



Parental Psychological Control, Attachment Insecurity and Body Shame: How Relational Factors Impact Disordered Eating

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Abstract

Family relationships are a critical factor in the etiology and maintenance of disordered eating (DE). Attachment theory provides a framework for how relational factors can impact DE, which can be further expanded with objectification theory. Parental relationships can either buffer or increase risk for body shame and DE. Specifically, parental psychological control (PPC) is linked to DE for adolescents and young adults. This study examined if attachment insecurity and body shame serially mediated the association between PPC and DE in young women. We applied secondary analysis to data obtained from a sample of 84 college women ($M_{age} = 20.61$; $SD = 2.49$). Self-reported measures included the Eating Attitudes Test, the Psychological Control Scale-Youth Report, the Body Shame Questionnaire, and the Experiences in Close Relationships-Relationship Structures Questionnaire. Hayes' Process Macro (v. 3.5 model 80) was used to test serial mediation models linking maternal and paternal PPC to DE through anxious and avoidant attachment and body shame. Results demonstrated indirect effects of body shame on DE in the maternal and paternal PPC models. Anxious (but not avoidant) attachment and body shame showed serial indirect effects linking PPC to DE. Our findings point to the saliency of body shame and attachment anxiety in predicting DE symptoms among young women.

Keywords Attachment insecurity · Parental psychological control · Disordered eating · Body shame · Objectification theory

Highlights

- Parental psychological control is linked with disordered eating through body shame.
- Anxious attachment is associated with disordered eating through body shame.
- Controlling parenting impacts young women's body shame and disordered eating.

Eating Disorders (EDs) pose a serious public health problem for young adults worldwide (Hoek, 2016). Disordered eating (DE) is a well-known precursor to EDs (Rohde et al. 2014). DE, which can include subclinical ED behaviors such as restrictive eating, binge eating, compensatory behaviors and distorted cognitions related to food and body (Alvarenga

et al., 2010), is prevalent among young adults with estimates of almost one quarter of young adult women experiencing DE symptoms in the past 12-months (Wade et al., 2012). Adolescence and young adulthood are the most common times for an ED to develop with ninety-five percent of first times cases of EDs occurring by age 25 (Ward et al., 2019). This is particularly troubling as EDs cause a disruption to developmental processes occurring in emerging adulthood (Arcelus et al., 2007) and can be life-threatening (Smink et al., 2012).

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Family Factors and Disordered Eating

In addition to the challenges EDs pose to individuals, EDs can place significant stress on family relationships (Blondin et al., 2019; Cerniglia et al., 2017; Holtom-Viesel & Allan, 2014). In a systematic review of 17 studies on family

functioning in ED families, Holtom-Viesel and Allan (2014) found that families with an adolescent who had an ED reported worse family functioning than control families. Other studies of EDs in youth have shown a consistent link between ED symptoms and family problems such as conflict, parental distress (e.g., depression, anxiety, alcoholism) as well as ED symptoms in other family members (Bi et al., 2017; Blodgett Salafia et al., 2014; Bould et al., 2015; Tafà et al., 2016). While, historically, family dysfunction has been thought to be a primary contributor to the onset and maintenance of EDs (Minuchin et al., 1978), recent perspectives underscore how EDs are disruptive to family systems as well (Blondin et al., 2019; Eisler, 2005; Schmidt & Treasure, 2006). Eisler (2005) describes how families reorganize their lives around the ED, which greatly restricts alternative family interactional patterns. Moreover, challenging relational dynamics that occurred before the ED are likely intensified in response to the ED.

On the other hand, positive family factors have also been shown to have a protective role against EDs. Studies have shown that social support, family connectedness, emotional well-being, family meals, perceived mother and father acceptance, and positive family communication buffer against EDs in adolescence (Allen et al., 2014; Hazzard et al., 2020; Langdon-Daly & Serpell, 2017; Loth et al., 2014). While the etiology of EDs is complex with biological, sociocultural, intrapsychic factors also playing a role (Culbert et al., 2015), this body of literature indicates that parent-child relationship quality is a crucial risk or protective factor for the development and maintenance of youth EDs.

Despite the robust evidence for the impact of family factors on the etiology and maintenance of DE, it is notable that only a small subset of DE models include a focus on the developmental impact of familial relationships. Pennesi and Wade (2016) conducted a systematic review examining all published theoretical models that synthesize the constellations of salient risk and protective factors of DE. While multiple models focus on interpersonal factors broadly, to our knowledge, Tasca et al. (2013) is the only model focusing on relational and developmental constructs to explain the development and maintenance of EDs through an attachment lens.

Attachment Perspective on Disordered Eating

Tasca et al. (2013) model draws from attachment theory, which provides a roadmap for how one cultivates personal and relational security (Bowlby, 1969). Through early experiences with their caregivers, children develop an internal working model of attachment, which becomes a

blueprint for their future relationships (Bowlby, 1969). The internal working model developed in childhood continues throughout the lifespan and impacts how adults experience the world, view themselves and others, and regulate their emotions. Hazan and Shaver (1987) have shown that young adults with inconsistent and unavailable attachment figures in childhood tend to have insecure attachment styles. Broadly speaking, attachment insecurity can be divided into attachment anxiety or attachment avoidance (Mikulincer & Shaver, 2019). Attachment anxiety has been associated with both individual and relational problems—specifically, engaging in compulsive strategies to seek closeness with attachment figures and difficulty with managing affect and emotional distress (Mikulincer & Shaver, 2019). Those higher in attachment avoidance minimize attachment needs and avoid closeness (Hazan & Shaver, 1987; Mikulincer & Shaver, 2005). As attachment style has been associated with self-concept, general psychopathology, and negative interpersonal functioning, attachment theory provides important insights to the theoretical literature on the etiology of EDs (Tasca, 2019).

Tasca et al. (2013) model provides a framework for how attachment insecurity may serve as a mediating variable for the development of ED symptoms in response to childhood adversity. In Tasca et al. (2013) model, attachment anxiety and attachment avoidance both mediated the relationship between childhood trauma (i.e., sexual abuse, physical punishment, neglect) and EDs among young adult women. Other researchers have supported the saliency of attachment insecurity for EDs for clinical samples and DE for non-clinical samples. A growing body of literature has demonstrated that ED symptoms are associated with less attachment security and greater attachment avoidance and anxiety (Barone & Guiducci, 2009; Illing et al., 2010). Moreover, the percentage of individuals with attachment insecurity and EDs is substantial, ranging from 70 (Ramaciotti et al., 2001) to 100 percent (Zachrisson & Kulbotten, 2006). Based on these findings, it is evident that attachment insecurity is relevant to EDs and necessitates further inquiry.

From a family perspective, two important elements are missing from Tasca et al. (2013) model. First, Tasca et al. (2013) model shows how relational traumatic experiences in childhood are linked to attachment insecurity and EDs in adulthood. However, the model does not indicate how parenting in particular may serve as a relational antecedent to attachment insecurity and in turn, DE. Second, the model lacks an explanation for how attachment insecurity leads to DE symptoms. While insecure attachment can influence one's vulnerability for developing psychopathology, it is not sufficient on its own to understand the etiology of DE. Individuals with insecure attachment may be more vulnerable to psychopathology; however, there are many other

contextual factors that play a role in whether someone develops a mental illness. Moreover, attachment insecurity cannot explain fully why individuals develop DE as the specific form of psychopathology under such circumstances (Mikulincer & Shaver, 2012).

Parenting

The literature on attachment points to the saliency of parenting and parent-child relationships on DE symptoms. In terms of parenting approaches, parental psychological control has garnered significant attention as it relates to insecure attachment and DE. Psychological control is defined as “control attempts that intrude into the psychological and emotional development of the child (e.g., thinking processes, self-expression, emotions, and attachment to parents)” (Barber, 1996, p. 3296). Previous literature has found that parental psychological control is associated with insecure attachment (Choe et al., 2020; Leondari & Kiosseoglou, 2002; Pittman et al., 2012). Choe et al. (2020), for example, found in a sample of 221 participants that parental psychological control at age 16 predicted insecure attachment at age 18, which in turn predicted psychological intimate partner violence at age 24. Conceptually, it is clear that a parent limiting their child’s emotional development would lead to a child questioning their sense of self and, therefore, increasing their vulnerability to insecure attachment and future psychopathology and/or relational distress (Mikulincer & Shaver, 2012). For DE, in particular, there is a robust body of literature showing associations between parental psychological control and DE among adolescents (Berge et al., 2014; Blodgett Salafia et al., 2009; Cance et al., 2014; Romm et al., 2019). There is also some preliminary evidence indicating the saliency of parental psychological control on DE symptoms among young adults (Almenara et al., 2016; Soenens et al., 2008). Despite these associations between parental psychological control and DE, the mechanisms in which parental psychological control leads to DE remains uncertain. Given the associations between a) parental psychological control and attachment insecurity and b) attachment insecurity and DE, insecure attachment may be an important mechanism through which parental psychological control is linked to DE symptoms.

Body Shame and Disordered Eating

While attachment insecurity may help link parental psychological control with DE symptoms, why an individual turns to DE behaviors as the specific form of psychopathology also remains uncertain. The role of gender may help explain why women in particular may turn to DE

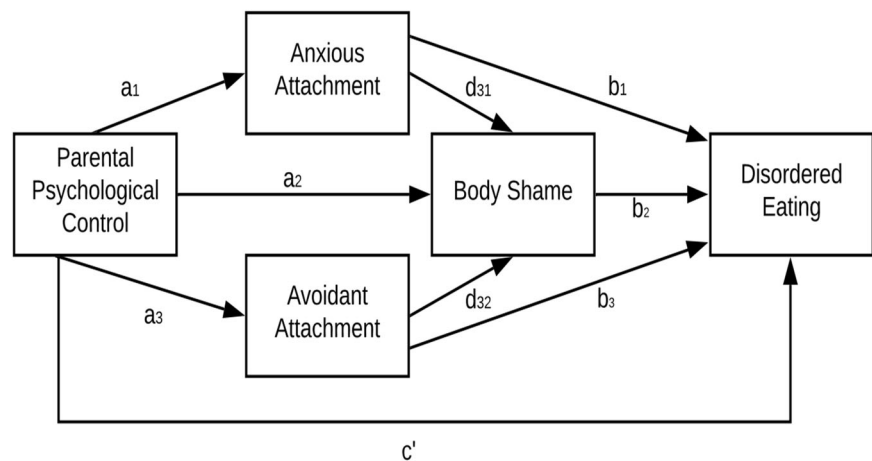
behaviors. While people of all genders can develop DE, women have specific, sociocultural vulnerabilities that may make them more susceptible to DE (Roberts et al., 2018). To determine why women might be vulnerable to DE against the backdrop of attachment insecurity, we turn to the feminist literature on self-objectification. Objectification theory suggests that women are living in a culture where their bodies are seen as objects to be evaluated (Fredrickson & Roberts, 1997). As a result, women are socialized to become their own objectifiers through the internalization of cultural messages about appearance (Calogero, 2012; Roberts et al., 2018). Fredrickson and Roberts (1997) model shows that the consequences of self-objectification are immense and include both intermediate psychological consequences and future mental health risks including DE. In the self-objectification framework, body shame is an emotional intermediate consequence of internalizing societal messages about oneself (Calogero et al., 2011; Fredrickson & Roberts, 1997). Specifically, body shame can be defined as an emotionally salient experience of feeling as if one’s body does not meet the cultural standards of attractiveness (Fredrickson & Roberts, 1997). In response, DE symptoms are posited to emerge as a way for women to reduce intense feelings of shame about one’s body (Calogero, 2012; Moradi et al., 2005; Roberts et al., 2018).

Body shame is one possible construct that could help explain the relationship between attachment insecurity and DE. There is some empirical evidence to support this hypothesis. Notably, studies have shown that family relationships can either buffer or exacerbate risk for body shame. Specifically, positive mother-daughter relationships have been found to buffer against body shame and predict higher body esteem in adolescents (Katz-Wise et al., 2012). Father-daughter relationship variables are also associated with body shame. For example, Miles-McLean et al. (2014) found that the relationship between body shame and negative eating attitudes was the strongest for women who reported their fathers to be highly caring and overprotective. Miles-McLean et al. (2014) theorize that for women who see their fathers to be caring but also intrusive, they may be more sensitive to how they perceive their father view them and their appearance. While Tasca et al. (2013) shows how early experiences can lead to DE through attachment insecurity, body shame helps further elucidate how attachment insecurity can lead to DE, and particularly for women.

Present Study

Previous research has not focused on the developmental and relational factors that may be linked to DE (Pennesi & Wade, 2016). Given the large body of literature indicating the impact of family factors on DE (Blondin et al., 2019;

Fig. 1 Hypothesized model



Cerniglia et al., 2017; Holtom-Viesel & Allan, 2014), this study sought to explore how family factors may be associated with DE through an attachment lens. The research on attachment insecurity and DE is rapidly growing, but several gaps in the literature exist. First, despite the associations between parental psychological control and attachment insecurity as well as attachment insecurity and DE, there have been no studies to date examining attachment insecurity as a mediator linking parental psychological control with DE. Second, while some studies have investigated attachment insecurity and DE, there is little examination of how attachment insecurity is associated with DE symptoms for women, in particular. Lastly, little has been done to understand the impact of parenting on attachment insecurity and DE among young adults. Given the potentially different life circumstances and the shifting role of parents that separates adolescence from young adulthood, it is important to explore the relationship between parental psychological control and DE among young adults.

This study sought to expand upon previous attachment informed models (e.g., Tasca et al., 2013) in two ways. First, we examined whether attachment insecurity and body shame were serially related mechanisms of the effect between parental psychological and DE, as well as individual parallel mediators of the parental psychological control and DE association (see Fig. 1). Second, we focused the impact of parental psychological control on DE symptoms in a sample of young adult women. Given the body of literature reviewed above, we hypothesized attachment insecurity and body shame would sequentially explain the association between parental psychological control (maternal and paternal measured and modeled separately) and DE. We hypothesized that attachment insecurity and body shame would also individually mediate the relationship between parental psychological control and DE. More specifically, our model tested the following five relationships: (1) Hypothesis 1 (pathway $a_1d_{31}b_2$) linking parental

psychological control with DE through the serial link of anxious attachment and body shame, (2) Hypothesis 2 (pathway $a_3d_{32}b_2$), linking parental psychological control with DE through the serial link of avoidant attachment and body shame, (3) Hypothesis 3 (pathway a_2b_2) linking parental psychological with DE through body shame, (4) Hypotheses 4 (pathway a_1b_1) linking parental psychological control through anxious attachment, and Hypothesis 5 (pathway a_3b_3) linking parental psychological control through avoidant attachment.

Method

This study uses secondary data from the second author's unpublished dissertation, which examined the effects of attachment insecurity on self-objectification and attentional bias towards ED-salient stimuli (Russon, 2015). In the original study, participants completed the attachment measure during the screening process, which was one to several weeks prior to attending a lab visit where the other measures were collected. The parental psychological control scales were completed during the lab visit, prior to being exposed to an experimental stimulus for the original study (a battery of advertisement images). The DE measure and body shame questionnaire were completed at the end of the visit and after the participant was exposed to the stimulus. IRB approval was obtained for the initial study. Informed consent from participants was obtained prior to the screening process and prior to the lab visit.

Participants

The sample consisted of heterosexual, cisgender women from the ages of 18–33 ($n = 82$ for paternal model and $n = 84$ for maternal model). Participants were recruited at three mid-Atlantic universities via campus flyers, an extra

credit system for undergraduates, classroom announcements, student groups, social media pages, and word of mouth. Inclusion criteria for the original study required participants to (1) self-identify as heterosexual, (2) self-identify as a woman, (3) have a Body Mass Index (BMI) between 18.5 and 29.9, and (4) be between the ages of 18–35 years old ($M = 20.61$, $SD = 2.49$). Exclusion criteria included (1) self-identifying as transgender, (2) cardiovascular issues, (3) being pregnant, and (4) severe depression, which were necessary for reasons related to the original study's measurements and goals. The decision to include only cisgender heterosexual women was due to literature on DE suggesting that the experience of LGBTQ+ individuals is a distinct experience with additional contextual stressors such as minority stress (Watson et al., 2015). The sample identified ethnically as European/European American (45%), Asian/Asian American (29.7%), African/African American (6.3%), Multiethnic (5.4%), Latina/Hispanic (3.6%), and Native Hawaiian or Pacific Islander (0.9%). Participants reported combined family income of \$71,000–\$100,000 (20.4%), \$101,000–\$150,000 (16.8%), \$10,000–\$25,000 (14.2%), \$31,000–\$50,000 (14.2%), \$51,000–\$70,000 (12.4%), \$151,000–\$200,000 (7.1%), 201,000 or more (8.8%), and \$26,000–\$30,000 (6.2%). Mean BMI of participants was 22.7 ($SD = 3.6$).

Measures

Demographic information

Participants completed a demographic survey used to determine sample characteristics. Participants were asked about their sex, gender, ethnicity, sexual identity, race, age, income, student status, height, weight, amount of exercise, relationship status, religious affiliation, cardiovascular concerns, and pregnancy status.

Parental psychological control

Parental psychological control was measured by the Psychological Control Scale-Youth Self Report (PCS-YSR; Barber, 1996). The PCS-YSR includes eight items measured on a three-point scale ranging from 1 (*Not like them*) to 3 (*A lot like them*). Examples of questions include “My mother/father is always trying to change how I feel or think about things” and “If I have hurt her/his feelings, my mother/father stops talking to me until I please her/him again.” Participants took the measure once for their mother and once for their father. Of note, participants were asked about their current relationship with their parents, and not about their relationship with their parents in childhood. The PCS-YSR has demonstrated good internal consistency for both the mother and father scale (Cronbach's alpha =

0.83) (Barber, 1996). In the current study, the Cronbach's Alpha was 0.79 and 0.85 for mothers and fathers, respectively.

Attachment insecurity

Attachment anxiety and avoidance was measured by the Experiences in Close Relationships- Relationships Structure Questionnaire global attachment measure (ECR-RS; Fraley et al., 2011). The ECR-RS was collected during screening to determine experimental groups for the original study. The ECR-RS consists of 9 items with scores ranging from 1 (strongly disagree) to 8 (strongly agree). The participant was asked to answer the 9 items based on their feelings “in close relationships in general.” The first 6 questions measure attachment avoidance (e.g., “I prefer not to show this person how I feel deep down”) and the last 3 questions measure attachment anxiety (e.g., “I worry that this person won't care about me as much as I care about him or her”). The ECR-RS scale for avoidance and anxiety have demonstrated good internal consistencies (Cronbach's alpha = 0.88 and 0.85, respectively) and good convergent and discriminant validity (Fraley et al., 2011). In the current study, the Cronbach's alpha was 0.81 for attachment avoidance and 0.86 for attachment anxiety.

Disordered eating

Disordered eating was measured by the Eating Attitudes Test (EAT-26; Garner et al., 1982). There are 26 items rated on a 6-point Likert scale, with responses ranging from 0 (*never*) to 6 (*always*). Example questions include “I avoid eating when I am hungry,” “I have gone on eating binges when I feel that I may not be able to stop” and “I vomit after I have eaten.” The total score is the sum of all items, with scores ranging from 0–78. Scores above 20 indicate abnormal eating behaviors and attitudes (Garner et al., 1982). The EAT-26 has demonstrated high internal consistency (Cronbach's alpha = 0.90) and is highly correlated with the longer 40-item EAT test ($r = 0.98$) (Garner et al., 1982). In the current study, the Cronbach's alpha was 0.87.

Body shame

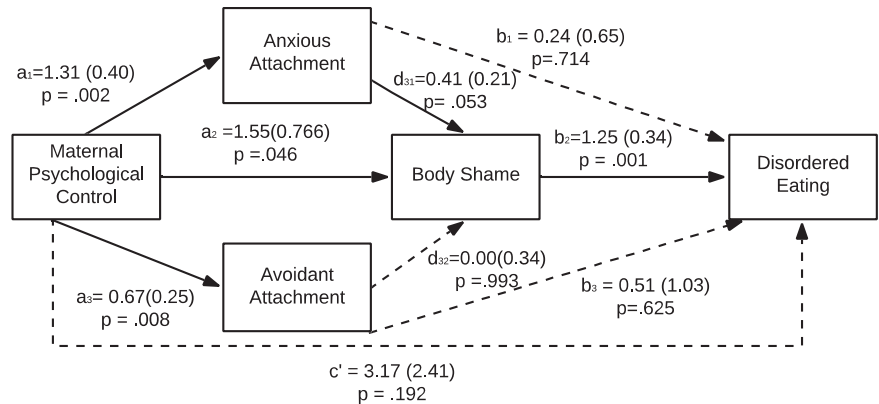
Body shame was measured by the Body Shame Questionnaire (BSQ; Noll & Fredrickson, 1998). The BSQ is a 24-item scale, which is broken into three parts. The first part lists eight body parts (e.g., waist) and asked participants if they would like to change that body part (yes or no). Next, participants were asked how frequently they want to change the body part with answer options ranging from 1 (*seldom*) to 9 (*very often*). Lastly, participants were asked how intense the feeling of wanting to change the body part is

Table 1 Correlation table

Variable	1	2	3	4	5	6
1. BSQ	–					
2. EATS-26	0.475**	–				
3. ECR-RS Anxiety	0.341**	0.262*	–			
4. ECR-RS Avoidance	0.171	0.220*	0.266**	–		
5. PCSYSR Father	0.322**	0.331**	0.333**	0.241*	–	
6. PCSYSR Mother	0.297**	0.292**	0.371**	0.322**	0.382**	–
Means	0.000	9.41	4.12	3.32	1.42	1.44
SD	2.75	9.19	1.63	1.07	0.469	0.412

* $p < 0.05$; ** $p < 0.01$

Fig. 2 Maternal psychological control model



with answer options ranging from 1 (*mild*) to 9 (*intense*). Noll and Frederickson (1998) found these three scores to be highly correlated and thus created a single composite score of body shame. The composite score was created by standardizing each of the three scores and then adding up the standardized scores to create a composite score. Noll (1996) found good construct validity of the BSQ by comparing the BSQ to similar measures. In another later study, the BSQ was found to have good internal consistency (Cronbach’s alpha = 0.82) (Aubrey, 2007). In the current study, Cronbach’s Alpha was 0.75.

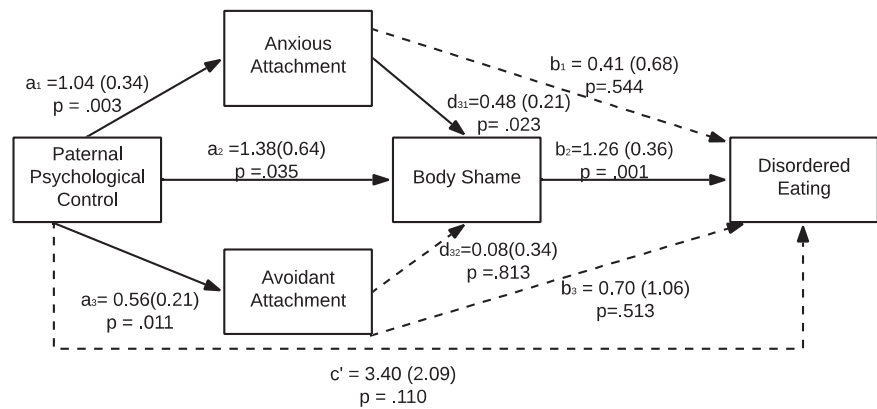
Analytic Plan

Analyses were conducted using SPSS Version 26. Preliminary analyses ensured the assumptions for multiple regression were met (see Table 1 for correlations and descriptive statistics). The hypothesized relationships were tested with multiple serial mediation models using the PROCESS macro (Hayes, 2017; Version 3.5, model 80). Percentile bootstrapped 95% confidence intervals using 5000 samples were calculated to test the statistical significance of the point estimates for the indirect and serial indirect effects. An indirect effect is found to be statistically significant if the 95% confidence interval does not include zero. We tested the hypothesized relationships with both

paternal and maternal psychological control as the antecedent variable.

Results

See Figs. 2 and 3 showing the tested serial mediation models and the beta coefficients for each pathway on the maternal and paternal models, respectively. Hypothesis 1 (pathway $a_1d_3b_2$) testing a serial process between parental psychological control, anxious attachment, body shame and DE were supported in both the maternal and paternal models (maternal IE = 0.030, SE = 0.022, 95% CI = 0.001, 0.085; paternal IE = 0.032, SE = 0.020, 95% CI = 0.003, 0.082). Hypothesis 2 (pathway $a_3d_3b_2$) testing a serial process between parental psychological control, avoidant attachment, body shame and DE were not supported in either the maternal or paternal model (maternal IE = 0.00, SE = 0.013, 95% CI = -0.030, 0.025; paternal IE = 0.003, SE = 0.012, 95% CI = -0.026, 0.027). Hypothesis 3 (pathway a_2b_2) was supported with a significant indirect effect of body shame on DE in the maternal psychological control model (IE = 0.088, SE = 0.047, 95% CI = 0.002, 0.186) and in the paternal psychological control model (IE = 0.089, SE = 0.052, 95% CI = 0.000, 0.201). Hypotheses 4 and 5 (pathways a_1b_1 and a_3b_3 , respectively) testing the indirect effects of anxious

Fig. 3 Paternal psychological control model

and avoidant attachment as parallel mediators between parental psychological control and DE were not supported for the maternal or paternal model (H2b maternal IE = 0.014, SE = 0.040, 95% CI = -0.061, 0.095; H2b paternal IE = 0.022, SE = 0.035, 95% CI = -0.047, 0.097; H2c maternal IE = 0.015, SE = 0.034, 95% CI = -0.064, 0.076; H2c paternal IE = 0.020, SE = 0.033, 95% CI = -0.048, 0.090).

Discussion

This research sought to expand upon previous attachment-informed DE models by investigating (1) the means through which attachment insecurity contributes to DE, and (2) the role of parenting as a relational antecedent to attachment insecurity, body shame and DE for young adult women. We hypothesized that attachment insecurity and body shame would sequentially mediate the relationship between parental psychological control and DE. We also hypothesized that this would be simultaneously true for both anxious and avoidant attachment and present in both the maternal and paternal models. Our hypotheses were partially supported. For young women who perceived their parents to be more psychologically controlling, there was a sequentially linked relationship of higher attachment anxiety and greater body shame, which was associated with greater DE symptoms. Body shame also had a significant indirect effect connecting parental psychological control to DE in both maternal and paternal models. These findings suggest that, regardless of level of attachment insecurity, parental psychological control is associated with DE through the mediating effect of body shame. These results expand upon Tasca et al. (2013) model by illustrating the sequential association between anxious attachment and body shame. Interestingly, our hypothesized results were not supported for the serial mediation involving attachment avoidance and body shame on DE, or the parallel indirect effects of either

forms of attachment insecurity. Specifically, findings revealed that parental psychological control predicted attachment avoidance and attachment anxiety, as in prior literature (Choe et al., 2020; Leondari & Kiosseoglou, 2002). However, neither attachment style predicted DE in our model, as previously shown in Tasca et al. (2013) model linking challenging childhood relational experiences (psychologically controlling parents in our case) with DE symptoms.

As hypothesized, body shame served as a mediator in the relationship between parental psychological control and DE. Our findings converge with previous literature indicating that parent-child relationships can either buffer or increase risk for body shame and subsequent DE behaviors (Katz-Wise et al., 2012; Miles-McLean et al., 2014). While this study used an attachment framework to understand the associations between parental psychological control and DE, it is notable that body shame was also a significant mediator outside of attachment insecurity. These findings suggest that regardless of the type of internal working model the young adult has developed, the body objectification effects of a psychologically controlling parent are significant for young adults.

We found that anxious, but not avoidant, attachment was associated with DE through the mediating effect of body shame. It was surprising that anxious attachment on its own did not mediate the relationship between parental psychological control and DE as it did in Tasca et al. (2013) model. Based on our findings, it appears that body shame may be a necessary additional mechanism for which attachment insecurity is linked to DE. To understand the impact of parental psychological control on anxious attachment, body shame, and DE, we first turn to the literature illustrating the impact of early relationships on one's self-concept. When a child with a psychologically controlling parent does not agree with their parent, the consequence is often love withdrawal, which can be anxiety provoking and devastating. Controlling parenting may lead to reduced opportunities for a child to develop important skills, which can reduce their sense of competency, leading to anxiety when

faced with new experiences or making decisions. Without a sense of security in one's own experiences, children may develop anxiety in current and future relationships (Affrunti & Ginsburg, 2011).

The anxiety that one experiences in childhood with their parents may lead them to internalize maladaptive beliefs about themselves, others, and the world at large. Previous research has found that, as a manifestation of seeking approval and acceptance, individuals with anxious attachment are especially vulnerable to social comparison and internalization of the thin ideal (Bamford & Halliwell, 2009; Lev-Ari et al., 2014; Hardit & Hannum, 2012). For those with anxious attachment styles, it may be that, instead of focusing their attention on the distress or ambivalence they feel in relationship with their parents or close others, the individual with anxious attachment may choose to focus their attention on reducing the shame they feel about their body. One possible explanation for this focus may be that obtaining the "ideal body" is perceived to be more attainable and consistent than obtaining attention in important relationships (Gander et al., 2015). Individuals with anxious attachment styles may connect their worth in relationships to their body, and, as such, believe that their ability to change their body will strengthen their relationships or mitigate the impact of these relationships on their self-concept (Gander et al., 2015; Hardit & Hannum, 2012; Lev-Ari et al., 2014).

Although we can explain why anxious attachment predicted body shame and DE, it is more challenging to understand why avoidant attachment did not predict body shame or DE. This finding was particularly surprising as Tasca et al. (2013) model demonstrated how avoidant attachment mediated the relationship between childhood trauma and DE. We had expected that perceived psychological control from parents might constitute a breach in parental trust where the child might feel vulnerable and withdraw from parental support. Previous research has shown that DE symptoms, and specifically restrictive symptoms, have been associated with avoidant attachment as a way to numb emotions in the context of interpersonal conflict (Espeset et al., 2012). However, Mikulincer and Shaver (2012) stated that attachment insecurity makes someone vulnerable to develop psychopathology, but the specific type of psychopathology is impacted by the type of attachment insecurity. Perhaps those with avoidant attachment are less prone to body shame and DE than those with anxious attachment and instead may be more vulnerable to other forms of psychopathology. For example, the existing literature has linked avoidant attachment with substance use, with substances being used as a strategy to deactivate emotional responses (Schindler, 2019). Our findings both support and contradict the current literature on avoidant attachment and DE. While some studies, like ours, have

shown that avoidant individuals may not be as vulnerable to experiencing body shame (Bamford & Halliwell, 2009), other have shown a direct relationship between attachment avoidance and DE (Bamford & Halliwell, 2009; Illing et al., 2010; Tasca et al., 2009). Ultimately, more research is needed to help clarify how body shame and DE are impacted by differences in attachment style.

It is notable that the sequential pathway from body shame to DE was present in both maternal and paternal models. While there is a robust body of literature examining the impact of mothers on their daughter's body shame and DE (Cooley et al., 2008; Katz-Wise et al., 2012; Neumark-Sztainer et al., 2010; Ogden & Steward, 2000; Smith et al., 2016), there is less for fathers. Our study also adds to the growing body of literature indicating that fathers have salience on their daughter's experience of body shame and DE symptoms (Miles-McLean et al., 2014; Pace et al., 2018). The finding in our study is particularly interesting given our sample consisted of young adult women, which suggests that fathers have a continued impact on their daughters during adulthood.

Limitations

Some notable limitations exist in this study. For one, since the data is cross-sectional, we do not know directionality of the associations and, of course, cannot assume that these findings imply causal relationships. Second, we would need medium to large effect sizes to detect associations with our sample size; therefore, the data may have been underpowered to find relationships that were smaller (Fritz & MacKinnon, 2007). Third, our data is not dyadic and, thus, we are dependent on young adult's perception of their parents. With this said, there is considerable evidence to show that the perception of the individual with DE correlates with symptoms more so than reports and perceptions of the family members (Holtom-Viesel & Allan, 2014; Smith et al., 2016). Along similar lines, this study assessed the young adult's current perceptions of their relationships with their parents, not how their relationships were retrospectively during childhood. However, we theorize that parental psychological control is a longstanding pattern that also likely existed during childhood (Barber, 1996). Lastly, the participants were recruited from a university setting, rather than from a clinical setting. A score of 20 on the EATS-26 indicates that an individual may have a diagnosable ED. The mean score on the EATS-26 was 9.41 for our sample and only 15 cases were above a score of 20. As such, the findings may have been more robust in a clinical sample. Future studies should address these issues by using longitudinal data, recruiting a larger sample, incorporating parent reports, and testing this model with a clinical sample.

Conclusions and Study Implications

In this study, we examined the effects of parental psychological control on DE for young adult women. We discovered that parental psychological control was associated with DE through the serially linked effects of anxious attachment and body shame. Our findings point to the saliency of the objectified body in this relationship as well as attachment anxiety in predicting DE symptoms. Clinically, the findings from this research suggests that clinicians should consider young adult clients' relationships with their parents when they present with DE symptoms. While some clinicians reinforce separation from parents in order to support young adults in their recovery (Winston et al., 2011), from an attachment perspective, this could be a lost opportunity. Moreover, our findings suggest that, for young adult women, their relationships with both their fathers and mothers were impactful in their associations with body shame and DE symptoms. Historically, more focus in eating disorder treatment has been spent on mother-daughter relationships, but our findings add to the evidence that clinicians should also be involving fathers in treatment. Future research should attempt to examine causal relationships between these variables.

Declarations

No funds, grants, or other support was received to conduct this research. The authors have no relevant financial or non-financial interests to disclose.

Compliance with Ethical Standards

Conflict of Interest The authors declare no competing interests.

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References

- Affrunti, N. W., & Ginsburg, G. S. (2011). Maternal overcontrol and child anxiety: The mediating role of perceived competence. *Child Psychiatry & Human Development*, 43(1), 102–112. <https://doi.org/10.1007/s10578-011-0248-z>.
- Allen, K.L., Gibson, L.Y., McLean, N.J., Davis, E.A., & Byrne, S.M. (2014). Maternal and family factors and child eating pathology: Risk and protective relationships. *Journal of Eating Disorders*, 2(1). <https://doi.org/10.1186/2050-2974-2-11>.
- Almenara, C. A., Umemura, T., & Macek, P. (2016). Parent-daughter relationships and disordered eating among emerging adult women from the Czech Republic. *Studia Psychologica*, 58(3), 216–230. <https://doi.org/10.21909/sp.2016.03.718>.
- Alvarenga, M., Scagliusi, F. B., & Philippi, S. T. (2010). Development and validity of the disordered eating attitude scale (deas). *Perceptual and Motor Skills*, 110(2), 379–395. <https://doi.org/10.2466/pms.110.2.379-395>.
- Arcelus, J., Bouman, W. P., & Morgan, J. F. (2007). Treating young people with eating disorders: Transition from child mental health to specialist adult eating disorder services. *European Eating Disorders Review*, 16(1), 30–36. <https://doi.org/10.1002/erv.830>.
- Aubrey, J. S. (2007). The impact of sexually objectifying media exposure on negative body emotions and sexual self-perceptions: Investigating the mediating role of body self-consciousness. *Mass Communication and Society*, 10(1), 1–23. <https://doi.org/10.1080/15205430709337002>.
- Bamford, B., & Halliwell, E. (2009). Investigating the role of attachment in social comparison theories of eating disorders within a non-clinical female population. *European Eating Disorders Review*, 17(5), 371–379. <https://doi.org/10.1002/erv.951>.
- Barber, B. K. (1996). Parental psychological control: Revisiting a neglected construct. *Child Development*, 67(6), 3296–3319. <https://doi.org/10.2307/1131780>.
- Barone, L., & Guiducci, V. (2009). Mental representations of attachment in eating disorders: A pilot study using the adult attachment interview. *Attachment & Human Development*, 11(4), 405–417. <https://doi.org/10.1080/14616730902814770>.
- Berge, J. M., Wall, M., Larson, N., Eisenberg, M. E., Loth, K. A., & Neumark-Sztainer, D. (2014). The unique and additive associations of family functioning and parenting practices with disordered eating behaviors in diverse adolescents. *Journal of Behavioral Medicine*, 37(2), 205–217. <https://doi.org/10.1007/s10865-012-9478-1>.
- Bowlby, J. (1969). *Attachment and loss: Attachment* (2nd ed.). Basic Books
- Bi, S., Haak, E. A., Gilbert, L. R., & Keller, P. S. (2017). Children exposed to marital conflict exhibit more disordered eating behaviors: Child emotional insecurity and anxiety as mechanisms of risk. *Journal of Child and Family Studies*, 26(11), 3112–3122. <https://doi.org/10.1007/s10826-017-0811-8>.
- Blodgett Salafia, E. H., Gondoli, D. M., Corning, A. F., Bucchianeri, M. M., & Godinez, N. M. (2009). Longitudinal examination of maternal psychological control and adolescents' self-competence as predictors of bulimic symptoms among boys and girls. *International Journal of Eating Disorders*, 42(5), 422–428. <https://doi.org/10.1002/eat.20626>.
- Blodgett Salafia, E. H., Schaefer, M. K., & Haugen, E. C. (2014). Connections between marital conflict and adolescent girls' disordered eating: Parent-adolescent relationship quality as a mediator. *Journal of Child and Family Studies*, 23(6), 1128–1138. <https://doi.org/10.1007/s10826-013-9771-9>.
- Blondin, S., Meilleur, D., Taddeo, D., & Frappier, J. (2019). Caregiving experience and expressed emotion among parents of adolescents suffering from anorexia nervosa following illness onset. *Eating Disorders*, 27(5), 453–470. <https://doi.org/10.1080/10640266.2018.1553431>.
- Bould, H., Koupil, I., Dalman, C., DeStavola, B., Lewis, G., & Magnusson, C. (2015). Parental mental illness and eating disorders in offspring. *International Journal of Eating Disorders*, 48(4), 383–391. <https://doi.org/10.1002/eat.22325>.
- Calogero, R. M. (2012). Objectification theory, self-objectification, and body image. In T. F. Cash (Ed.), *Encyclopedia of body image and human appearance* (pp. 574–580). Academic Press
- Calogero, R. M., Tantleff-Dunn, S., & Thompson, J. K. (Eds.) (2011). *Self-objectification in women: Causes, consequences, and*

- counteractions. American Psychological Association. <https://doi.org/10.1037/12304-000>.
- Cance, J. D., Loukas, A., & Talley, A. E. (2014). The differential associations of internalizing symptoms and family and school relationships with disordered eating attitudes among early adolescents. *Journal of Social and Personal Relationships*, 32(1), 41–56. <https://doi.org/10.1177/0265407514523551>.
- Cerniglia, L., Cimino, S., Tafà, M., Marzilli, E., Ballarotto, G., & Bracaglia, F. (2017). Family profiles in eating disorders: Family functioning and psychopathology. *Psychology Research and Behavior Management*, 10, 305–312. <https://doi.org/10.2147/prbm.s145463>.
- Choe, S. Y., Lee, J. O., & Read, S. J. (2020). Psychological intimate partner violence, insecure attachment, and parental psychological control from adolescence to emerging adulthood. *Journal of Interpersonal Violence*. <https://doi.org/10.1177/0886260520957974>.
- Cooley, E., Toray, T., Wang, M. C., & Valdez, N. N. (2008). Maternal effects on daughters' eating pathology and body image. *Eating Behaviors*, 9(1), 52–61. <https://doi.org/10.1016/j.eatbeh.2007.03.001>.
- 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>.
- Eisler, I. (2005). The empirical and theoretical base of family therapy and multiple family day therapy for adolescent anorexia nervosa. *Journal of Family Therapy*, 27(2), 104–131. <https://doi.org/10.1111/j.1467-6427.2005.00303.x>.
- Espeset, E. M., Gulliksen, K. S., Nordbø, R. H., Skårderud, F., & Holte, A. (2012). The link between negative emotions and eating disorder behaviour in patients with anorexia nervosa. *European Eating Disorders Review*, 20(6), 451–460. <https://doi.org/10.1002/erv.2183>.
- Fraleigh, 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), 615–625. <https://doi.org/10.1037/a0022898>.
- Fredrickson, B. L., & Roberts, T. (1997). Objectification theory: Toward understanding women's lived experiences and mental health risks. *Psychology of Women Quarterly*, 21(2), 173–206. <https://doi.org/10.1111/j.1471-6402.1997.tb00108.x>.
- Fritz, M. S., & MacKinnon, D. P. (2007). Required sample size to detect the mediated effect. *Psychological Science*, 18(3), 233–239. <https://doi.org/10.1111/j.1467-9280.2007.01882.x>.
- Gander, M., Sevecke, K., & Buchheim, A. (2015). Eating disorders in adolescence: Attachment issues from a developmental perspective. *Frontiers in Psychology*, 6. <https://doi.org/10.3389/fpsyg.2015.01136>.
- Garner, D. M., Olmsted, M. P., Bohr, Y., & Garfinkel, P. E. (1982). The eating attitudes test: Psychometric features and clinical correlates. *Psychological Medicine*, 12(4), 871–878. <https://doi.org/10.1017/s0033291700049163>.
- Hardit, S. K., & Hannum, J. W. (2012). Attachment, the tripartite influence model, and the development of body dissatisfaction. *Body Image*, 9(4), 469–475. <https://doi.org/10.1016/j.bodyim.2012.06.003>.
- Hayes, A.F. (2017). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach* (2nd ed.). Guilford Publications.
- Hazan, C., & Shaver, P. (1987). Romantic love conceptualized as an attachment process. *Journal of Personality and Social Psychology*, 52(3), 511–524. <https://doi.org/10.1037/0022-3514.52.3.511>.
- Hazzard, V. M., Miller, A. L., Bauer, K. W., Mukherjee, B., & Sonnevile, K. R. (2020). Mother-child and father-child connectedness in adolescence and disordered eating symptoms in young adulthood. *Journal of Adolescent Health*, 66(3), 366–371. <https://doi.org/10.1016/j.jadohealth.2019.09.019>.
- Holtom-Viesel, A., & Allan, S. (2014). A systematic review of the literature on family functioning across all eating disorder diagnoses in comparison to control families. *Clinical Psychology Review*, 34(1), 29–43. <https://doi.org/10.1016/j.cpr.2013.10.005>.
- Hoek, H. W. (2016). Review of the worldwide epidemiology of eating disorders. *Current Opinion in Psychiatry*, 29(6), 336–339. <https://doi.org/10.1097/ycp.0000000000000282>.
- Illing, V., Tasca, G. A., Balfour, L., & Bissada, H. (2010). Attachment insecurity predicts eating disorder symptoms and treatment outcomes in a clinical sample of women. *The Journal of Nervous and Mental Disease*, 198(9), 653–659. <https://doi.org/10.1097/nmd.0b013e3181ef34b2>.
- Katz-Wise, S. L., Budge, S. L., Lindberg, S. M., & Hyde, J. S. (2012). Individuation or identification? Self-objectification and the mother-adolescent relationship. *Psychology of Women Quarterly*, 37(3), 366–380. <https://doi.org/10.1177/0361684312468425>.
- 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). <https://doi.org/10.1186/s40337-017-0141-7>.
- Leondari, A., & Kiosseoglou, G. (2002). Parental psychological control and attachment in late adolescents and young adults. *Psychological Reports*, 90(3), 1015–1030. <https://doi.org/10.2466/pr0.2002.90.3.1015>.
- Lev-Ari, L., Baumgarten-Katz, I., & Zohar, A. H. (2014). Show me your friends, and I shall show you who you are: The way attachment and social comparisons influence body dissatisfaction. *European Eating Disorders Review*, 22(6), 463–469. <https://doi.org/10.1002/erv.2325>.
- Loth, K., Wall, M., Choi, C., Bucchianeri, M., Quick, V., Larson, N., & Neumark-Sztainer, D. (2014). Family meals and disordered eating in adolescents: Are the benefits the same for everyone? *International Journal of Eating Disorders*, 48(1), 100–101. <https://doi.org/10.1002/iat.22339>.
- Mikulincer, M., & Shaver, P. R. (2005). Attachment theory and emotions in close relationships: Exploring the attachment-related dynamics of emotional reactions to relational events. *Personal Relationships*, 12(2), 149–168. <https://doi.org/10.1111/j.1350-4126.2005.00108.x>.
- Mikulincer, M., & Shaver, P. R. (2012). An attachment perspective on psychopathology. *World Psychiatry*, 11(1), 11–15. <https://doi.org/10.1016/j.wpsyc.2012.01.003>.
- Mikulincer, M., & Shaver, P. R. (2019). An attachment perspective on family relations. *APA handbook of contemporary family psychology: Foundations, methods, and contemporary issues across the lifespan (Vol. 1)* (pp. 109–125). <https://doi.org/10.1037/0000099-007>.
- Miles-McLean, H., Liss, M., & Erchull, M. J. (2014). Fathers, daughters, and self-objectification: Does bonding style matter. *Body Image*, 11(4), 534–542. <https://doi.org/10.1016/j.bodyim.2014.08.005>.
- Minuchin, S., Rosman, B.L. & Baker, L. (1978) *Psychosomatic families*. Harvard University Press
- Moradi, B., Dirks, D., & Matteson, A. V. (2005). Roles of sexual objectification experiences and internalization of standards of beauty in eating disorder symptomatology: A test and extension of objectification theory. *Journal of Counseling Psychology*, 52, 420–428. <https://doi.org/10.1037/0022-0167.52.3.420>.
- Neumark-Sztainer, D., Bauer, K. W., Friend, S., Hannan, P. J., Story, M., & Berge, J. M. (2010). Family weight talk and dieting: How much do they matter for body dissatisfaction and disordered eating behaviors in adolescent girls? *Journal of Adolescent Health*

- Health*, 47(3), 270–276. <https://doi.org/10.1016/j.jadohealth.2010.02.001>.
- Noll, S.M. (1996). *The relationship between sexual objectification and disordered eating. Correlational and experimental tests of body shame as a mediator*. Unpublished doctoral dissertation. Duke University
- Noll, S. M., & Fredrickson, B. L. (1998). A mediational model linking self-objectification, body shame, and disordered eating. *Psychology of Women Quarterly*, 22(4), 623–636. <https://doi.org/10.1111/j.1471-6402.1998.tb00181.x>.
- Ogden, J., & Steward, J. (2000). The role of the mother-daughter relationship in explaining weight concern. *International Journal of Eating Disorders*, 28(1), 78–83. 10.1002(sici)1098-108x(200007)28:1<78::aid-eat9>3.0.co;2-n.
- Pace, U., D’Urso, G., & Zappulla, C. (2018). Negative eating attitudes and behaviors among adolescents: The role of parental control and perceived peer support. *Appetite*, 121, 77–82. <https://doi.org/10.1016/j.appet.2017.11.001>.
- Pennesi, J., & Wade, T. D. (2016). A systematic review of the existing models of disordered eating: Do they inform the development of effective interventions. *Clinical Psychology Review*, 43, 175–192. <https://doi.org/10.1016/j.cpr.2015.12.004>.
- Pittman, J. F., Kerpelman, J. L., Soto, J. B., & Adler-Baeder, F. M. (2012). Identity exploration in the dating domain: The role of attachment dimensions and parenting practices. *Journal of Adolescence*, 35(6), 1485–1499. <https://doi.org/10.1016/j.adolescence.2012.04.006>.
- Ramacciotti, A., Sorbello, M., Pazzagli, A., Vismara, L., Mancone, A., & Pallanti, S. (2001). Attachment processes in eating disorders. *Eating and Weight Disorders*, 6, 166–170.
- Roberts, T.-A., Calogero, R.M., & Gervais, S.J. (2018). Objectification theory: Continuing contributions to feminist psychology. In C.B. Travis, J.W. White, A. Rutherford, W.S. Williams, S.L. Cook, & K.F. Wyche (Eds.), *APA handbook of the psychology of women: History, theory, and battlegrounds* (pp. 249–271). American Psychological Association. <https://doi.org/10.1037/0000059-013>.
- Rohde, P., Stice, E., & Marti, C. N. (2014). Development and predictive effects of eating disorder risk factors during adolescence: Implications for prevention efforts. *International Journal of Eating Disorders*, 48(2), 187–198. <https://doi.org/10.1002/eat.22270>.
- Romm, K. F., Metzger, A., & Alvis, L. M. (2019). Parental psychological control and adolescent problematic outcomes: A multidimensional approach. *Journal of Child and Family Studies*, 29(1), 195–207. <https://doi.org/10.1007/s10826-019-01545-y>.
- Russon, J. (2015). *Objectification theory and the family: The effect of attachment insecurity on self-objectification and attentional bias toward eating disorder stimuli* (Doctoral dissertation). <https://www.proquest.com/docview/1728736573?pq-origsite=gscholar&fromopenview=true>.
- Schindler, A. (2019). Attachment and substance use disorders—Theoretical models, empirical evidence, and implications for treatment. *Frontiers in Psychiatry*, 10. <https://doi.org/10.3389/fpsy.2019.00727>.
- Schmidt, U., & Treasure, J. (2006). Anorexia nervosa: Valued and visible. A cognitive-interpersonal maintenance model and its implications for research and practice. *British Journal of Clinical Psychology*, 45(3), 343–366. <https://doi.org/10.1348/014466505x53902>.
- Smink, F. R., Van Hoeken, D., & Hoek, H. W. (2012). Epidemiology of eating disorders: Incidence, prevalence and mortality rates. *Current Psychiatry Reports*, 14(4), 406–414. <https://doi.org/10.1007/s11920-012-0282-y>.
- Smith, J. E., Erickson, S. J., Austin, J. L., Winn, J. L., Lash, D. N., & Amrhein, P. C. (2016). Mother–daughter relationship quality and body image in preadolescent girls. *Journal of Child and Family Studies*, 25(9), 2683–2694. <https://doi.org/10.1007/s10826-016-0452-3>.
- Soenens, B., Vansteenkiste, M., Vandereycken, W., Luyten, P., Siensens, E., & Goossens, L. (2008). Perceived parental psychological control and eating-disordered symptoms. *The Journal of Nervous and Mental Disease*, 196(2), 144–152. <https://doi.org/10.1097/nmd.0b013e318162aabf>.
- Tafà, M., Cimino, S., Ballarotto, G., Bracaglia, F., Bottone, C., & Cerniglia, L. (2016). Female adolescents with eating disorders, parental psychopathological risk and family functioning. *Journal of Child and Family Studies*, 26(1), 28–39. <https://doi.org/10.1007/s10826-016-0531-5>.
- Tasca, G. A. (2019). Attachment and eating disorders: A research update. *Current Opinion in Psychology*, 25, 59–64. <https://doi.org/10.1016/j.copsyc.2018.03.003>.
- Tasca, G. A., Szadkowski, L., Illing, V., Trinneer, A., Grenon, R., Demidenko, N., Krysanski, V., Balfour, L., & Bissada, H. (2009). Adult attachment, depression, and eating disorder symptoms: The mediating role of affect regulation strategies. *Personality and Individual Differences*, 47(6), 662–667. <https://doi.org/10.1016/j.paid.2009.06.006>.
- Tasca, G. A., Ritchie, K., Zachariades, F., Proulx, G., Trinneer, A., Balfour, L., Demidenko, N., Hayden, G., Wong, A., & Bissada, H. (2013). Attachment insecurity mediates the relationship between childhood trauma and eating disorder psychopathology in a clinical sample: A structural equation model. *Child Abuse & Neglect*, 37(11), 926–933. <https://doi.org/10.1016/j.chiabu.2013.03.004>.
- Wade, T., Wilksch, S., & Lee, C. (2012). A longitudinal investigation of the impact of disordered eating on young women’s quality of life. *Health Psychology*, 31(3), 352–359. <https://doi.org/10.1037/a0025956>.
- Ward, Z. J., Rodriguez, P., Wright, D. R., Austin, S. B., & Long, M. W. (2019). Estimation of eating disorders prevalence by age and associations with mortality in a simulated nationally representative US cohort. *JAMA Network Open*, 2(10), e1912925 <https://doi.org/10.1001/jamanetworkopen.2019.12925>.
- Watson, L. B., Grotewiel, M., Farrell, M., Marshik, J., & Schneider, M. (2015). Experiences of sexual objectification, minority stress, and disordered eating among sexual minority women. *Psychology of Women Quarterly*, 39(4), 458–470. <https://doi.org/10.1177/0361684315575024>.
- Winston, A. P., Paul, M., & Juanola-Borray, Y. (2011). The same but different? Treatment of anorexia nervosa in adolescents and adults. *European Eating Disorders Review*, 20(2), 89–93. <https://doi.org/10.1002/erv.1137>.
- Zachrisson, H., & Kulbotten, G. (2006). Attachment in anorexia: An exploration of associations with eating disorder psychopathology and psychiatric symptoms. *Eating and Weight Disorders*, 11(4), 163–170.