

Running Head: ATTACHMENT, SELF-ESTEEM,
AND DISORDERED EATING

Fathers, Friends, and Food:

Adult Relationship Attachment Style Predicts Disordered Eating Attitudes

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Abstract

The purpose of the present study was to identify the presence of behaviors indicative of a potential eating disorder, and correlate these behaviors with both the individual's self-esteem scores and relationship attachment style patterns in a variety of close relationships. In this study, 93 participants (65% white, 76% female) were randomly selected from university freshman small groups and surveyed using Qualtrics. Participants completed three separate, self-report instruments: a measure of eating attitudes and behaviors (EAT-26); a measure of adult attachment towards significant relational figures such as mother, father, significant other, and closest friend (ECR-RS); and the Rosenberg Self-Esteem scale, which evaluated self-esteem by measuring both positive and negative feelings of self-worth. Scores on a measure of maladaptive attachment towards each parent indicated that anxious attachment with the father and avoidant attachment with the mother positively predicted EAT-26 scores ($r(82)=.333$, $p=.002$; $r(82)=.232$, $p=.033$). The scores on a measure of maladaptive attachment relationships with peers indicated that anxious attachment with a close friend and avoidant attachment with a significant other both predicted the individual's EAT-26 score ($r(76)=.291$, $p=.01$; $r(74)=.284$, $p=.013$). Self-esteem scores predicted agreement with the statement, "I am happy with my physical appearance," ($r(84)=.645$, $p<.001$) and negatively predicted individual EAT-26 scores ($r(84)=-.540$, $p<.001$). The results of this study provide helpful insight in better understanding the role relationship attachment plays as a risk factor in the development of disordered eating attitudes and behaviors.

Introduction

The growing rates of eating disorder diagnoses on college campuses has become a significant issue within the past few decades, with as many as 57 to 69% of college age women exhibiting a high likelihood of disordered eating behaviors (Cain, Epler, Steinley, & Sher, 2010). The actual estimates of incidence and prevalence varies between genders, ranging between 3% to 20% in college aged women and up to 10% in college aged men in recent literature, but these statistics are considered conservative due to the high numbers of unreported cases (Polivy & Herman 2002; Weltzin et. al 2005). Anorexia nervosa (AN) and bulimia nervosa (BN) are the two most common eating disorders, with high morbidity and mortality primarily affecting young females (Crow & Eckert, 2016). The *Diagnostic and Statistical Manual of Mental Disorders* (DSM-5) characterizes anorexia nervosa by the presence of excessive dieting and disordered body image, leading to severe weight loss with a pathological fear of becoming fat. Bulimia nervosa is defined by a similar desire to avoid weight gain, accompanied by frequent periods of binge eating and self-induced vomiting (American Psychiatric Association, 2013). While the outward physical symptoms may differ (i.e. binge-purge cycles versus severe caloric restriction) between the two diagnoses, core symptoms- such as body dissatisfaction, low self-esteem, and preoccupation with food and weight- remain consistent (Polivy & Herman, 2002).

Numerous studies and research have been performed in an attempt to identify the specific cause of eating disorders, and factors such as intrapsychic conflict, self-deficits, family dynamics, sociocultural norms, sexual trauma, and biological and genetic factors have been associated with the pathogenesis of anorexia nervosa (Nelson, Hughes, Katz, & Searight, 1999). Many researchers agree there are a multitude of factors that contribute to the development of disordered eating attitudes and behaviors, rather than a single predicting factor. Most efforts

towards determining causative factors and similar theories are impeded by difficulties in creating consistent and reliable research environments, as diagnosed cases may vary significantly and are hard to control. For this reason, many studies focus on isolating correlates of eating disorders, with the hope of arguing strong correlates as causative factors (Polivy & Herman, 2002). An increasing amount of research over the past decades has focused on the role of psychological health in eating attitudes. For example, a positive linear relationship was observed between psychiatric disturbance and eating disturbance (Thompson & Schwartz, 1982). Many eating disorder cases may be representative of a coping mechanism for issues with identity and personal control (Polivy & Herman, 2002). The co-occurrence of eating disorders and mood disorders, particularly ones that cause an increased negative affect, has been studied and may be a reflection of primary mood disturbance in eating disorders, secondary to eating disorders, or common biological or psychosocial third variables that lead to either, such as genetic or familial transmission (Polivy & Herman, 2002).

Attachment theory, which was developed through the work of psychologists John Bowlby and Mary Ainsworth in the 1960-70s, has also been correlated with the development of disordered eating behaviors. This theory seeks to explain the nature of relationship development between an individual and their close relational figures, and proposes that the quality of close personal relationships in adulthood is strongly influenced by the quality of relationships that the individual developed with parental attachment figures beginning in infancy (Bowlby, 1952; Ainsworth, 1969). According to adult attachment theory, “people construct mental representations, or *working models*, of the self and significant others based on their interpersonal experiences. These representations are believed to play an important role in the way people interpret and understand their social worlds” (Fraley et al., 2011, p. 615). Evaluating these

working models is necessary in order to comprehend the emotions, personality dynamics, and interpersonal relationships that individuals develop with one another. More recently, studies regarding attachment theory have developed a range of classification systems, placing individuals on a scale that measure relationship avoidance versus relationship anxiety to determine the quality of the relationship attachment (Bartholomew, 1990). Individuals scoring on the low end of both scales would indicate low levels of dependence and trust in their relationships, categorized as negative or insecure attachment styles. Individuals scoring on the high end of both scales would indicate secure attachment, exhibiting autonomy, interdependence, and trust in their relationships (Bartholomew, 1990; Hazan & Shaver, 1994).

Past studies suggest a connection between the development of eating disorders and maladaptive attachment style within the family, including decreased encouragement for personal growth, and the presence of avoidant attachment behaviors (Bruch, 1973; Latzer, Hochdorf, Bachar, & Kenneti, 2003; Zachrisson & Skarderud, 2010). Attachment insecurity was found to be related to body dissatisfaction and negative affect among women who were diagnosed with an eating disorder (Tasca et al., 2006). Insecure attachment toward both mother and father was linked to concerns regarding shape and weight among inpatient, obese children (Bosmans, Goossens, & Braet, 2009). Furthermore, attachment representations are associated with overweight children's concerns about weight and shape, reflecting a fear of rejection from their mothers, and a denial of the need for an attachment figure in their fathers (Elliott et al., 2010; Hertz, Addad, & Ronel, 2012). Beyond relationship attachment, other research suggests that familial interactions serve to perpetuate disordered eating tendencies. Close family members and friends' praise the self-control and discipline of individuals with disordered eating behaviors, reinforcing these negative thoughts and attitudes (Branch & Eurman, 1980). Family dynamics of

patients with diagnosed eating disorder have been found to be enmeshed, intrusive, hostile, and negating of the patient's emotional needs (Minuchin, Rosman, & Baker, 1978), or overly concerned with parenting (Shoebridge & Gowers, 2000). However, because most of the studies regarding family functioning are correlational, causative factors here are also inconclusive.

When considering the effect of gender on the different theorized risk factors for disordered eating behaviors between males and females, the research available is considerably limited. A possible reason for this may be related to the fact that men and women have indicated strikingly different perspectives toward physical appearance, which may have an effect on perceived eating behaviors and attitudes. Many women desire a slender body shape, and often seek to lose weight if they feel dissatisfied with their current physique (Przybyłowicz, Jesiołowska, Obara-Gołębiowska, & Antoniak, 2014). Researchers have found that by the age of 18, 80% of females of normal height and weight reported wanting to weigh less (McCreary Centre, 1999). While many of these attitudes and behaviors associated with a desire to lose weight are common, they can still bear significant psychological and medical risks, and have been correlated with an increased risk of developing clinical eating disorders in the future (Patton, Selzer, Coffey, Carlin, & Wolfe, 1999; Polivy & Herman, 1985). Historically, body image issues in females are concerned with having a thin appearance, and have been studied in great depth regarding their role in the development of eating disorders (Thompson, Heinberg, Altabe, & Tantleff-Dunn, 1999). Most body image research has focused on this aspiration for thinness in females, neglecting the fact that most males are more concerned with developing a muscular appearance (McCreary & Sasse, 2000). As a result, males are less likely than females to engage in typical compensatory behaviors such as vomiting, and more likely to participate in activities such as excessive physical activity in an attempt to lose weight or compensate for the

effects of eating (Weltzin et al., 2005). Research has also found that men are more likely to binge rather than restrict calorie intake due to negative body image in comparison to women. Males with eating disorders have been shown to be less likely to seek treatment, possibly because of the cultural bias that eating disorders are more often associated with females (Weltzin et. al 2005). This last statistic may provide some additional insight as to why far fewer disordered eating behaviors are reported, and therefore able to be studied, in male populations.

The gender disparity concerning disordered eating risk factors is even more pronounced when considering relationship attachment style as a factor in the development of disordered eating. A study performed in 2006 demonstrated that secure attachment is negatively associated with disordered eating in females, and insecure attachment was positively associated (Elgin & Pritchard, 2006). Secure attachment in men was negatively correlated with disordered eating behaviors, but no significant relationship was determined with insecure attachment style (Elgin & Pritchard, 2006). Previous research has shown a positive relationship between bulimic eating patterns and insecure relationship attachment. Bulimic participants scored significantly higher than did participants without eating disturbances on a measure of ambivalent and anxious attachment (Becker, Bell, & Billington, 1987).

In addition to psychological health, self-esteem has also been well researched and thoroughly documented as a risk factor for disordered eating attitudes. In a four-year prospective study, Leon, Keel, Klump and Fulkerson (1997) found that low self-esteem in combination with negative affect predicted eating disorder symptomatology. Low self-esteem and high public self-consciousness were correlated with increased levels of troublesome eating behaviors and body dissatisfaction among a sample of female college students, regardless of racial identification (Akan & Grilo,1995). Low-self-esteem and social support were associated with a negative body

esteem, body image, and eating attitudes (Ata, Ludden, & Lally, 2007). A four-year prospective study of self-esteem as measured by the Rosenberg Self-Esteem Scale (RSE; Rosenberg, 1965) found that girls with low levels of self-esteem at 11- to 12-years-old were significantly more likely to develop more severe symptoms of eating disorders and other psychological problems by the time they were 15 to 16 years old (Button, Sonuga-Barke, Davies, & Thompson, 1996). Research by Shea and Pritchard (2007) that considered the variables of self-esteem, high stress, poor coping skills, maladaptive perfectionism, and gender found that self-esteem was the secondary predictor for bulimia, drive for thinness, and body dissatisfaction. Another study indicated that individuals with disturbed eating attitudes also had lower self-esteem, higher social physique anxiety, and higher trait anxiety than those who had normal eating attitudes (Bas, Asçi, Karabudak, & Kiziltan, 2004).

Relative to attachment theory, previous research indicates that self-esteem levels can be predicted by relationship attachment style. An earlier study suggests that insecure attachment styles are associated with dysfunctional attitudes, which then cause a predisposition for lower levels of self-esteem (Roberts, Gotlib, & Kassel, 1996). Research from Huntsinger and Luecken (2004) indicates a positive correlation between self-esteem and secure attachment, supporting the theory that satisfying relationships are internalized and can manifest into positive self-regard (Tafarodi & Swann, 1995). Individuals with negative relationship attachment styles reported having the lowest self-esteem of the attachment style groups, suggesting that “a high dependence on relationships to maintain self-esteem, combined with unsatisfying relationships, may be particularly damaging” (Huntsinger & Luecken, 2004). Within the present research, we hope to include the implications of this postulation as it pertains to both close friends and significant others.

The present study examines an individual's self-esteem and their attachment patterns in a variety of close relationships as predictors of the development of disordered eating attitude and behaviors. The goal was to identify behaviors that were indicative of a potential eating disorder, and correlate them with both the individual's self-esteem scores and their attachment styles with his or her mother, father, significant other, and closest friend. We hypothesize that the presence of disordered eating attitudes will correlate positively with increased anxious/avoidant attachment style tendencies, and that the presence of these attitudes will also correlate negatively with individual self-esteem scores.

Methods and Materials

In this study, 93 participants (65% white, 76% female) were recruited from the freshman class at Point Loma Nazarene University, a private undergraduate institution located in San Diego, California. Participants were from all majors and tended to be around 18 years old. Subjects were randomly chosen from a selection of small groups that were part of a freshman level, general education psychology course. Through stratified random sampling, researchers recruited small group leaders who voluntarily collected data from their small group members. Each small group had approximately 12 participants. These small group leaders were asked to provide an online link to the Qualtrics survey to their group members during their designated meeting time, and results were recorded. The Qualtrics survey consisted of a demographic questionnaire and three different self-reporting measures: the Eating Attitudes Test, the Rosenberg Self-Esteem Scale, and the Experiences in Close Relationships- Relationship Structures questionnaire. Demographic items asked about the subject's age, gender, major, ethnicity, religious affiliation, parents' marital status, and their order within their sibling

arrangement. Data was analyzed using SPSS and Preacher and Hayes' Multiple Mediation Analysis program "Process."

The Eating Attitudes Test, also known as the EAT-26, is a widely used screening tool of symptoms and concerns characteristic of eating disorders (EAT-26; Garner & Garfinkel, 1979; Garner, Olmstead, Bohr, & Garfinkel, 1982). While the EAT-26 was not designed to make a diagnosis of an eating disorder, it has been demonstrated to predict both anorexia nervosa and bulimia nervosa in clinical and non-clinical settings, and has been used often to research disordered eating behaviors in both North America and Europe (Steinhausen, 1985; Williams, Schaefer, Shisslak, Gronwaldt, & Comerchi, 1986). Twenty-six items describing behaviors or attitudes such as, "am terrified about being overweight," or "avoid foods with sugar in them," were rated on a scale ranging from "never" to "always." Individuals who receive the EAT-26 cutoff score of 20 may have maladaptive eating attitudes and behaviors, but not necessarily a clinically diagnosable eating disorder. Garner et al. (1982) remarked that, "while most individuals from these nonclinical groups who score highly on the EAT do not satisfy the diagnostic criteria for anorexia nervosa, the majority have been identified (in personal interviews) as experiencing abnormal eating patterns which interfere with normal psychological functioning."

In the present study's use of the EAT-26, a sum score method was utilized in data analysis. While the original EAT-26 scoring method involves scoring a six-point item as 1=0, 2=0, 3=0, 4=1, 5=2, and 6=3, so as to ensure that low-level disordered eating attitudes were not recorded as clinically significant eating disorders, we chose to analyze the data differently. In our coding system, 1=1, 2=2, 3=3, and so on. By this method, the scale produces more sensitivity

and is more relevant to a nonclinical population. Research justification for this process is provided in Garner et al. (1982).

The Rosenberg Self-Esteem Scale is a ten item questionnaire that evaluates self-esteem by measuring both positive and negative feelings of self-worth, by rating statements on a 4-item Likert scale ranging from “strongly agree” to “strongly disagree” (Rosenberg, 1965). Scores can range between 0-30 points, with 30 being the highest score possible and indicating high levels of self-esteem, while scores below 15 points may indicate potentially problematic low self-esteem (Rosenberg, 1965). Studies utilizing this scale have demonstrated its unidimensional structure with two factors, self-confidence and self-deprecation (Blascovich & Tomaka, 1993). The scale has also shown high reliability, with test-retest correlations in the range of 0.82 to 0.88, and Cronbach’s alpha (internal validity) for various samples being in the range of 0.77 to 0.88 (Blascovich & Tomaka, 1993; Rosenberg 1965.) An additional demographic section asked about the subject’s height, weight, and degree of agreement with the statement, “I am happy with my physical appearance,” on a 10-item Likert scale, and was placed after this instrument.

The Experiences in Close Relationships- Relationship Structures (ECR-RS) is an instrument used to assess attachment patterns in a variety of close relationships, measuring the general level of anxiety versus avoidant attitudes that the individual has towards their relationship with their mother, father, significant other, and closest friend (Fraley, Heffernan, and Vicary, 2011). The ECR-RS is a condensed version of the 36-item Experiences in Close Relationships-Revised (ECR-R) questionnaire, which is a revised version of the Experiences in Close Relationships (ECR) questionnaire developed by Brennan, Clark, and Shaver (1998). This measure is designed to assess attachment dimensions in multiple contexts, specifically for use with adult attachment relationships. Four identical 9-item sections corresponding with each

figure asked the subject to rate statements regarding their feelings toward the relationship on a scale from “strongly disagree,” to “strongly agree”. Over 30 days, the test-retest reliability of the individual scales is approximately 0.80 in the parental domain, and 0.65 for the romantic relationships domain (Fraley et al., 2011). Additional research indicates that the scales are meaningfully related to various relational outcomes, such as relationship satisfaction or the perception of emotional expressions, as well as to one another (Fraley et al., 2011). Two scores are computed separately for each interpersonal relationship with this questionnaire: one for attachment-related avoidance, and the second for attachment-related anxiety.

Results

Summarized results from the demographics section are provided in Tables 1.1-1.6, and Table 2. Data from the study revealed that non-secure attachment styles successfully predicted disordered eating attitudes in a number of cases (Table 3). Scores on a measure of maladaptive attachment towards each parent indicated that anxious attachment with their father and avoidant attachment with their mother positively predicted scores on a measure of disordered eating attitudes (EAT-26 official) ($r(82) = .333, p = .002$, two-tailed; $r(82) = .232, p = .033$, two-tailed).

But, familial relationships were not the only significant predictors of disordered eating attitudes. In fact, avoidant attachment towards significant others positively predicted individual scores on a measure of disordered eating attitudes (EAT-26 official) ($r(74) = .284, p = .013$, two-tailed). In addition, anxious attachment towards one’s closest friend positively predicted individual scores on a measure of disordered eating attitudes (EAT-26 official) ($r(76) = .291, p = .01$, two-tailed).

Confirmatory investigation was carried out on the relationship between self-esteem and disordered eating attitudes that is considered expected in current research literature (Table 3). Data analysis confirmed that individual scores on a measure of self-esteem (Rosenberg) negatively predicted scores on a measure of disordered eating attitudes (EAT-26 official) ($r(82) = -.400, p < .001$, two-tailed). In addition, the frequency with which individuals reported being happy with their physical appearance positively predicted scores on a measure of self-esteem (Rosenberg) score ($r(84) = .645, p < .001$, two-tailed) and negatively predicted their score on a measure of disordered eating attitudes (EAT-26 official) ($r(85) = -.54 <, p = .001$, two-tailed). As a further indication of this relationship, analysis revealed that the frequency that individuals reported being happy with their physical appearance negatively predicted their BMI ($r(85) = -.319, p = .003$, two-tailed).

So for this reason, further probing was conducted using a Preacher and Hayes mediation analysis, and a significant predictive model was revealed: $R^2 = .26, F(3, 77) = 8.87, p < .0001$. After controlling for a significant degree of covariance in EAT-26 scores related to anxious father attachment [$\beta = -3.09, t(77) = -1.94, p = .056$], participant gender predicted EAT-26 scores (Sum Score), [$\beta = -9.35, t(77) = -2.31, p = .024$]. What is more, that relationship was fully mediated (95% CI [-7.50, -.15]) by the effect of self-esteem, [$\beta = .1.09, t(77) = 3.42, p = .001$].

However, self-esteem had an adverse effect on attachment relationships. Individual scores on a measure of self-esteem (Rosenberg) negatively predicted Avoidant Attachment towards mother ($r(82) = -.329, p = .002$, two-tailed), Avoidant Attachment towards father ($r(81) = -.374, p = .001$, two-tailed), Anxious Attachment towards father ($r(81) = -.245, p = .026$, two-tailed), Avoidant Attachment towards significant other ($r(73) = -.263, p = .024$, two-tailed). Anxious Attachment towards significant other ($r(74) = -.491, p < .001$, two-tailed), Avoidant

Attachment towards closest friend ($r(75) = -.255$, $p = .026$, two-tailed), and Anxious Attachment towards closest friend ($r(75) = -.462$, $p < .001$, two-tailed).

Tables 1.1 – 1.6

Descriptive Statistics of Participant Population Demographics

Table 1.1

Q5 - What is your age?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	18	81	87.1	87.1	87.1
	19	6	6.5	6.5	93.5
	20	1	1.1	1.1	94.6
	21	1	1.1	1.1	95.7
	23+	4	4.3	4.3	100.0
	Total	93	100.0	100.0	

Table 1.2

Q6 - What is your gender?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	22	23.7	23.7	23.7
	Female	71	76.3	76.3	100.0
	Total	93	100.0	100.0	

Table 1.3

Q25 - What is your major?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Social Sciences (History, psychology, political science, sociology, family and consumer sciences, etc.)	13	14.0	14.0	14.0
	Physical Sciences (Chemistry, biology, mathematics, physics, engineering, computer sciences, etc.)	24	25.8	25.8	39.8
	Fine Arts	3	3.2	3.2	43.0
	Business/Accounting	6	6.5	6.5	49.5
	Pre-nursing	22	23.7	23.7	73.1
	Education	3	3.2	3.2	76.3
	Theology/Christian Ministry	3	3.2	3.2	79.6
	Literature, Journalism, and Modern Language	3	3.2	3.2	82.8
	Communication and Theater	3	3.2	3.2	86.0
	Kinesiology	5	5.4	5.4	91.4
	Undeclared	8	8.6	8.6	100.0
	Total	93	100.0	100.0	

Table 1.4

Q26 - What is your racial or ethnic identification?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Asian	12	12.9	12.9	12.9
	Black or African American	2	2.2	2.2	15.1
	Hispanic or Latino	7	7.5	7.5	22.6
	Native Hawaiian or Other Pacific Islander	5	5.4	5.4	28.0
	White	61	65.6	65.6	93.5
	Other	4	4.3	4.3	97.8
	I prefer not to respond	2	2.2	2.2	100.0
	Total	93	100.0	100.0	

Table 1.5

Q17 - What is your religious affiliation?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Christian	83	89.2	89.2	89.2
	Other	5	5.4	5.4	94.6
	Nonreligious/not affiliated	5	5.4	5.4	100.0
	Total	93	100.0	100.0	

Table 1.6

Body Mass Index					
	N	Minimum	Maximum	Mean	Std. Deviation
BMI_FinalScore	86	16.76	41.10	23.1844	4.73207
Valid N (listwise)	86				

Table 2

*Descriptive Statistics for Physical Appearance Satisfaction***Q19_1 – I am happy with my appearance**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	.00	1	1.1	1.2	1.2
	1.00	1	1.1	1.2	2.3
	2.00	4	4.3	4.7	7.0
	3.00	3	3.2	3.5	10.5
	4.00	5	5.4	5.8	16.3
	5.00	7	7.5	8.1	24.4
	6.00	16	17.2	18.6	43.0
	7.00	22	23.7	25.6	68.6
	8.00	20	21.5	23.3	91.9
	9.00	5	5.4	5.8	97.7
	10.00	2	2.2	2.3	100.0
Total	86	92.5	100.0		
Missing	System	7	7.5		
Total		93	100.0		

Table 3

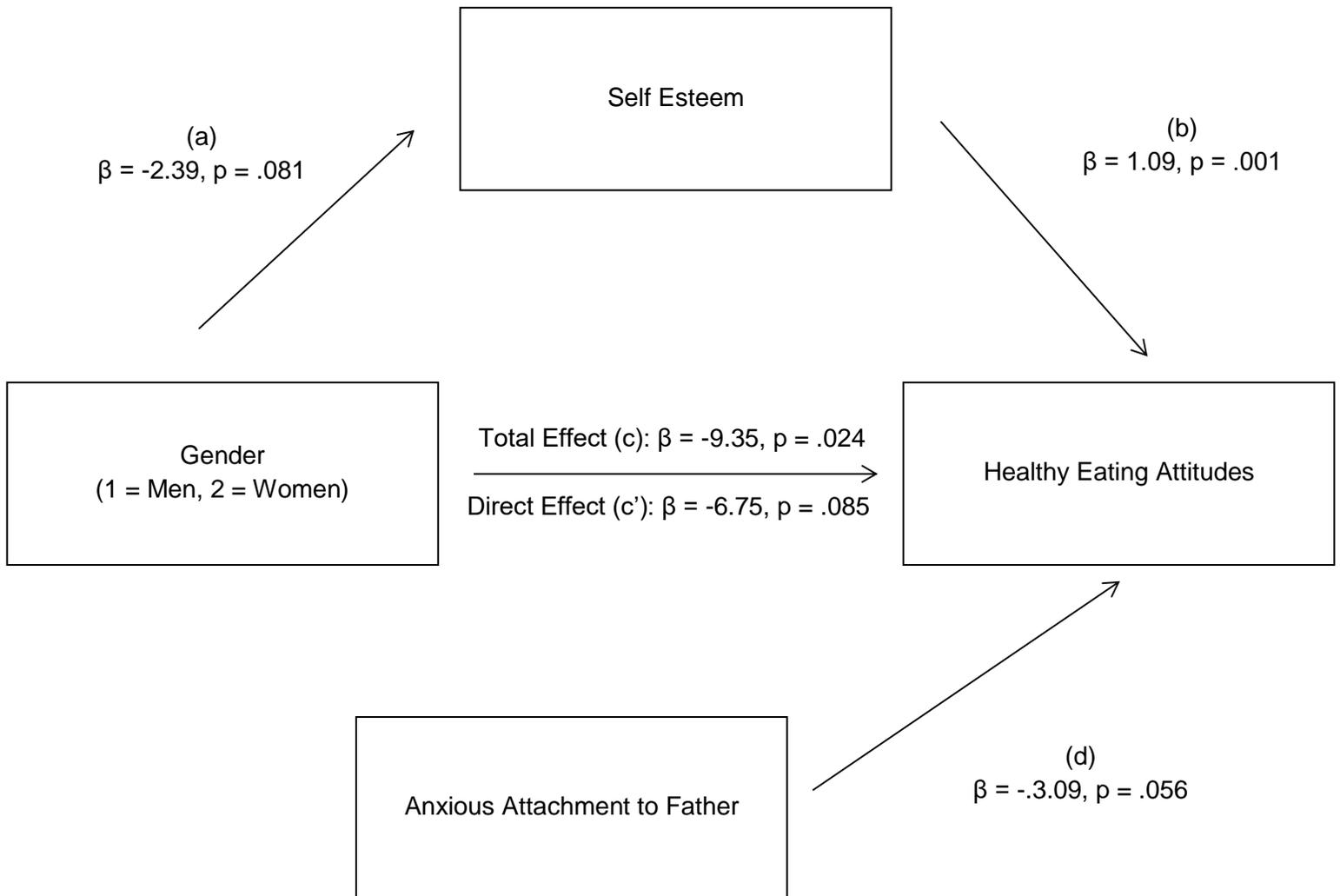
Pearson Product-Moment Correlations between EAT-26, Rosenberg Self-Esteem, and ECR-RS Attachment, Across All Individuals

		ROSENBERG_Final	EAT26_OfficialScore	ECRAttach_Mother_Avoid	ECRAttach_Mother_ANX	ECRAttach_Father_Avoid	ECRAttach_Father_ANX	ECRAttach_SO_Avoid	ECRAttach_SO_ANX	ECRAttach_BFF_Avoid	ECRAttach_BFF_ANX
EAT26_OfficialScore	Pearson Correlation	-.400**									
	Sig. (2-tailed)	0.000									
	N	84									
ECRAttach_Mother_Avoid	Pearson Correlation	-.329**	.232*								
	Sig. (2-tailed)	0.002	0.033								
	N	83	84								
ECRAttach_Mother_ANX	Pearson Correlation	-0.138	0.121	.559**							
	Sig. (2-tailed)	0.215	0.277	0.000							
	N	82	83	83							
ECRAttach_Father_Avoid	Pearson Correlation	-.374**	0.213	.655**	.332**						
	Sig. (2-tailed)	0.001	0.053	0.000	0.002						
	N	82	83	83	82						
ECRAttach_Father_ANX	Pearson Correlation	-.245*	.333**	.346**	.559**	.482**					
	Sig. (2-tailed)	0.026	0.002	0.001	0.000	0.000					
	N	82	83	83	82	83					
ECRAttach_SO_Avoid	Pearson Correlation	-.263*	.284*	0.149	0.151	0.201	.375**				
	Sig. (2-tailed)	0.024	0.013	0.201	0.199	0.084	0.001				
	N	74	75	75	74	75	75				
ECRAttach_SO_ANX	Pearson Correlation	-.491**	.241*	.419**	.270*	.400**	.268*	.543**			
	Sig. (2-tailed)	0.000	0.036	0.000	0.019	0.000	0.019	0.000			
	N	75	76	76	75	76	76	75			
ECRAttach_BFF_Avoid	Pearson Correlation	-.255*	0.018	.458**	.361**	.367**	.427**	.457**	.407**		
	Sig. (2-tailed)	0.026	0.875	0.000	0.001	0.001	0.000	0.000	0.000		
	N	76	76	76	75	76	76	72	73		
ECRAttach_BFF_ANX	Pearson Correlation	-.462**	.291*	.412**	.434**	.519**	.566**	.414**	.547**	.600**	
	Sig. (2-tailed)	0.000	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	N	76	77	77	76	77	77	73	74		

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Figure 1. The mediation model significantly predicts Healthy Eating Attitudes, $R^2 = .26$, $F(3, 77) = 8.87$, $p < .001$. All path coefficients are unstandardized regression weights. The direct effect coefficient is the effect of gender after controlling for attachment and the mediating influence of self-esteem (95% CI [-7.33, -.14]).



Discussion

This research set out to assess the role of attachment and self-esteem in relation to disordered eating attitudes in a non-clinical population. Researchers aimed to examine three main hypotheses. First, we predicted that low self-esteem would serve as a successful predictor of increased disordered eating attitudes. The data supported this supposition and reinforced previous research findings on this topic (Leon, Keel, Klump, & Fulkerson, 1997). Low self-esteem was not only an indicator of disordered eating attitudes, but also a predictor of negative body image (Ata, Ludden, & Lally, 2007). As such, we conclude that in our population of interest, research findings on the relationship between self-esteem and disordered eating attitudes remain strong.

Additional examination was carried out to examine the relationship of maladaptive attachment styles to individual disordered eating attitudes. Confirming past studies on this connection, our research highlights a number of fascinating connections between specific attachment relationships including father, mother, significant other, and closest friend. Maladaptive familial attachments have been found to predict disordered eating attitudes in the past (Bruch, 1973; Latzer, Hochdorf, Bachar, & Kenneti, 2003, Zachrisson & Skarderud, 2010, Bosmans, Goossens, and Braet, 2009). Further theorization may suggest that in wake of the transition to college, individual's' attachment figure relationship evolve from parental-oriented to peer-oriented. Peer-oriented attachment is vital to intrapsychic self-esteem and relational development (Huntsinger & Luecken 2004). For this reason, there is value in studying populations that are in the midst of an attachment transition.

Analysis of the relationship between self-esteem and general maladaptive attachment has been examined in the past. The connection between healthy attachment and positive self-esteem

has been well-proven (2004). In keeping with object relations theory, past research has shown that quality relationships foster high self-regard (Tafordi and Swann, 1995). In the present study, data confirms this dynamic. As such, we encourage further examination as to the directionality of the relationship between self-esteem and secure attachment. The question remains: “does an individual’s self-esteem determine the type and quality of the attachment relationships they form or does an individual’s attachment relationships (particularly early childhood) determine the quality of their self-esteem?” However, the mediation analysis indicated that women have less healthy eating habits and intrapsychic processes than men. Yet, this difference tends to be driven entirely by the role of self-esteem in healthy eating. This relationship also begs further investigation.

Becoming familiar with the many psychology-related correlates of eating disorder risk should be quite beneficial for both clinical therapists and dietetic practitioners. Understanding the influences that parental and peer attachment relationships have on the individual in a treatment setting can help dietitians to develop more comprehensive treatment and counseling programs. As most current eating disorder treatment focuses on aspects of both psychology and nutrition, clinical dietitians would do well to include applications of the integrated research available in the two fields. Certain cognitive factors characteristic of eating disorders, such as obsessive thoughts, rigid thought patterns, dissociation (especially during periods of binging), and other cognitive aberrations, could impede the effects of nutritional therapy (Polivy & Herman, 2002). This feature is especially important as the field of clinical dietetics is continually expanding in both scope and knowledge, further soliciting the need for dietetics practitioners to maintain an understanding of developments between the two fields as much as possible. Beyond the extent of eating disorders, dietetics practitioners may find the research

behind attachment theory in other areas of nutrition counseling, particularly in regards to motivational interviewing or lifestyle changes. Again, utilization of the knowledge of how attachment relationships affect the individual may help the practitioner to shape the style of treatment, and suggest solutions that would be most effective in the lives of their clients.

Limitations

Despite successfully confirming and adding layers to previous research, the present study carries with it a number of limitations. First, the sample population calls for a greater proportion of male participants and perhaps more participants in total. Being that the sample population is from a small, private, religious-affiliated university, the results may have limited external validity. Finally, while the research findings have valuable academic and clinical implications, other significant limitations of this line of research have been noted by past researchers. A 20-year longitudinal study on attachment style stability has shown that while Bowlby's belief that attachment styles remain largely stable over time, there is still room for modification (Waters, Merrick, Treboux, Crowell, & Albersheim, 2000). Attachment style questionnaires assess the attachment style of an individual only at the time of assessment (Baldwin & Fehr, 1995) which suggests another potential limitation - perhaps further, longitudinal study is necessary for significant findings.

Conclusion

In examining this research topic, an unfortunate dearth in published findings on the role of attachment style and relationships as a whole was uncovered. But, the assessment of disordered eating attitudes in nonclinical samples is crucial in the development of both preventative and treatment programs, as the presence of these behaviors provides a depth of knowledge regarding both prevalence and changing trends (Jones, J. M., Bennett, S., Olmsted,

M. P., Lawson, M. L., & Rodin, G. 2001). Since the present study focused on an 18-year-old population, the external validity for a clinical population presenting with disordered eating attitudes is meaningful. In the fields of both dietetics and clinical psychology, research acts as an important intermediary in connecting science to clinical, in-person work. In light of this, we hope to point our research in a direction that informs clinical science. While the data from the present study has further aided in understanding how specific factors are more strongly correlated with eating disorders, the correlative nature does not allow us to better explain the mechanism behind them. Because this study, as well as countless others before it, emphasized the correlative relationship between certain causative factors and eating disorder risk, the definitive process of moving from these factors to the actual development of an eating disorder still remains unknown. Limited studies regarding attachment style and disordered eating behaviors have been performed, although it is known that familial relationships are a strong risk factor in eating disorder risk (Polivy & Herman, 2002). The findings of the present study suggest that attachment style and relational health are valuable foci for clinical practitioners interested in intervention for disordered eating, in both dietetic and psychological fields. Future implications for suggested use in clinical practice include the possibility of implementing relationship attachment style as part of eating disorder screening, and as part of treatment programs. Further research should examine self-esteem, attachment relationship quality, and disordered eating from an experimental and longitudinal perspective.

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