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THE ROLE OF WEIGHT-BASED REJECTION SENSITIVITY IN THE ASSOCIATION BETWEEN SOCIAL ANXIETY AND BINGE EATING

by

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A thesis submitted in partial fulfillment of the requirements  
for graduation with Honors in the Psychology

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Graham Nelson  
Thesis Mentor

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All requirements for graduation with Honors in the  
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Michael O'Hara  
Psychology Honors Advisor

The Role of Weight-Based Rejection Sensitivity in the Association between Social Anxiety and

Binge Eating

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## Abstract

The factors that influence the established association between social anxiety and binge eating have received limited research attention. Because previous research demonstrates an association between weight stigma and disordered eating behaviors like binge eating, one factor that potentially explains this association is weight-based rejection sensitivity, the tendency to anxiously anticipate social rejection on the basis of one's weight. While previous research has established that anticipating rejection due to one's appearance mediates the association between social anxiety and binge eating, it remains to be seen whether this association can be accounted for by sensitivity to rejection more broadly. In order to examine this question, 409 undergraduate students from the University of Iowa completed an online questionnaire containing measures of social anxiety, binge eating, weight-based rejection sensitivity, and general rejection sensitivity. Results demonstrated that weight-based rejection sensitivity was a significant mediator of the association between social anxiety and binge eating even when general rejection sensitivity was included as a covariate. Gender significantly moderated the direct effect of social anxiety on binge eating and the indirect effect of social anxiety on binge eating through weight-based rejection sensitivity such that the direct and indirect effects were only significant for female participants. These findings suggest that weight-based rejection sensitivity may partially explain why women with heightened social anxiety report increased binge eating while other factors may contribute to the association between social anxiety and binge eating for men.

## The Role of Weight-Based Rejection Sensitivity in the Association between Social Anxiety and Binge Eating

Previous research suggests a strong link between anxiety disorders and eating disorders. In particular, a growing body of research suggests that social anxiety may be particularly associated with eating disorder symptoms and diagnoses. Godart et al. (2000) and Swinbourne et al. (2012) found social anxiety disorder (SAD) or social phobia to be the most prevalent anxiety disorder in those with eating disorders. According to Godart et al. (2000), 55% of those with anorexia nervosa and 59% of those with bulimia nervosa met criteria for a lifetime diagnosis of social phobia. Similarly, Swinbourne et al. (2012) found social phobia to be the most frequently diagnosed anxiety disorder in women presenting for treatment of an eating disorder at 42%. In both studies, anxiety disorders were also found predate eating disorders for the majority of participants which is consistent with past research on the temporality of this association (Brewerton et al., 1995; Bulik et al., 1996; Deep et al., 2003; Toner et al., 1988, Schwalberg et al., 1992). Furthermore, a recent meta-analysis concluded that social anxiety levels were similarly elevated across diagnostic groups, including anorexia nervosa, bulimia nervosa, and binge eating disorder (Kerr-Gaffney, Harrison, & Tchanturia, 2018). Taken together, these studies suggest that social anxiety in particular could be a risk factor for developing an eating disorder. While common in clinical samples, social anxiety disorder is also prevalent in those who exhibit disordered eating behaviors without a formal diagnosis. In fact, disordered-eating behaviors were correlated with 12-month and lifetime prevalence of SAD in a non-clinical sample of over 20,000 women (Gadalla & Piran, 2008). This suggests that social anxiety impacts a broad range of disordered eating behaviors and severities.

Despite the established correlation between social anxiety and disordered eating, there are few studies addressing the relationship between social anxiety and binge eating disorder (BED) or binge eating in non-clinical samples. Ostrovsky et al. (2013) found that social anxiety was correlated with binge eating and emotional eating but not restrained eating in obese participants. Similarly, Sawaoka et al. (2012) found that in overweight and obese participants with BED, social anxiety was associated with increased binge eating frequency and greater weight and shape concerns. Social anxiety was not correlated with body mass index or dietary restraint, suggesting that social anxiety is not merely a side effect of being overweight or obese but may play an important role in the perpetuation of binge eating and other disordered eating patterns (Sawaoka et al., 2012).

Past research has identified several mediators of the relationship between social anxiety and disordered eating. Supporting the influences of poor emotion regulation and negative affect, Mclean, Miller, and Hope (2007) found that the suppression of negative emotions mediated the relationship between social anxiety and a general measure of disordered eating in a non-clinical sample. In addition, two studies conducted by Menatti and colleagues found that perfectionism and fear of negative evaluation mediated the association between social anxiety and bulimia symptoms (Menatti, Weeks, Levingston, & McGowan, 2013; Menatti, DeBoer, Weeks, & Heimberg, 2015).

Rejection sensitivity has been shown to be an important potential mediator in the association between social anxiety and binge eating. Linardon and colleagues (2017) found appearance-based rejection sensitivity, the tendency to anxiously expect rejection based on one's appearance, to mediate the relationship between social anxiety and a broad range of disordered eating behaviors, including binge eating.

One factor that may contribute to the association between social anxiety and binge eating is weight-based rejection sensitivity, a newer construct that integrates weight stigma and rejection sensitivity. Weight-based rejection sensitivity, the tendency to anxiously expect rejection based on one's weight, has been correlated with several negative outcomes, including increased psychological distress, poor college adjustment, and bulimia symptoms (Brenchley & Quinn, 2016). Heightened expectations of rejection or negative evaluation in social situations based on one's weight may lead those with social anxiety to engage in disordered eating patterns in order to reduce the negative emotions, thoughts, and anxiety provoked by social situations in which one's weight is salient. As mentioned previously, Linardon et al. (2017) identified appearance-based rejection sensitivity, a closely related construct to weight-based rejection sensitivity, as a mediator of the association between social anxiety and several outcome variables: over-evaluation of weight and shape, dietary restraint, binge eating frequency, compulsive exercise frequency, and vomiting frequency. While this study adds to the literature by identifying appearance-based rejection sensitivity a potential mechanism behind the association between social anxiety and disordered eating, there are limitations that need to be addressed. Disordered eating behaviors were assessed with the Eating Disorder Examination Questionnaire (EDE-Q) which has a limited number of scales and few items assessing important outcome variables. For example, over-evaluation of weight and shape was assessed with two items while binge eating frequency, compulsive exercise frequency, and vomiting frequency were assessed with a single item. In addition, Linardon et al. (2017) failed to examine whether their findings were specific to appearance-based rejection sensitivity or were associated with rejection sensitivity more broadly. Additional research is needed to examine whether the

association between binge eating and social anxiety is mediated by appearance or weight-based rejection specifically, beyond the contribution of general rejection sensitivity.

In order to address the limitations of Linardon et al. (2017) and the lack of research on binge eating and related constructs, the present study aimed to examine the role of weight-based rejection sensitivity in the relationship between social anxiety and binge eating in comparison to other disordered eating dimensions. To capture a wider range of disordered eating dimensions, disordered eating was assessed with a 45-item measure that includes eight scales: body dissatisfaction, binge eating, cognitive restraint, purging, restricting, excessive exercise, negative attitudes toward obesity, and muscle building. This measure allowed for a more in-depth assessment of disordered eating symptoms and provided additional relevant constructs, like negative attitudes toward obesity and muscle building. Unlike the prior study, participants' sensitivity to rejection in general was also assessed.

Weight-based rejection sensitivity, which is conceptually and empirically different from appearance-based rejection sensitivity, may be more relevant to the association between social anxiety and binge eating because those who binge eat may experience weight stigma more frequently than those who restrict or purge. This is because binge eating severity seems to be associated with increased obesity severity (Bruce & Agras, 1992; de Zwaan, 2001), and weight stigmatization of overweight and obese individuals is pervasive in the United States (Puhl & Heuer, 2009). Cross-sectional research has consistently shown an association between weight stigma experiences and unhealthy or disordered eating behaviors like binge eating (Vartanian & Porter, 2016). Furthermore, experimental research has also consistently demonstrated that negative weight-related experiences, such as priming overweight stereotypes and exposing participants to weight-stigmatizing content, lead to increased food intake (Vartanian & Porter,

2016). Experimental research on stereotype priming indicates the existence of an overweight stereotype that, when activated, leads to behaviors in line with this stereotype, including the increased likelihood of ordering higher calorie foods and decreased intentions to maintain a healthy diet (Brochu & Dovidio, 2014; Seacat & Mickelson, 2009). In a study manipulating the exposure to weight-stigmatizing content, participants who viewed stigmatizing material and perceived themselves as overweight consumed more calories and reported feeling less capable of controlling their eating compared to participants who did not view stigmatizing material (Major, Hunger, Bunyan, & Miller, 2014).

Based on past research, I hypothesized that weight-based rejection sensitivity would significantly mediate the association between social anxiety and binge eating; heightened social anxiety may lead individuals to anxiously expect rejection based on their weight, leading to increased binge eating to regulate these negative emotions. I predicted that weight-based rejection sensitivity would significantly mediate the relationship between social anxiety and binge eating even when general rejection sensitivity is included as a covariate. In addition, I predicted that gender would moderate the relationship between social anxiety and weight-based rejection sensitivity and social anxiety and general rejection sensitivity such that this association would be stronger in females.

## **Method**

### **Measures**

#### *Demographic Characteristics*

Demographic variables included age, gender, race, Hispanic/Latino/Spanish origin, length of relationship, and current marital status.

*Social Anxiety*

Social anxiety was assessed using the 6-item Social Anxiety scale of the Inventory of Depression and Anxiety Symptoms (IDAS-II). Participants rated each item from 1 (not at all) to 5 (extremely) based on how much each item described how they felt during the past two weeks, including the day of the assessment. The internal consistency, criterion validity, and discriminant validity of the IDAS-II have been well-established (Watson et al., 2012). With respect to the interview-based measures of symptoms and disorders in the *DSM-IV*, the IDAS-II also shows strong criterion validity and incremental predictive power (Watson et al., 2012).

*Binge Eating and Other Disordered Eating Dimensions*

The Eating Pathology Symptoms Inventory (Forbush et al., 2013) assessed binge eating (8-items) and seven additional dimensions of disordered eating using a total of 45-items. In addition to the traditional dimensions of disordered eating measured by other assessments—Body Dissatisfaction, Binge Eating, Cognitive Restraint, Purging, Restricting, Excessive Exercise—the EPSI also includes Negative Attitudes toward Obesity and Muscle Building scales. For each item, participants were asked to select the option that best described how frequently each statement applied to them, ranging from 0 (never) to 4 (very often), during the past four weeks and including the day of the assessment. Forbush et al. (2013) found that the EPSI scales had great internal consistency and demonstrated strong convergent and discriminant validity compared to existing eating pathology, depression, and anxiety scales. Furthermore, the EPSI served as a brief and easily interpreted measure while providing a thorough assessment of a wide range of eating disorder symptoms.

*Weight-Based Rejection Sensitivity*

The Weight-Based Rejection Sensitivity Scale (W-RS) assessed participants' tendencies to anxiously expect weight-based rejection. Brenchley and Quinn (2016) developed the W-RS in order to better understand experiences of interpersonal weight stigma, combining rejection sensitivity and social stigma theories. In order to evaluate these experiences, the measure creators wrote 16 intentionally ambiguous scenarios, based on common stereotypes of overweight and obese people, with the potential for rejection based on one's weight. For example, one item reads: *"Imagine that you have taken your seat on an airplane. After everyone has boarded, it appears as though there are a couple empty seats. You hear the person next to you ask the flight attendant whether he can switch seats."* After reading the scenario, participants rated their anxiety over the scenario and expectations for rejection. For the example item provided, the following parts of the item read: *"How concerned/anxious would you be over whether the person is trying to switch seats because of your weight?"* rated on a 6-point scale from very unconcerned (1) to very concerned (6) and *"I would expect that the person wants to switch seats because of my weight"* rated on a 6-point scale from very unlikely (1) to very likely (6). To psychometrically evaluate the W-RS, Brenchley and Quinn (2016) conducted three cross-sectional studies using undergraduate samples which established the W-RS as a reliable, single-factor measure with strong construct, convergent, and discriminant validity. A longitudinal study also showed the predictive value of the W-RS, predicting increased psychological distress, bulimia symptoms, decreased physical health, and poor college adjustment in an undergraduate student sample.

### *Rejection Sensitivity*

The 8-item version of the RSQ/RS-Personal, originally developed and validated by Downey and Feldman (1996), measured individual differences in rejection sensitivity. Unlike the W-RS, the RSQ assesses the general tendency to anxiously anticipate rejection not based on a particular status characteristic, such as weight, race, age, or gender. Participants were asked to imagine themselves in eight scenarios, specifically geared toward college students, and to answer two items assessing their anxiety and expectations for rejection. An example item reads, “*After graduation, you can’t find a job and ask your parents if you can live at home for a while.*” The following two parts of the item read: “*How concerned or anxious would you be over whether or not your parents would want you to come home?*” rated from very unconcerned (1) to very concerned (6) and “*I would expect I would be welcome at home*” rated from very unlikely (1) to very likely (6).

### **Analyses**

Two models were used to examine the roles of rejection sensitivity, weight-based rejection sensitivity, and gender in the association between social anxiety and binge eating. The first model included weight-based rejection sensitivity as a mediator of this association and rejection sensitivity as a covariate. The second was a moderated-mediation model that included weight-based rejection sensitivity as a mediator and gender as a potential moderator.

## **Results**

### *Demographic Characteristics*

Table 1 displays the demographic characteristics of the sample. The participants were predominantly female, White, un-married, and in relatively long-term relationships.

TABLE 1.  
*Demographics of Participants (N = 409)*

Characteristic	Frequency	Percent
Gender		
Male	105	25.7
Female	304	74.3
Race		
American Indian/Alaska Native	2	.5
Asian	33	8.1
Black/African American	16	3.9
Caucasian/White	349	85.3
Hispanic/Latino/Spanish	38	9.3
Other	20	4.9
Marital Status		
Single	375	91.7
Married	1	.2
Divorced	1	.2
Other	29	7.1
Age	18.74 (M)	1.06 (SD)
Relationship Length	16.79 (M)	0.81 (SD)

Note: M=Mean; SD=Standard Deviation

Both rejection sensitivity and weight-based rejection sensitivity were significantly correlated with the IDAS-II social anxiety scale as well as the majority of the EPSI scales (Table 2). Compared to rejection sensitivity, weight-based rejection sensitivity was more highly correlated with body dissatisfaction, binge eating, cognitive restraint (global perceived efforts to diet and limit food intake), purging, and restricting. Neither rejection sensitivity measure was significantly correlated with muscle building or excessive exercise. However, weight-based rejection sensitivity was significantly and positively associated with negative attitudes toward obesity while rejection sensitivity was not. Lastly, weight-based rejection sensitivity and rejection sensitivity were positively and significantly associated with each other ( $r = .524, p < .01$ ). This correlation supports that weight-based rejection sensitivity and general rejection sensitivity are closely related but distinct constructs.

TABLE 2.  
*Correlations for Rejection Sensitivity Measures & IDAS-II and EPSI Scales*

	Rejection Sensitivity	Weight-Based Rejection Sensitivity
Social Anxiety	.502**	.445**
Dysphoria	.361**	.345**
Body Dissatisfaction	.345**	.633**
Binge Eating	.254**	.390**
Cognitive Restraint	.141**	.345**
Purging	.240**	.489**
Restricting	.201**	.239**
Excessive Exercise	-.069	.071
NAO	.067	.181**
Muscle Building	.035	.008

*Note:* NAO=Negative Attitudes toward Obesity

$p < .01$  \*\*

*Mediation Analysis: Rejection Sensitivity and Weight-Based Rejection Sensitivity*

All mediation and moderation analyses were conducted using PROCESS v 3.3 (Hayes, 2017), a macro for SPSS. Significance of indirect effects was tested using bootstrapping procedures in which 10,000 bootstrapped samples were used to calculate 95% confidence intervals. Indirect effects are considered to be significant when this confidence interval does not include zero.

A mediation model was tested in which weight-based rejection sensitivity mediated the association between social anxiety and binge eating with general rejection sensitivity included as a covariate. Results are presented in Table 3. All three paths of the mediation model were significant. Social anxiety was significantly associated with weight-based rejection sensitivity ( $t = 9.59, p < .0001$ ), weight-based rejection sensitivity was significantly associated with binge eating ( $t = 8.47, p < .0001$ ), and social anxiety was associated with binge eating ( $t = 3.80, p = .0002$ ). The indirect effect was also significant: weight-based rejection sensitivity was a

significant mediator of the association between social anxiety and binge eating ( $ab = .08$ , 95% CI [.03, .14]) even after accounting for general rejection sensitivity. As a result, general rejection sensitivity was excluded from further analyses.

TABLE 3.  
*Mediation Analysis (N=409)*

<b>Variables</b>	<b>B</b>	<b>SE</b>	<b>t</b>	<b>p</b>
Social Anxiety → W-RS	1.40	.27	9.59	<.0001
RS → W-RS	2.86	.34	8.47	<.0001
Social Anxiety → Binge Eating	.23	.06	3.80	.0002
W-RS → Binge Eating	.06	.01	5.57	<.0001
RS → Binge Eating	-.01	.08	-.13	.90
<b>Bootstrap</b>	<b>Effect</b>	<b>SE</b>	<b>LL 95% CI</b>	<b>UL 95% CI</b>
<i>Bootstrap results for indirect effect</i>				
W-RS	.08	.03	.03	.14

*Note: W-RS=Weight-Based Rejection Sensitivity; RS=Rejection Sensitivity*

#### *Moderated-Mediation Analysis: Weight-Based Rejection Sensitivity and Gender*

In order to assess the potential role that gender might play in weight-based rejection sensitivity's mediation of the association between social anxiety and binge eating, a moderated mediation model was conducted in which gender could potentially moderate each path of the mediation model (from social anxiety to weight-based rejection sensitivity, from weight-based rejection sensitivity to binge eating, and from social anxiety to binge eating). Results from this model are presented in Table 4. Gender was a significant moderator of the association between social anxiety and weight-based rejection sensitivity such that the association is stronger in women ( $p = .01$ ). Gender was a marginally significant moderator of the association between weight-based rejection sensitivity and binge eating ( $p = .06$ ), again such that the association was stronger in women. Gender significantly moderated the direct effect of social anxiety on binge eating such that the effect was only significant for women (95% CI [.11, .36] for women, 95% CI [-.06, .41] for men). Gender also significantly moderated the indirect effect of social anxiety on binge eating through weight-based rejection sensitivity such that the indirect effect was only

significant for female participants (women: 95% CI [.09, .27], men: 95% CI [-.05, .41]). In particular, this effect resulted from the association between social anxiety and weight-based rejection sensitivity being stronger in women than in men.

FIGURE 1: Moderated-Mediation Analysis

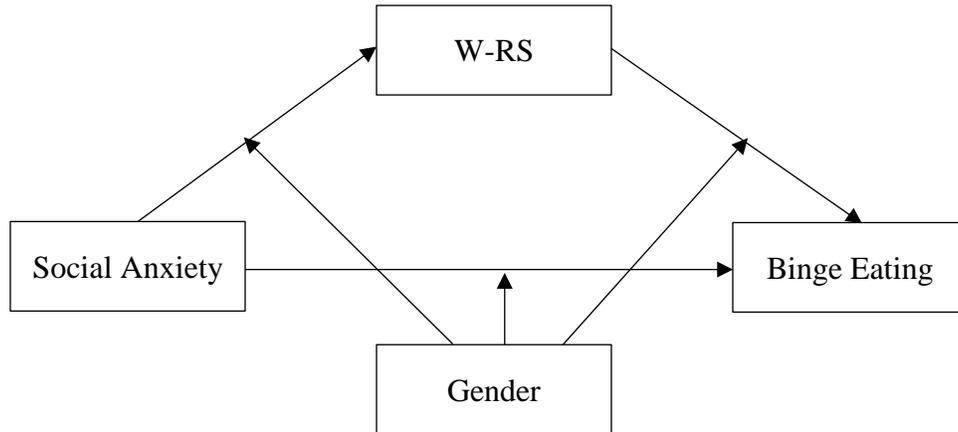


TABLE 4. Moderated mediation analysis when using gender as a moderator (N=409)

<i>Mediator variable model</i>				
	<b>Outcome variable: W-RS</b>			
	<b>B (SE)</b>	<b>t</b>	<b>p</b>	
Social Anxiety	-.35(1.17)	.25	.76	
Gender	-4.52(7.55)	-.60	.55	
Social Anxiety x Gender	1.54(.63)	2.45	.01	
<i>Dependent variable model</i>				
	<b>Outcome Variable: Binge Eating</b>			
	<b>B (SE)</b>	<b>t</b>	<b>p</b>	
Social Anxiety	.12(.24)	.49	.62	
W-RS	-.04(.05)	-.81	.42	
Gender	-3.25(1.91)	-1.70	.09	
Social Anxiety x Gender	.06(.13)	.42	.67	
W-RS x Gender	.05(.03)	1.91	.06	
<i>Conditional indirect effect at specific levels of the moderator</i>				
<b>Mediator</b>	<b>Moderator: Gender</b>	<b>Indirect Effect (SE)</b>	<b>LL 95% CI</b>	<b>UL 95% CI</b>
W-RS	Male	.01(.03)	-.05	.08
	Female	.18(.05)	.09	.27
<i>Conditional direct effect at specific levels of the moderator</i>				
<b>Mediator</b>	<b>Moderator: Gender</b>	<b>Indirect Effect (SE)</b>	<b>LL 95% CI</b>	<b>UL 95% CI</b>
W-RS	Male	.18(.12)	-.06	.41
	Female	.18(.05)	.11	.36

Note: W-RS=Weight-Based Rejection Sensitivity; RS=Rejection Sensitivity

### Discussion

This study aimed to examine whether weight-based rejection sensitivity mediates the association between social anxiety and binge eating after accounting for general rejection sensitivity. In addition, this study aimed to examine gender as a moderator of these relationships. Mediation analyses demonstrated that weight-based rejection sensitivity was a significant mediator of this relationship even when controlling for general rejection sensitivity. Gender was found to moderate this association significantly such that the indirect effect of social anxiety on binge eating through weight-based rejection sensitivity was only significant for women. These results suggest that weight-based rejection sensitivity may partially explain the relationship between social anxiety and binge eating for females. While mediation conceptually implies causation, this study cannot support a causal mechanism due to its cross-sectional design. However, the present study helps to illuminate the factors that influence the relationship between social anxiety and binge eating.

In line with past research that identifies weight-based rejection sensitivity as conceptually and empirically distinct from related measures, the results demonstrate that weight-based rejection sensitivity is empirically distinct from rejection sensitivity (Brenchley & Quinn, 2016). In addition, the results suggest that weight-based rejection sensitivity may play an important role in the perpetuation of binge eating which is in line with cross-sectional and longitudinal studies that explore the effects of weight stigma on unhealthy eating behaviors (Brochu & Dovidio, 2014; Major, Hunger, Bunyan, & Miller, 2014; Seacat & Mickelson, 2009; Vartanian & Porter, 2016). However, the role of weight-based rejection sensitivity in the association between social anxiety and binge eating was only significant for female participants. It is likely that factors other than weight-based rejection sensitivity contribute to this relationship for males. Additional

research is needed to identify these factors. Feelings of stigma regarding thinness concerns and overvaluation of body weight and/or shape are two possibilities. Concerns about thinness have been found to be more stigmatizing for young boys than for young girls (Griffiths et al., 2014). In addition, overvaluation of body weight and/or shape has been shown to be more predictive of binge eating among males than among females (Mitchison et al., 2017).

Furthermore, this study builds upon the work of Linardon and colleagues (2017) who found that appearance-based rejection sensitivity mediated the relationship between social anxiety and disordered eating dimensions. The present study extended the findings of Linardon and colleagues (2017) by using an in-depth assessment of binge eating, identifying weight-based rejection sensitivity as a significant mediator, including rejection sensitivity as a covariate, and examining the role of gender.

While this study builds upon previous research by identifying what type of rejection sensitivity contributes most significantly to the association between social anxiety and binge eating, it also had several limitations. First, its cross-sectional nature makes it impossible to determine the directionality of the relationships examined in the study. In addition, the sample was primarily white, female undergraduate students in relationships. Because of this, the results cannot be generalized to more diverse groups of individuals. This study also only included female and male gender identities. Future research should employ longitudinal designs in order to determine the directionality of these relationships and also include a broader range of gender identities. Lastly, future studies should aim to identify the factors that contribute to the relationship between social anxiety and binge eating in males.

There may be important clinical implications of the present findings. In particular, interventions targeted towards women with comorbid social anxiety and binge eating may

benefit from containing content assessing weight-based rejection sensitivity as well as related constructs such as weight stigma. Future research can evaluate the clinical utility of the weight-based rejection sensitivity construct.

In conclusion, this study was the first to examine weight-based rejection sensitivity as a mediator of the association between social anxiety and binge eating when accounting for the contribution of general rejection sensitivity. In addition, the present study identified gender as a key moderator such that these relationships were only significant for female participants. Future research can further elucidate the mechanisms that underlie the association between social anxiety and binge eating and the extent to which these mechanisms are gender specific.

## References

- Brenchley, K. J. M., & Quinn, D. M. (2016). Weight-based rejection sensitivity: Scale development and implications for well-being. *Body image, 16*, 79-92.
- Brewerton, T. D., Lydiard, R. B., Herzog, D. B., Brotman, A. W., O'Neil, P. M., & Ballenger, J. C. (1995). Comorbidity of Axis I psychiatric disorders in bulimia nervosa. *The Journal of clinical psychiatry*.
- Brochu, P. M., & Dovidio, J. F. (2014). Would you like fries (380 calories) with that? Menu labeling mitigates the impact of weight-based stereotype threat on food choice. *Social Psychological and Personality Science, 5*(4), 414-421.
- Bruce, B., & Agras, W. S. (1992). Binge eating in females: A population-based investigation. *International Journal of Eating Disorders, 12*(4), 365-373.
- Bulik, C. M., Sullivan, P. F., Carter, F. A., & Joyce, P. R. (1996). Lifetime anxiety disorders in women with bulimia nervosa. *Comprehensive psychiatry, 37*(5), 368-374.
- de Zwaan M. (2001). Binge eating disorder and obesity. *International Journal of Obesity and Related Metabolic Disorders, 25* 51–55.
- Deep, A. L., Nagy, L. M., Weltzin, T. E., Rao, R., & Kaye, W. H. (1995). Premorbid onset of psychopathology in long-term recovered anorexia nervosa. *International Journal of Eating Disorders, 17*(3), 291-297.
- Downey, G., & Feldman, S. I. (1996). Implications of Rejection Sensitivity for Intimate Relationships. *Journal of Personality and Social Psychology, 70*(6), 1327-1343.
- Forbush, K. T., Wildes, J. E., Pollack, L. O., Dunbar, D., Luo, J., Patterson, K., ... & Bright, A. (2013). Development and validation of the Eating Pathology Symptoms Inventory (EPSI). *Psychological Assessment, 25*(3), 859.

- Fraley, R. C., Heffernan, M. E., Vicary, A. M., & Brumbaugh, C. C. (2011). The experiences in close relationships—Relationship Structures Questionnaire: A method for assessing attachment orientations across relationships. *Psychological Assessment, 23*(3), 615.
- Gadalla, T., & Piran, N. (2008). Psychiatric comorbidity in women with disordered eating behavior: a national study. *Women & Health, 48*(4), 467-484.
- Godart, N. T., Flament, M. F., Lecrubier, Y., & Jeammet, P. (2000). Anxiety disorders in anorexia nervosa and bulimia nervosa: Co-morbidity and chronology of appearance. *European Psychiatry, 15*(1), 38-45.
- Griffiths, S., Mond, J. M., Murray, S. B., & Touyz, S. (2014). Young peoples' stigmatizing attitudes and beliefs about anorexia nervosa and muscle dysmorphia. *International Journal of Eating Disorders, 47*(2), 189-195.
- Hayes, A. F. (2017). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach*. Guilford Publications.
- Kerr-Gaffney, J., Harrison, A., & Tchanturia, K. (2018). Social anxiety in the eating disorders: A systematic review and meta-analysis. *Psychological Medicine, 48*(15), 2477-2491.
- Linardon, J., Braithwaite, R., Cousins, R., & Brennan, L. (2017). Appearance-based rejection sensitivity as a mediator of the relationship between symptoms of social anxiety and disordered eating cognitions and behaviors. *Eating Behaviors, 27*, 27-32.
- Major, B., Hunger, J. M., Bunyan, D. P., & Miller, C. T. (2014). The ironic effects of weight stigma. *Journal of Experimental Social Psychology, 51*, 74-80.
- McLean, C. P., Miller, N. A., & Hope, D. A. (2007). Mediating Social Anxiety and Disordered Eating: The Role of Expressive Suppression. *Eating Disorders: The Journal of Treatment and Prevention, 15*(1), 41-54.

- Menatti, A. R., Weeks, J. W., Levinson, C. A., & McGowan, M. M. (2013). Exploring the relationship between social anxiety and bulimic symptoms: Mediation effects of perfectionism among females. *Cognitive Therapy and Research, 37*(5), 914-922.
- Menatti, A. R., DeBoer, L. B. H., Weeks, J. W., & Heimberg, R. G. (2015). Social anxiety and associations with eating psychopathology: Mediating effects of fears of evaluation. *Body Image, 14*, 20-28.
- Mitchison, D., Hay, P., Griffiths, S., Murray, S. B., Bentley, C., Gratwick-Sarll, K., ... & Mond, J. (2017). Disentangling body image: The relative associations of overvaluation, dissatisfaction, and preoccupation with psychological distress and eating disorder behaviors in male and female adolescents. *International Journal of Eating Disorders, 50*(2), 118-126.
- Ostrovsky, N. W., Swencionis, C., Wylie-Rosett, J., & Isasi, C. R. (2013). Social anxiety and disordered overeating: An association among overweight and obese individuals. *Eating Behaviors, 14*(2), 145-148.
- Puhl, R. M., & Heuer, C. A. (2009). The stigma of obesity: a review and update. *Obesity, 17*(5), 941-964.
- Sawaoka, T., Barnes, R. D., Blomquist, K. K., Masheb, R. M., & Grilo, C. M. (2012). Social anxiety and self-consciousness in binge eating disorder: Associations with eating disorder psychopathology. *Comprehensive Psychiatry, 53*(6), 740-745.
- Schwalberg, M. D., Barlow, D. H., Alger, S. A., & Howard, L. J. (1992). Comparison of bulimics, obese binge eaters, social phobics, and individuals with panic disorder on comorbidity across DSM-III—R anxiety disorders. *Journal of Abnormal Psychology, 101*(4), 675.

- Seacat, J. D., & Mickelson, K. D. (2009). Stereotype threat and the exercise/dietary health intentions of overweight women. *Journal of Health Psychology, 14*(4), 556-567.
- Swinbourne, J., Hunt, C., Abbott, M., Russell, J., St Clare, T., & Touyz, S. (2012). The comorbidity between eating disorders and anxiety disorders: Prevalence in an eating disorder sample and anxiety disorder sample. *Australian & New Zealand Journal of Psychiatry, 46*(2), 118-131.
- Toner, B. B., Garfinkel, P. E., & Garner, D. M. (1989). Affective and anxiety disorders in the long-term follow-up of anorexia nervosa. *The International Journal of Psychiatry in Medicine, 18*(4), 357-364.
- Vartanian, L. R., & Porter, A. M. (2016). Weight stigma and eating behavior: A review of the literature. *Appetite, 102*, 3-14.
- Watson, D., O'Hara, M. W., Naragon-Gainey, K., Koffel, E., Chmielewski, M., Kotov, R., ... & Ruggero, C. J. (2012). Development and validation of new anxiety and bipolar symptom scales for an expanded version of the IDAS (the IDAS-II). *Assessment, 19*(4), 399-420.