class analysis (Williamson et al., 2002) and has been shown to correlate with scores acquired using the Eating Disorder Examination, an interview-based assessment of eating disorder symptoms (Berg et al., 2012). Test-retest reliability for LOC eating over a two-week period is good ($r = 0.68$) (Berg et al., 2012).

2.3. Data analytic plan

Descriptive statistics of key variables indicated an over dispersion of zeros in the dependent variable, LOC eating frequency. As such, a negative binomial regression model was used to assess the association between reported distress from weight-based teasing and frequency of LOC eating. Negative binomial models include a random component that accounts for over dispersion while preventing an incorrect assumption that differences between subjects are equal (Elhai et al., 2008). Due to the nature of our outcome variable and the large proportion of zero responses, zero-inflated negative binomial models were also considered, however, this statistical approach did not demonstrate improved model fit and thus was not employed. To examine the proposed moderating properties of the tendency to engage in impulsive behavior when distressed on the association between weight-based teasing distress and LOC eating, means of both weight-based teasing distress and the tendency to engage in impulsive behavior when distressed were first centered around zero. A second negative binomial

regression model was conducted with these centered terms and their interaction. A significant moderation effect was plotted using the method of Dawson for interpretation of interaction effects (Dawson, n.d.). All analyses adjusted for age, BMI, and race/ethnicity as these have been shown to have significant associations with LOC eating in prior research with young men (Haines et al., 2006; Kelly et al., 2015; Kelly, Smith, et al., 2018). Frequency of weight-based teasing was considered as a covariate. The same analyses were repeated to explore the proposed associations within each racial/ethnic group. In these analyses, racial/ethnic identity was removed as a covariate. Reported effect sizes were calculated as standardized mean differences (SMD; small = 0.2, medium = 0.5, large = 0.8; Cohen, 1992). All analyses were conducted using SPSS v26 and were considered significant at $p < .05$.

3. Results

3.1. Preliminary analyses

A total of 1114 participants enrolled in the current study. The weight-based teasing measure was added to this study shortly after recruitment began, resulting in a total sample size of 1011 young men ($M_{\text{age}} = 23.9$, $SD = 3.6$ years; $M_{\text{BMI}} = 25.38$, $SD = 6.23$ kg/m^2). Missing data in the final sample of 1011 participants were minimal (<3%); thus, listwise deletion was used (Buhi et al., 2008). Table 1 presents the demographic characteristics of the sample, 51.8% of the sample reported

Table 1
Demographic and descriptive information.

| | Full sample (N = 1011) |
|--|------------------------|
| Age, M \pm SD (years) | 23.9 \pm 3.6 |
| BMI, M \pm SD (kg/m^2) | 25.3 \pm 6.2 |
| Racial/ethnic identity (%) | |
| Non-Hispanic White | 25.7% |
| African American | 24.7% |
| Hispanic/Latino | 24.7% |
| Asian/Asian American | 25.0% |
| Geographic region (%) | |
| Urban | 45.7% |
| Suburban | 41.2% |
| Rural | 13.1% |
| Education (%) | |
| \leq High school | 32.5% |
| Some college | 35.2% |
| \geq 4-Year college degree | 32.3% |
| School status (%) | |
| In school | 37.5% |
| Not in school | 62.5% |
| Marital status (%) | |
| Single | 81.3% |
| Married | 17.1% |
| Other | 0.6% |
| Employment status (%) | |
| Disability | 3.8% |
| Unemployed | 28.3% |
| Employed part-time | 24.5% |
| Employed full-time | 43.4% |
| Annual income (%) | |
| <\$19,999 | 25.7% |
| 20,000–29,999 | 16.5% |
| 30,000–39,999 | 10.4% |
| 40,000+ | 47.4% |
| Not born in U.S. (%) | 20.4% |
| Heterosexual (%) | 88.8% |
| % with LOC eating | 51.8% |
| LOC eating frequency (mode) | 1.0 |
| LOC eating range | 1.0–56.0 |
| Impulsive emotion regulation, M \pm SD | 2.22 \pm 1.15 |
| Weight-based teasing distress, M \pm SD | 1.79 \pm 1.65 |
| Weight-based teasing frequency, M \pm SD | 1.96 \pm 1.11 |

Note. BMI = body mass index; LOC = loss of control; LOC eating frequency mode is reported for those who reported engagement in these episodes in the last 28 days.

LOC eating with a range of 1.0–56.0 episodes in the prior 28 days. Table 2 presents the correlations among study variables. Spearman's correlations were conducted for variables with distributions demonstrating departures from normality (Bishara & Hittner, 2015). All other correlations were examined using Pearson bivariate correlations. Unadjusted correlations revealed a significant and strong association between weight-based teasing frequency and weight-based teasing distress ($r = 0.82$); thus, weight-based teasing frequency was not included as a covariate to avoid potential issues with multicollinearity (Franke, 2010).

3.2. Primary analyses

After adjusting for age, BMI, and race/ethnicity, there was a positive association between weight-based teasing distress and LOC eating frequency, $p < .001$; SMD = 0.35 (see Table 3). Furthermore, the tendency to engage in impulsive behavior when distressed significantly moderated this association, $p = .047$; SMD = 0.03 (see Table 3). As demonstrated in Fig. 1, the tendency to engage in impulsive behavior when distressed exacerbated the positive association between weight-based teasing distress and LOC eating in the full sample.

3.3. Exploratory racial/ethnic analyses

After adjusting for age and BMI, there was a positive association between weight-based teasing distress and LOC eating frequency in non-Hispanic White men, $p < .001$; SMD = 0.29, Asian/Asian American men, $p = .02$; SMD = 0.24, African American men, $p < .001$; SMD = 0.40, and Hispanic/Latino men, $p < .001$; SMD = 0.39 (see Table 4). The tendency to engage in impulsive behavior when distressed significantly moderated this association in non-Hispanic White men only, $Exp(B) = 0.89$, $p = .01$; SMD = 0.09. Specifically, in non-Hispanic White men, the tendency to engage in impulsive behavior when distressed exacerbated the association between distress from weight-based teasing and LOC eating (see Fig. 2). The tendency to engage in impulsive behavior when distressed did not significantly moderate the link between weight-based teasing distress and LOC eating frequency for African American, Asian/Asian American or Hispanic/Latino men ($ps = .18-.75$).

4. Discussion

LOC eating is linked to substantial physical and psychosocial impairment among adult men and women (Striegel et al., 2012). Some data suggest that lower levels of health-related quality of life in connection with LOC eating is elevated in men relative to women (Mitchison et al., 2013). Elucidating the factors which are associated with LOC eating among men may provide valuable insight into identification of high-risk individuals, as well as the development of potential targeted strategies for intervention. The results of the present study revealed that, after controlling for age and BMI, non-Hispanic White, Asian/Asian American, African American men, and Hispanic/Latino men who endorsed greater distress from weight-based teasing also

Table 2
Correlations for study variables.

| | 1 | 2 | 3 | 4 | 5 |
|-----------------------------------|--------------------|--------------------|--------------------|-------|-------|
| 1. Age | – | | | | |
| 2. BMI | 0.15* [†] | – | | | |
| 3. LOC eating frequency | 0.03 [†] | 0.13* [†] | – | | |
| 4. Impulsive emotion regulation | 0.04 | –0.05 [†] | 0.32* [†] | – | |
| 5. Weight-based teasing distress | 0.03 | 0.25* [†] | 0.43* [†] | 0.28* | – |
| 6. Weight-based teasing frequency | 0.02 | 0.23* [†] | 0.48* [†] | 0.37* | 0.82* |

Note. BMI = body mass index; LOC = loss of control.

* $p < .01$.

[†] Spearman correlation.

Table 3

Results of negative binomial regression models to evaluate link between distress from weight-based teasing and LOC eating frequency and the moderating role of the tendency to engage in impulsive behavior when distressed.

| | 95% CI | | Exp (B) | p | SMD |
|--|--------|------|---------|--------|------|
| | LL | UL | | | |
| Non-Hispanic White identity (reference) | – | – | – | – | |
| Hispanic/Latino identity* | 0.51 | 0.85 | 0.67 | 0.001 | 0.28 |
| African American identity | 0.50 | 0.84 | 0.65 | 0.001 | 0.29 |
| Asian/Asian American identity* | 0.46 | 0.77 | 0.60 | <0.001 | 0.34 |
| BMI | 0.98 | 1.07 | 0.99 | 0.33 | 0.01 |
| Age | 0.97 | 1.02 | 0.99 | 0.52 | 0.01 |
| Distress from weight-based teasing** | 1.30 | 1.55 | 1.42 | <0.001 | 0.35 |
| Impulsive behavior when distressed** | 1.36 | 1.58 | 1.46 | <0.001 | 0.36 |
| Impulsive behavior × distress from weight-based teasing* | 0.93 | 1.00 | 0.95 | 0.047 | 0.03 |

Note. BMI = body mass index; CI = confidence interval; LL = lower limit; UL = upper limit; SMD = standardized mean difference. Values above the line represent findings related to the association between weight-based teasing distress and LOC eating. Values below the line represent findings related to the moderating property of impulsive behavior on the association between weight-based teasing distress and LOC eating.

* $p < .01$.

** $p < .001$.

reported more frequent engagement in LOC eating. Additionally, the link between distress from weight-based teasing and LOC eating was exacerbated for non-Hispanic White men who reported a high tendency to engage in impulsive behaviors when distressed. The same moderation effect was not significant for all other racial and ethnic groups.

The positive association between distress from weight-based teasing and LOC eating provides further evidence for the relationship between weight stigmatizing experiences and disordered eating behaviors (Calogero et al., 2009; Haines et al., 2006; Libbey et al., 2008). Although these associations have previously been observed among Hispanic adolescent boys and girls and non-Hispanic White adult women (Rojo-Moreno et al., 2013; Simone & Lockhart, 2016), deleterious correlates of weight-based teasing are markedly understudied among adult men. The current study extends this research by demonstrating that the distress attached to experiences of weight-based teasing is significantly associated with LOC eating, and that this association is present among racially and ethnically diverse men. These findings corroborate previous research supporting the escape theory (Blackburn et al., 2006; Haedt-Matt & Keel, 2011; Heatherton & Baumeister, 1991), whereby engaging in LOC eating acts as a means to evade negative self-awareness. Weight-based teasing may directly evoke negative self-awareness by highlighting one's failure to meet sociocultural standards of appearance. Weight-based teasing may also elicit negative self-awareness beyond appearance concerns through the perceived social rejection that is embedded in stigmatizing experiences (Feldman & Crandall, 2007). Subsequently, an individual may attempt to escape from this negative self-awareness by narrowing their attention to their immediate surroundings through LOC eating.

Consistent with our hypotheses and prior research with women (Fischer et al., 2013; Smith, Mason, Crosby, Engel, & Wonderlich, 2019), impulsive behavior when distressed exacerbated the link between weight-based teasing distress and LOC eating frequency in the full sample. However, follow-up exploratory analyses by race and ethnicity revealed the moderation was only significant for non-Hispanic White men. These findings highlight the value of examining observed associations within racial and ethnic groups, as aggregated approaches may mask meaningful group differences. To that end, it is unclear why impulsive emotion regulation did not significantly intensify the positive association between weight-based teasing distress and LOC eating frequency also found in Asian/Asian American, African American, and

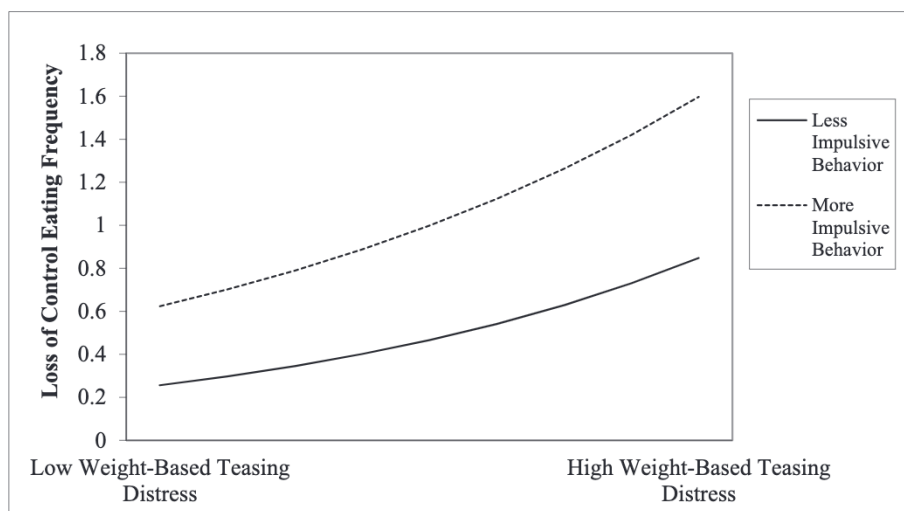


Fig. 1. Graph of the moderating properties of engagement in impulsive behavior when distressed on the association between weight-based teasing distress and LOC eating in the full sample.

Moderating role of the tendency to engage impulsive behavior when distress was evaluated at 1 SD above the mean (more impulsive behavior) and 1 SD below the mean (less impulsive behavior). The interaction between weight-based teasing distress and the tendency to engage in impulsive behavior when distressed was statistically significant, $Exp(B) = 0.96, p = .047; SMD = 0.03$. In the full sample, the tendency to engage in impulsive behavior when distressed exacerbated the positive association between weight-based teasing distress and LOC eating frequency.

Table 4
Results for exploratory follow-up analyses by racial/ethnic identity.

| | 95% CI | | Exp (B) | p | SMD |
|---|--------|------|---------|--------|-------|
| | LL | UL | | | |
| Non-Hispanic White men | | | | | |
| BMI | 0.96 | 1.01 | 0.98 | 0.16 | 0.01 |
| Age | 0.96 | 1.06 | 1.01 | 0.70 | 0.01 |
| Distress from weight-based teasing*** | 1.14 | 1.60 | 1.35 | <0.001 | 0.29 |
| Impulsive behavior when distressed*** | 1.37 | 1.92 | 1.62 | <0.001 | 0.49 |
| Impulsive behavior × distress from weight-based teasing** | 0.82 | 0.98 | 0.89 | 0.01 | 0.09 |
| African American men | | | | | |
| BMI* | 0.98 | 1.04 | 1.01 | 0.65 | 0.01 |
| Age | 0.91 | 1.02 | 0.96 | 0.20 | 0.03 |
| Distress from weight-based teasing*** | 1.28 | 1.79 | 1.51 | <0.001 | 0.40 |
| Impulsive behavior when distressed*** | 1.22 | 1.63 | 1.41 | <0.001 | 0.34 |
| Impulsive behavior × distress from weight-based teasing | 0.94 | 1.09 | 1.01 | 0.71 | 0.01 |
| Asian/Asian American men | | | | | |
| BMI | 0.98 | 1.03 | 1.00 | 0.90 | 0.01 |
| Age | 0.94 | 1.05 | 0.99 | 0.70 | 0.01 |
| Distress from weight-based teasing*** | 1.04 | 1.63 | 1.30 | 0.02 | 0.24 |
| Impulsive behavior when distressed | 0.96 | 1.33 | 1.13 | 0.13 | 0.09 |
| Impulsive behavior × distress from weight-based teasing | 0.93 | 1.11 | 1.02 | 0.75 | 0.001 |
| Hispanic/Latino men | | | | | |
| BMI | 0.95 | 1.02 | 0.98 | 0.41 | 0.01 |
| Age | 0.95 | 1.07 | 1.01 | 0.73 | 0.01 |
| Distress from weight-based teasing*** | 1.32 | 1.86 | 1.57 | <0.001 | 0.39 |
| Impulsive behavior when distressed*** | 1.40 | 1.84 | 1.60 | <0.001 | 0.34 |
| Impulsive behavior × distress from weight-based teasing | 0.89 | 1.02 | 0.96 | 0.18 | 0.03 |

Note. Independent variables were centered around zero; BMI = body mass index; CI = confidence interval; UL = upper limit; LL = lower limit; SMD = standardized mean differences. Values above the line represent findings related to the association between weight-based teasing distress and LOC eating. Values below the line represent findings related to moderating property of impulsive behavior on the association between weight-based teasing distress and LOC eating.

* $p < .05$.
 ** $p < .01$.
 *** $p < .001$.

Hispanic/Latino men. This pattern of findings may reflect racial and ethnic variations in pathways through which distress from weight-based teasing relates to LOC eating. For some, LOC eating may represent an emotional coping strategy; for others, it may be a consequence of behaviors intended to change one's appearance, such as dieting and excessive exercise (Carrard et al., 2012; Kelly et al., 2020). Indeed, African American men, in particular, may engage in maladaptive muscularity-oriented behaviors to embody traditional perceptions of masculinity and power in the stratified racial hierarchy of the United States (Osa & Kelly, 2021). In turn, these behaviors (e.g., compulsive and excessive exercise) may contribute to LOC eating (Martin et al., 2020). These findings are fairly consistent with prior work with this sample, which suggested that differences in emotion regulation strategies did not moderate the link between discrimination and LOC eating frequency in African American, Asian/Asian American, or Hispanic/Latino men (Kelly et al., 2018). More research is needed to identify moderators of and mechanisms for the link between weight-based teasing distress and LOC eating, and whether these differ according to specific identity factors, such as gender, race, and ethnicity.

Men belonging to systemically marginalized racial and ethnic identities may utilize other forms of escapism in the face of distress from weight-based teasing. For example, some men belonging to marginalized racial and ethnic identities engage in substance use in response to distress from general stigmatization and discrimination (Gilbert & Zemore, 2016; Iwamoto et al., 2016), and impulsivity is consistently related to alcohol use (Dir et al., 2014). Alternatively, perhaps appearance is held in higher esteem for non-Hispanic White men; therefore, being teased about weight or appearance is more closely linked to distress and extreme weight loss strategies, both of which are associated with LOC eating (Kelly et al., 2016; Kukk & Akkermann, 2019). Similarly, although some of our prior work suggests that Asian/Asian American men have significantly higher body image concerns than their racial and ethnic peers (Kelly et al., 2015), they also have culturally-bound norms for emotion regulation that discourage impulsive responses to distressing events (Liu & Iwamoto, 2007).

Taken together, our findings highlight the close tie between distress attached to weight-based teasing and LOC eating, even in young men, and underscore the need to consider individual-level and cultural-specific variations in emotion regulation that may interact with weight-based teasing or function independently in future efforts to understand LOC eating in understudied populations. These study results, however, should be considered in light of their effect sizes. Distress from weight-based teasing and impulsive emotion regulation demonstrated small-to-medium effect sizes, suggesting other constructs also contribute to young men's LOC eating habits. Furthermore, the sole significant

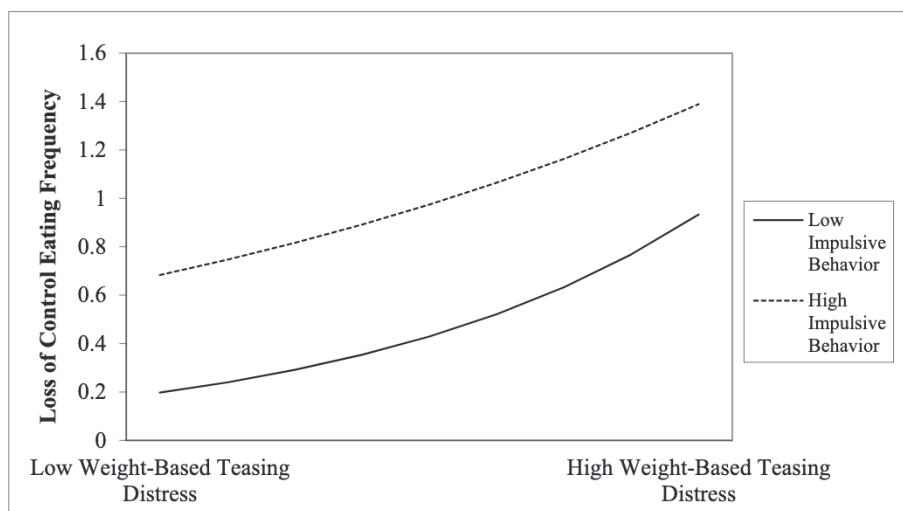


Fig. 2. Graph of the moderating properties of engagement in impulsive behavior when distressed on the association between weight-based teasing distress and LOC eating frequency in non-Hispanic White men.

Moderating role of the tendency to engage in impulsive behavior when distressed was evaluated at 1 SD above the mean (more impulsive behavior) and 1 SD below the mean (less impulsive behavior). The interaction between weight-based teasing distress and the tendency to engage in impulsive behavior when distressed was statistically significant in non-Hispanic White men, $Exp(B) = 0.89$, $p = .01$; $SMD = 0.09$. The tendency to engage in impulsive behavior when distressed exacerbated the positive association between weight-based teasing distress and LOC eating frequency.

moderation finding yielded a small effect size, suggesting that other variables may be more relevant to the co-occurrence of weight-based teasing distress and LOC eating in young non-Hispanic White men. For example, internalization of appearance ideals may guide behavioral responses to weight-based teasing. Men who believe that having a certain body size and shape is integral to their worth may be more inclined to respond to weight-based teasing distress by dieting and excessive exercise, both of which are associated with LOC eating behaviors in racially and ethnically diverse men (Carrard et al., 2012; Kelly, Cotter, et al., 2020). Future research may also benefit from investigating culturally relevant factors, such as family connectedness and intergenerational practices surrounding food and eating behaviors, to assess their potentially protective nature (Croll et al., 2002; Langdon-Daly & Serpell, 2017).

Data from the current study was collected at a single time point and the measure of weight-based teasing examined participants' life history of weight-based teasing (versus current experiences). As such, it is not possible to conclude the timing and roles of the constructs evaluated in the current study. While theory would suggest that distressing experiences like weight-based teasing and maladaptive emotion regulation tendencies increase risk for and maintain LOC eating (Whiteside et al., 2007), prospective methodology is needed to further test these hypotheses. An additional limitation of the current study is the reliance on self-report measures of impulsive coping and LOC eating, which may be influenced by participants' willingness to provide responses that reflect their actual behavior. Gender-based stereotypes regarding appearance concerns and disordered eating may undermine men's sincerity of reporting (Griffiths et al., 2015). We must also acknowledge the presence of potential bias from retrospective recollection of weight-based teasing. Future studies would benefit from employing laboratory behavioral measures of the tendency to engage in impulsive behavior when distressed (e.g., Dougherty et al., 2005), as well as testing the association between weight-based teasing distress and LOC eating in experimental paradigms (Russell et al., 2017). Evidence exists that weight-based teasing from peers and family members differentially predict the frequency of disordered eating behaviors among men (Puhl et al., 2017). Therefore, examination of specific sources (e.g., peers, family members) of weight-based teasing may inform whether the link between the tendency to engage in impulsive behavior when distressed and LOC eating varies by source. Although participants were not recruited based on targeting individuals with eating pathology, more men in this sample endorsed LOC eating than in previous literature (eg., Kelly et al., 2015; Lavender et al., 2010; Mitchison et al., 2013). Variations in LOC eating prevalence across studies may reflect increases in LOC eating within this demographic over time or may be the result of

methodological differences, with online surveys increasing men's comfort with disclosing their experiences with disordered eating. Nonetheless, these results may not generalize to all young men. Finally, although the sample in this study consisted of men belonging to a wide range of racial and ethnic backgrounds, our findings cannot be assumed to generalize to men who hold more than one racial or ethnic minority identity, older men, or men outside of the United States.

Despite these limitations, our results underscore the potential utility of including emotion regulation training in intervention efforts aimed at reducing LOC eating for some young men. For instance, Dialectical Behavior Therapy (DBT) has been found to benefit individuals with BED (Lenz et al., 2014) and may be effective at reducing impulsive behaviors and promoting adaptive emotion regulation (Jamilian et al., 2014; McMMain et al., 2001). Given the preliminary nature of the present study, however, it is unclear whether and to what extent impulsive behavior reduction may mitigate the link between distress from weight-based teasing and LOC eating specifically among non-Hispanic White men. Further, training in adaptive emotion regulation strategies does not address the widespread societal devaluation of larger body sizes that underpins weight-based teasing. Negative perceptions and stereotypes about weight, which denote people with larger body sizes as "lazy" or "incompetent," are pervasive and adopted early in life (Harriger et al., 2010; Puhl & Heuer, 2010). The present study builds on past research demonstrating that weight stigmatizing experiences are tied to considerable social, psychological, and physical impairment (Eisenberg et al., 2003). Youth report that weight-based teasing begins as early as elementary school and occurs more often than bullying due to race, religion, or disability (Puhl et al., 2011; Puhl & King, 2013). Yet, few studies have implemented and evaluated interventions related to bullying specifically regarding body size. Overall, our findings highlight the relevance of weight-based teasing to LOC eating and call for further investigation of weight stigmatizing experiences and engagement in impulsive behavior as it relates to distress and disordered eating among racially and ethnically diverse young men.

Role of funding sources

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

CRedit authorship contribution statement

Maggie Osa: Writing - Original Draft, Writing - Review and Editing, Formal Analysis. **Lisa Bunn:** Conceptualization, Formal Analysis, Writing - Original Draft, Writing - Review and Editing. **Nicole Giuliani:**

Methodology, Writing - Review and Editing. **Nichole Kelly:** Conceptualization, Supervision, Data Curation, Methodology, Project Administration, Funding Acquisition, Writing - Review and Editing.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

References

- American Psychiatric Association. (2013). *Diagnostic and Statistical Manual of Mental Disorders (DSM-5)* (5th ed.). American Psychiatric Publishing.
- Baudson, T. G., Weber, K. E., & Freund, P. A. (2016). More than only skin deep: Appearance self-concept predicts most of secondary school students' self-esteem. *Frontiers in Psychology, 7*. <https://doi.org/10.3389/fpsyg.2016.01568>.
- Berg, K. C., Peterson, C. B., Frazier, P., & Crow, S. J. (2012). Psychometric evaluation of the eating disorder examination and eating disorder examination-questionnaire: A systematic review of the literature: Psychometrics of the EDE and EDE-Q. *International Journal of Eating Disorders, 45*(3), 428–438. <https://doi.org/10.1002/eat.20931>.
- Bishara, A. J., & Hittner, J. B. (2015). Reducing bias and error in the correlation coefficient due to nonnormality. *Educational and Psychological Measurement, 75*(5), 785–804. <https://doi.org/10.1177/0013164414557639>.
- Blackburn, S., Johnston, L., Blampied, N., Popp, D., & Kallen, R. (2006). An application of escape theory to binge eating. *European Eating Disorders Review, 14*(1), 23–31. <https://doi.org/10.1002/erv.675>.
- Buhi, E. R., Goodson, P., & Neilands, T. B. (2008). Out of sight, not out of mind: Strategies for handling missing data. *American Journal of Health Behavior, 32*(1), 83–92. <https://doi.org/10.5993/AJHB.32.1.8>.
- Calogero, R. M., Herbozo, S., & Thompson, J. K. (2009). Complimentary weightism: The potential costs of appearance-related commentary for women's self-objectification. *Psychology of Women Quarterly, 33*(1), 120–132. <https://doi.org/10.1111/j.1471-6402.2008.01479.x>.
- Carrard, I., Crépin, C., Ceschi, G., Golay, A., & Van der Linden, M. (2012). Relations between pure dietary and dietary-negative affect subtypes and impulsivity and reinforcement sensitivity in binge-eating individuals. *Eating Behaviors, 13*(1), 13–19. <https://doi.org/10.1016/j.eatbeh.2011.10.004>.
- Cohen, J. (1992). A power primer. *Psychological Bulletin, 112*, 155–159.
- Cordes, M., Vocks, S., Düsing, R., & Waldorf, M. (2017). Effects of the exposure to self- and other-referential bodies on state body image and negative affect in resistance-trained men. *Body Image, 21*, 57–65. <https://doi.org/10.1016/j.bodyim.2017.02.007>.
- Croll, J., Neumark-Sztainer, D., Story, M., & Ireland, M. (2002). Prevalence and risk and protective factors related to disordered eating behaviours among adolescents: Relationship to gender and ethnicity. *The Journal of Adolescent Health, 31*(2), 166–175. [https://doi.org/10.1016/S1054-139X\(02\)00368-3](https://doi.org/10.1016/S1054-139X(02)00368-3).
- Cross, C. P., Copping, L. T., & Campbell, A. (2011). Sex differences in impulsivity: A meta-analysis. *Psychological Bulletin, 137*(1), 97–130. <https://doi.org/10.1037/a0021591>.
- Culbert, K. M., Racine, S. E., & Klump, K. L. (2015). Research review: What we have learned about the causes of eating disorders – A synthesis of sociocultural, psychological, and biological research. *Journal of Child Psychology and Psychiatry, 56*(11), 1141–1164. <https://doi.org/10.1111/jcpp.12441>.
- Cyders, M. A., & Smith, G. T. (2008). Emotion-based dispositions to rash action: positive and negative urgency. *Psychological Bulletin, 134*(6), 807–828. <https://doi.org/10.1037/a0013341>.
- Dawson, J. (n.d.). Interpreting interaction effects. <http://www.jeremydawson.co.uk/slopes.htm>.
- Dir, A. L., Coskunuzun, A., & Cyders, M. A. (2014). A meta-analytic review of the relationship between adolescent risky sexual behavior and impulsivity across gender, age, and race. *Clinical Psychology Review, 34*(7), 551–562. <https://doi.org/10.1016/j.cpr.2014.08.004>.
- Dougherty, D. M., Mathias, C. W., Marsh, D. M., & Jagar, A. (2005). Laboratory behavioral measures of impulsivity. *Behavior Research Methods, 37*, 82–90. <https://doi.org/10.3758/BF03206401>.
- Eisenberg, M. E., Neumark-Sztainer, D., & Story, M. (2003). Associations of weight-based teasing and emotional well-being among adolescents. *Archives of Pediatrics & Adolescent Medicine, 157*(8), 733–738. <https://doi.org/10.1001/archpedi.157.8.733>.
- Elhai, J. D., Calhoun, P. S., & Ford, J. D. (2008). Statistical procedures for analyzing mental health services data. *Psychiatry Research, 160*(2), 129–136. <https://doi.org/10.1016/j.psychres.2007.07.003>.
- Else-Quest, N. M., Hyde, J. S., Goldsmith, H. H., & Van Hulle, C. A. (2006). Gender differences in temperament: A meta-analysis. *Psychological Bulletin, 132*(1), 33. <https://doi.org/10.1037/0033-2909.132.1.33>.
- Eschenbeck, H., Kohlmann, C. W., & Lohaus, A. (2007). Gender differences in coping strategies in children and adolescents. *Journal of Individual Differences, 28*(1), 18. <https://doi.org/10.1027/1614-0001.28.1.18>.
- Fairburn, C. G., & Beglin, S. J. (1994). Assessment of eating disorders: Interview or self-report questionnaire? *The International Journal of Eating Disorders, 16*(4), 363–370.
- Fairburn, C. G., & Cooper, Z. (1993). The eating disorder examination. In C. G. Fairburn, & G. T. Wilson (Eds.), *Binge eating, nature, assessment and treatment* (12th ed., pp. 317–360). Guilford.
- Feldman, D. B., & Crandall, C. S. (2007). Dimensions of mental illness stigma: What about mental illness causes social rejection? *Journal of Social and Clinical Psychology, 26*(2), 137–154. <https://doi.org/10.1521/jscp.2007.26.2.137>.
- Fischer, S., Peterson, C. M., & McCarthy, D. (2013). A prospective test of the influence of negative urgency and expectancies on binge eating and purging. *Psychology of Addictive Behaviors, 27*(1), 294–300.
- Franke, G. R. (2010). Multicollinearity. In *Wiley International Encyclopedia of Marketing*. American Cancer Society. <https://doi.org/10.1002/9781444316568.wiem02066>.
- Gilbert, P. A., & Zemore, S. E. (2016). Discrimination and drinking: a systematic review of the evidence. *Social Science & Medicine, 198*(161), 178–194. <https://doi.org/10.1016/j.socscimed.2016.06.009>.
- Goldschmidt, A. B., Engel, S. G., Wonderlich, S. A., Crosby, R. D., Peterson, C. B., Le Grange, D., Tanofsky-Kraff, M., Cao, L., & Mitchell, J. E. (2012). Momentary affect surrounding loss of control and overeating in obese adults with and without binge eating disorder. *Obesity, 20*(6), 1206–1211. <https://doi.org/10.1038/oby.2011.286>.
- Gratz, K. L., & Roemer, L. (2003). Multidimensional assessment of emotion regulation and dysregulation: development, factor structure, and initial validation of the difficulties in emotion regulation scale. *Journal of Psychopathology and Behavioral Assessment, 14*.
- Green, S. P., & Pritchard, M. E. (2003). Predictors of body image dissatisfaction in adult men and women. *Social Behavior and Personality, 31*(3), 215–222. <https://doi.org/10.2224/sbp.2003.31.3.215>.
- Griffiths, S., Mond, J. M., Li, Z., Gunatillake, S., Murray, S. B., Sheffield, J., & Touyz, S. (2015). Self-stigma of seeking treatment and being male predict an increased likelihood of having an undiagnosed eating disorder. *The International Journal of Eating Disorders, 48*(6), 775–778. <https://doi.org/10.1002/eat.22413>.
- Gross, J. J. (1998). The emerging field of emotion regulation: An integrative review. *Review of General Psychology, 2*(3), 271–299. <https://doi.org/10.1037/1089-2680.2.3.271>.
- Haines, J., Neumark-Sztainer, D., Eisenberg, M. E., & Hannan, P. J. (2006). Weight teasing and disordered eating behaviors in adolescents: Longitudinal findings from project EAT (Eating among Teens). *Pediatrics, 117*(2), e209–e215. <https://doi.org/10.1542/peds.2005-1242>.
- Haedt-Matt, A. A., & Keel, P. K. (2011). Revisiting the affect regulation model of binge eating: A meta-analysis of studies using ecological momentary assessment. *Psychological Bulletin, 137*(4), 660–681. <https://doi.org/10.1037/a0023660>.
- Haines, J., Hannan, P. J., van den Berg, P., Eisenberg, M. E., & Neumark-Sztainer, D. (2013). Weight-related teasing from adolescence to young adulthood: Longitudinal and secular trends between 1999 and 2010. *Obesity (Silver Spring, Md.), 21*(9), E428–E434. <https://doi.org/10.1002/oby.20092>.
- Harriger, J. A., Calogero, R. M., Smith, J. E., & Witherington David, C. (2010). Body size stereotyping and internalization of the thin ideal in preschool girls. *Sex Roles, 63*(9–10), 609–620. <https://doi.org/10.1007/s11199-010-9868-1>.
- Hayaki, J., & Free, S. (2016). Positive and negative eating expectancies in disordered eating among women and men. *Eating Behaviors, 22*, 22–26. <https://doi.org/10.1016/j.eatbeh.2016.03.025>.
- Heatherton, T. F., & Baumeister, R. F. (1991). Binge eating as escape from self-awareness. *Psychological Bulletin, 110*. <https://doi.org/10.1037/0033-2909.110.1.86>.
- Iwamoto, D. K., Kaya, A., Grivel, M., & Clinton, L. (2016). Under-researched demographics: Heavy episodic drinking and alcohol-related problems among Asian Americans. *Alcohol Research: Current Reviews, 38*(1), 17–25.
- Jamilian, H. R., Malekiran, A. A., Farhadi, M., Habibi, M., & Zamani, N. (2014). Effectiveness of group dialectical behavior therapy (based on core distress tolerance and emotion regulation components) on expulsive anger and impulsive behaviors. *Global Journal of Health Science, 6*(7), 116–123. <https://doi.org/10.5539/gjhs.v6n7p116>.
- Jones, A., Helverskov, J., Rokkedal, K., & Clausen, L. (2015). A comparison of eating disorder symptomatology in a clinical population of adolescents with subjective versus objective bulimic episodes. *Advances in Eating Disorders, 3*(2), 124–132. <https://doi.org/10.1080/21662630.2014.969752>.
- Kaufman, E. A., Xia, M., Fosco, G., Yaptangco, M., Skidmore, C. R., & Crowell, S. E. (2016). The difficulties in emotion regulation scale short form (DERS-SF): Validation and replication in adolescent and adult samples. *Journal of Psychopathology and Behavioral Assessment, 38*(3), 443–455. <https://doi.org/10.1007/s10862-015-9529-3>.
- Kelly, N. R., Tanofsky-Kraff, M., Vannucci, A., Ranzhofer, L. M., Altschul, A. M., Schvey, N. A., Shank, L. M., Brady, S. M., Galescu, O., Kozlosky, M., Yanovski, S. Z., & Yanovski, J. A. (2016). Emotion dysregulation and loss-of-control eating in children and adolescents. *Health Psychology, 35*(10), 1110–1119. <https://doi.org/10.1037/hea0000389>.
- Kelly, N. R., Cotter, E., & Guidinger, C. (2018). Men who engage in both subjective and objective binge eating have the highest psychological and medical comorbidities. *Eating Behaviors, 30*, 115–119. <https://doi.org/10.1016/j.eatbeh.2018.07.003>.
- Kelly, N. R., Cotter, E. W., Guidinger, C., & Williamson, G. (2020). Perceived discrimination, emotion dysregulation and loss of control eating in young men. *Eating Behaviors, 37*, Article 101387. <https://doi.org/10.1016/j.eatbeh.2020.101387>.
- Kelly, N. R., Cotter, E. W., & Mazzeo, S. E. (2014). Examining the role of distress tolerance and negative urgency in binge eating behavior among women. *Eating Behaviors, 15*(3), 483–489. <https://doi.org/10.1016/j.eatbeh.2014.06.012>.
- Kelly, N. R., Cotter, E. W., Tanofsky-Kraff, M., & Mazzeo, S. E. (2015). Racial variations in binge eating, body image concerns, and compulsive exercise among men.

- Psychology of Men & Masculinity*, 16(3), 326–336. <https://doi.org/10.1037/a0037585>.
- Kelly, N. R., Smith, T. M., Hall, G. C. N., Guidinger, C., Williamson, G., Budd, E. L., & Giuliani, N. R. (2018). Perceptions of general and postpresidential election discrimination are associated with loss of control eating among racially/ethnically diverse young men. *International Journal of Eating Disorders*, 51(1), 28–38. <https://doi.org/10.1002/eat.22803>.
- Kukuk, K., & Akkermann, K. (2019). *Emotion regulation difficulties and dietary restraint independently predict binge eating among men*. *Eating and Weight Disorders*. <https://doi.org/10.1007/s40519-019-00791-9>.
- Langdon-Daly, J., & Serpell, L. (2017). Protective factors against disordered eating in family systems: A systematic review of research. *Journal of Eating Disorders*, 5(1), 12. <https://doi.org/10.1186/s40337-017-0141-7>.
- Lavender, J. M., De Young, K. P., & Anderson, D. A. (2010). Eating disorder examination questionnaire (EDE-Q): Norms for undergraduate men. *Eating Behaviors*, 11(2), 119–121. <https://doi.org/10.1016/j.eatbeh.2009.09.005>.
- Lenz, A. S., Taylor, R., Fleming, M., & Serman, N. (2014). Effectiveness of dialectical behavior therapy for treating eating disorders. *Journal of Counseling & Development*, 92(1), 26–35. <https://doi.org/10.1002/j.1556-6676.2014.00127.x>.
- Libbey, H. P., Story, M. T., Neumark-Sztainer, D. R., & Boutelle, K. N. (2008). Teasing, disordered eating behaviors, and psychological morbidities among overweight adolescents. *Obesity (Silver Spring, Md.)*, 16, S24–S29. <https://doi.org/10.1038/oby.2008.455>.
- Liu, W. M., & Iwamoto, D. K. (2007). Conformity to masculine norms, Asian values, coping strategies, peer group influences and substance use among Asian American men. *Psychology of Men & Masculinity*, 8(1), 25–39. <https://doi.org/10.1037/1524-9220.8.1.25>.
- Luce, K. H., Crowther, J. H., & Pole, M. (2008). Eating disorder examination questionnaire (EDE-Q): Norms for undergraduate women. *International Journal of Eating Disorders*. <https://doi.org/10.1002/eat.20504>.
- Lundahl, A., Wahlstrom, L. C., Christ, C. C., & Stoltenberg, S. F. (2015). Gender differences in the relationship between impulsivity and disordered eating behaviors and attitudes. *Eating Behaviors*, 18, 120–124. <https://doi.org/10.1016/j.eatbeh.2015.05.004>.
- Martin, S. J., Schell, S. E., Srivastava, A., & Racine, S. E. (2020). Dimensions of unhealthy exercise and their associations with restrictive eating and binge eating. *Eating Behaviors*, 39, Article 101436. <https://doi.org/10.1016/j.eatbeh.2020.101436>.
- McMain, S., Korman, L. M., & Dimeff, L. (2001). Dialectical behavior therapy and the treatment of emotion dysregulation. *Journal of Clinical Psychology*, 57(2), 183–196. [https://doi.org/10.1002/1097-4679\(200102\)57:2<183::aid-jclp5>3.0.co;2-y](https://doi.org/10.1002/1097-4679(200102)57:2<183::aid-jclp5>3.0.co;2-y).
- Mitchison, D., Mond, J., Slewa-Younan, S., & Hay, P. (2013). Sex differences in health-related quality of life impairment associated with eating disorder features: a general population study. *International Journal of Eating Disorders*, 46(4), 375–380. <https://doi.org/10.1002/eat.22097>.
- Nicdao, E. G., Hong, S., & Takeuchi, D. T. (2007). Prevalence and correlates of eating disorders among Asian Americans: results from the National Latino and Asian American study. *The International Journal of Eating Disorders*, 40(S3), S22–S26. <https://doi.org/10.1002/eat.20450>.
- Osa, M. L., & Kelly, N. R. (2021). Experiences of discrimination are associated with drive for muscularity among African American men. *Psychology of Men & Masculinities*, 22(2), 365–374. <https://doi.org/10.1037/men0000287>.
- Palavras, M. A., Morgan, C. M., Borges, F. M. B., Claudino, A. M., & Hay, P. J. (2013). An investigation of objective and subjective types of binge eating episodes in a clinical sample of people with co-morbid obesity. *Journal of Eating Disorders*, 1(1), 26. <https://doi.org/10.1186/2050-2974-1-26>.
- Polivy, J., & Herman, C. P. (1993). *Etiology of binge eating: Psychological mechanisms*. 80. New York: Guilford Press.
- Puhl, R. M., & Heuer, C. A. (2010). Obesity stigma: Important considerations for public health. *American Journal of Public Health*, 100(6), 1019–1028. <https://doi.org/10.2105/AJPH.2009.159491>.
- Puhl, R. M., & King, K. M. (2013). Weight discrimination and bullying. *Best Practice & Research Clinical Endocrinology & Metabolism*, 27(2), 117–127. <https://doi.org/10.1016/j.beem.2012.12.002>.
- Puhl, R. M., Luedicke, J., & Heuer, C. (2011). Weight-based victimization toward overweight adolescents: Observations and reactions of peers. *Journal of School Health*, 81(11), 696–703. <https://doi.org/10.1111/j.1746-1561.2011.00646.x>.
- Puhl, R. M., Wall, M. M., Chen, C., Bryn Austin, S., Eisenberg, M. E., & Neumark-Sztainer, D. (2017). Experiences of weight teasing in adolescence and weight-related outcomes in adulthood: A 15-year longitudinal study. *Preventive Medicine*, 100, 173–179. <https://doi.org/10.1016/j.ypmed.2017.04.023>.
- Racine, S. E., VanHuyse, J. L., Keel, P. K., Burt, S. A., Neale, M. C., Boker, S., & Klump, K. L. (2017). Eating disorder-specific risk factors moderate the relationship between negative urgency and binge eating: A behavioral genetic investigation. *Journal of Abnormal Psychology*, 126(5), 481–494. <https://doi.org/10.1037/abn0000204>.
- Rojo-Moreno, L., Rubio, T., Plumed, J., Barberá, M., Serrano, M., Gimeno, N., Conesa, L., Ruiz, E., Rojo-Bofill, L., Beato, L., & Livianos, L. (2013). Teasing and disordered eating behaviors in Spanish adolescents. *Eating Disorders*, 21(1), 53–69. <https://doi.org/10.1080/10640266.2013.741988>.
- Russell, S. L., Haynos, A. F., Crow, S. J., & Fruzzetti, A. E. (2017). An experimental analysis of the affect regulation model of binge eating. *Appetite*, 110, 44–50. <https://doi.org/10.1016/j.appet.2016.12.007>.
- Simone, M., & Lockhart, G. (2016). Two distinct mediated pathways to disordered eating in response to weight stigmatization and their application to prevention programs. *Journal of American College Health*, 64(7), 520–526. <https://doi.org/10.1080/07448481.2016.1188106>.
- Smith, K. E., Mason, T. B., Crosby, R. D., Engel, S. G., & Wonderlich, S. A. (2019). A multimodal, naturalistic investigation of relationships between behavioral impulsivity, affect, and binge eating. *Appetite*, 136, 50–57. <https://doi.org/10.1016/j.appet.2019.01.014>.
- Striegel, R. H., Bedrosian, R., Wang, C., & Schwartz, S. (2012). Why men should be included in research on binge eating: Results from a comparison of psychosocial impairment in men and women. *International Journal of Eating Disorders*. <https://doi.org/10.1002/eat.20962>.
- Striegel-Moore, R. H., Rosselli, F., Perrin, N., DeBar, L., Wilson, G. T., May, A., & Kraemer, H. C. (2009). Gender difference in the prevalence of eating disorder symptoms. *International Journal of Eating Disorders*. <https://doi.org/10.1002/eat.20625>.
- Thompson, J. K., Cattarin, J., Fowler, B., & Fisher, E. (1995). In , 0367. *The perception of teasing scale (POTS): A revision and extension of the physical appearance related teasing scale (PARTS)* (pp. 146–157).
- Udo, T., McKee, S. A., White, M. A., Masheb, R. M., Barnes, R. D., & Grilo, C. M. (2013). Sex differences in biopsychosocial correlates of binge eating disorder: A study of treatment-seeking obese adults in primary care setting. *General Hospital Psychiatry*, 35(6), 587–591. <https://doi.org/10.1016/j.genhosppsych.2013.07.010>.
- Whiteside, U., Chen, E., Neighbors, C., Hunter, D., Lo, T., & Larimer, M. (2007). Difficulties regulating emotions: Do binge eaters have fewer strategies to modulate and tolerate negative affect? *Eating Behaviors*, 8(2), 162–169. <https://doi.org/10.1016/j.eatbeh.2006.04.001>.
- Williamson, G., Osa, M. L., Budd, E., & Kelly, N. R. (2021). Weight-related teasing is associated with body image concerns, disordered eating, and health diagnoses in racially and ethnically diverse young men. *Body Image*, 38, 37–48. <https://doi.org/10.1016/j.bodyim.2021.03.010>.
- Williamson, D. A., Womble, L. G., Smeets, M. A. M., Netemeyer, R. G., Thaw, J. M., Kutlesic, V., & Gleaves, D. H. (2002). Latent structure of eating disorder symptoms: A factor analytic and taxometric investigation. *The American Journal of Psychiatry*, 159(3), 412–418. <https://doi.org/10.1176/appi.ajp.159.3.412>.