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Original Article:

PARENTING DYNAMICS IN CHILDHOOD AS THEY RELATE TO BODY DISSATISFACTION IN ADULT WOMEN: AN EXPLORATION OF PARENTAL ATTACHMENT, ACCEPTANCE, TEASING, AND BODY-RELATED COMMENTS

Adrienne F. Kerbs, M.S.
Eastern Washington University, USA

Amani El-Alayli, Ph.D.
Eastern Washington University, USA

Abstract

Various family dynamics during childhood may be related to subsequent body dissatisfaction in adulthood. We tested a comprehensive set of parenting dynamics simultaneously, including two previously untested factors. We sought to determine (1) the variance in body dissatisfaction accounted for by parental factors, (2) the relative statistical influence of each factor, (3) the potential roles of parental acceptance and body-related teasing by parents, and (4) whether self-esteem may mediate the relationship between general parental acceptance/attachment and body dissatisfaction. Female undergraduates (n = 174) completed established measures of parental attachment/bonding and acceptance, separation anxiety, and body-related parental comments/ teasing (all based on interactions with their primary caregiver(s) while growing up), along with measures of current body dissatisfaction and self-esteem. All relevant parenting variables correlated significantly with current body dissatisfaction, collectively explaining 39% of its variance. The strongest and most consistent predictor was negative body-related comments. Although causation cannot be determined, we observed a pattern of relationships supporting the prediction that more general parenting factors (attachment/bonding, acceptance, and separation anxiety) may indirectly harm their children's body dissatisfaction by first reducing their global self-esteem. We discuss other parenting variables which could play a key role in children's long-term body dissatisfaction.

Keywords: body dissatisfaction; parenting; attachment; teasing; comments; self-esteem

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AUTHOR NOTE: Please address all correspondence to Dr. Amani El-Alayli, 135 Martin Hall, Psychology Department, Eastern Washington University, Cheney, WA 99004, USA. Email: amani@ewu.edu

INTRODUCTION

Roughly 15.6 million cosmetic procedures were conducted in the United States in 2014 alone, with liposuction rising in recent years (American Society of Plastic Surgeons, 2015). This is a testament to how commonplace it is to feel dissatisfied with one's body. Roughly 7-8% of recipients of plastic surgery in the U.S., and 3-15% internationally, appear to meet diagnostic criteria for body dysmorphic disorder, which involves extreme "preoccupation with one or more perceived defects or flaws in physical appearance" that appear to be minimal or nonexistent to others (American Psychiatric Association, 2013, p. 242).

The rising frequency of cosmetic procedures and the association between body dissatisfaction and disordered eating, and sometimes even suicidal ideation (e.g., Buhlmann et al., 2010), suggest a need to investigate the sources of people's dissatisfaction with their physical appearance. The present study examined possible sources of body dissatisfaction among females, for whom the problem is more common and far-reaching. Compared to males, females tend to have lower body-esteem (e.g., Sheldon, 2010); a stronger drive for thinness, as well as its accompanying unhealthy behaviors (e.g., Connor-Greene, 1988); a higher incidence of eating disorders (see Darcy, 2011); and more cosmetic surgeries, with women receiving over 88% of liposuction procedures (American Society of Plastic Surgeons, 2015). Moreover, body image disturbances appear to be linked to depression among girls but not boys (Bearman & Stice, 2008).

The sources of body dissatisfaction are typically multifaceted. The Tripartite Influence Model of body dissatisfaction and eating disturbance (Thompson, Heinberg, Altabe, & Tantleff-Dunn, 1999) suggests that family, peers, and media constitute the three major influences on body image and disturbed eating. The present study focused on how parent-child dynamics during childhood may carry over into adulthood to affect young women's perceptions of themselves and their bodies. We examined parental pressure, in the form of body-related comments and teasing, as well as general aspects of the parent-child relationship, such as bonding/attachment and acceptance/rejection.

Numerous studies have examined the relationships between parenting dynamics and body dissatisfaction during childhood and adolescence, but few have studied the possible lingering effects into adulthood. Those which have (Abraczinskas, Fisak, & Barnes 2012; Bardone-Cone, Harney, & Sayen, 2011; Cheng & Mallinckrodt, 2009; Gross & Nelson, 2000; Hanna & Bond, 2006; Haudek, Rorty, & Henker, 1999; Kluck, 2010; Markham, Thompson, & Bowling, 2005; Rodgers, Paxton, & Chabrol, 2009; Wansink, Latimer, & Pope, 2016) typically included only one or two parenting components, sometimes in conjunction with other important factors such as peer and media influences. We opted, instead, to examine several parenting dynamics simultaneously, with the goals of determining (1) how much of a woman's body dissatisfaction can be traced back to parental issues and (2) which parenting components may play the biggest role. Ultimately, this research could lead to the development of successful parenting interventions that help prevent body dissatisfaction and its negative and sometimes life-threatening consequences. It could also help identify children who are at greater risk for developing a negative body image.

Parental Pressure

Some parents make body-related comments towards their children or tease them about their body shape or size. Such parental pressure seems to influence children's self-views, harming their body perceptions (e.g., Rodgers et al., 2009; see Rodgers & Chabrol, 2009, for a review). According to Erik Erikson's (1950) psychosocial theory of development, which suggests that various social crises shape who we become, parents play a fundamental role in teaching children how to feel about themselves and the world, particularly in the early stages of development. Because parents are often the first people children look to for truth (Erikson, 1950), body-related comments or teasing from parents may be accepted as truth, perhaps even resulting in an ongoing critical self-dialogue that lasts into adulthood.

The few studies which have investigated body-related parental comments and their links to adult women's body dissatisfaction have yielded fairly consistent results (Abraczinskas et al., 2012; Gross & Nelson, 2000; Kluck, 2010; Hanna & Bond, 2006; Herbozo & Thompson, 2006; Rodgers et al., 2009; Wansink et al., 2016). Some have found relationships between college women's body dissatisfaction and how much their parents either criticized them about their weight or emphasized the importance of weight loss during childhood (Hanna & Bond, 2006; Kluck, 2010; Rodgers et al., 2009; Wansink et al., 2016). Others have found body-relevant comments to be related to concerns about weight/shape (e.g., Bardone-Cone et al., 2011), drive for thinness (Rodgers et al., 2009), and disordered/maladaptive eating behavior (Abraczinskas et al., 2012; Baker, Whisman, & Brownell, 2000; Gross & Nelson, 2000), including bulimic symptoms (Rodgers et al., 2009). In contrast, positive parental comments, which send healthy messages regarding weight, and deemphasize its importance, have been associated with more favorable outcomes for women (Abraczinskas et al., 2012; see also Rodgers et al., 2009).

Past work has also examined body-related teasing (see Menzel et al., 2010, for a review), but the focus has typically been on teasing by peers, family, or the general public. To the best of our knowledge, no studies have examined parental teasing in particular as a predictor of adult body dissatisfaction. We suspect that teasing by one's primary caregiver(s) can carry a lot of influence. One study found that weight-related teasing by a girl's parents was associated with worse *general* perceptions of appearance in adulthood (Schwartz, Phares, Tantleff-Dunn & Thompson, 1999). We examined whether parental teasing also related to body perceptions.

In addition, we investigated whether closeness to one's parents could exacerbate the potential effects of teasing and comments. Perhaps individuals who are not as close with their parents are less affected by and reminded of the body-related criticism they received from their parents when they were younger. If so, then their body image may not suffer quite as much from those experiences. Thus, we predicted that the relationship between parents' teasing/comments and daughters' body dissatisfaction may be stronger in closer parent-daughter relationships.

Parental Bonding

More general aspects of the parent-child relationship may also be associated with body dissatisfaction. Attachment theory suggests that the first relationship (i.e., "attachment" or "bond") a child has with her primary caregiver influences the child's social and personal development in ways that last into adulthood (Ainsworth, 2010; Bowlby, 1977). Attachment theorists believe that a primary caregiver who provides appropriate amounts of warmth, care, and independence is likely to raise a child who develops a secure child-caregiver bond and a secure sense of self that carries into adulthood (Ainsworth, 2010; Bowlby, 1977). In contrast, cold or over-controlling parents could leave a child feeling insecure, perhaps indefinitely. The way parents bond with their children may thus influence the children's general self-satisfaction in adulthood, and also their satisfaction with more specific aspects of themselves, such as their bodies.

Parental care/warmth and parental overprotection/control have been identified as two important aspects of the parent-child bond. Parental care/warmth refers to how much parents show caretaking behaviors such as affection, tenderness, and empathy (Parker, Tupling, & Brown, 1979). Parental overprotection/control, which is inversely related to care/warmth, refers to parental behaviors that are overprotective, controlling, and intrusive (Parker et al., 1979). Greater maternal and paternal care/warmth have been associated with lower body dissatisfaction in female college students (Cheng & Mallinckrodt, 2009, Haudek et al., 1999). Similar findings have been observed in outpatient women with eating disorders (Panfilis, Rabbaglio, Rossi, Zita, & Maggini, 2003). However, Haudek et al. found no relationship between parental overprotection/control and body dissatisfaction. Moreover, the relationship between both parenting aspects and body-image *shame* is unclear or perhaps nonexistent (Markham et al., 2005). Given this inconsistency in the literature examining adult body issues, we re-examined the potential connection between parental bonding and body dissatisfaction, while employing multiple assessments of the parent-child bond. We also measured separation anxiety because it is a potential indicator of a poorly formed parent-child attachment (Bowlby, 1977). Although only examined in a clinical sample of anorexic and bulimic women, past research has identified a connection between childhood separation anxiety and greater body dissatisfaction in adulthood (Troisi et al., 2006).

Parental Acceptance and Rejection

Parental acceptance and rejection during childhood are also likely to play role in children's self-perceptions. The acceptance/rejection dimension is very similar to the care/warmth dimension discussed earlier, but its definition is a bit broader. It includes the parental care/warmth behaviors, but also considers the importance of hurtful behaviors, such as hostility, coldness, anger, and resentment, as well as the absence of loving behaviors (exemplified by such things as indifference and neglect). Simply put, children who feel greater acceptance and less rejection by their parents feel more valued and loved. According to Carl Rogers's humanistic theory, unconditional acceptance and positive regard from a parent is essential to healthy mental development (Dwairy, 2010). Research from thousands of studies supports this view (Rohner, Khaleque, & Cournoyer, 2005). In their review, Rohner et al. (2005, p. 300) claim that when the acceptance need "is not

met satisfactorily, children worldwide – regardless of variations in culture, gender, age, ethnicity, or other such defining conditions – tend to report themselves to be hostile and aggressive, dependent or defensively independent, impaired in self-esteem and self-adequacy, emotionally unresponsive, emotionally unstable, and to have a negative worldview…" According to Rohner et al., as much as 26% of variability in children's psychological adjustment, and 21% of variability in adults' psychological adjustment, can be accounted for by perceptions of their primary caregivers' acceptance and rejection of them during childhood.

Thus, we propose that a girl who feels rejected by her parents may learn to reject herself, but a girl who feels loved by her parents may learn to love herself, and that these self-perceptions would linger into adulthood. Therefore, we predicted a relationship between parental acceptance/rejection during childhood and body dissatisfaction in adulthood. One study (Cordero & Israel, 2009) found no relationships between acceptance/rejection to maladaptive eating cognitions (e.g., preoccupation with food and dieting) and behaviors (e.g., eating-disordered behaviors, such as bulimia), but this parenting dimension has not yet been studied in relation to body dissatisfaction specifically.

The Role of Self-Esteem

Parental bonding and acceptance may shape one's body image by way of first influencing one's general self-esteem (i.e., one's overall evaluation of self-worth). If negative aspects of the parent-child relationship result in the child feeling less secure and accepted, then she is likely to be less accepting of herself. As such, she may develop lower self-esteem, which could result in greater body dissatisfaction. Adult self-esteem is, indeed, related to various parenting factors from childhood, including parental acceptance (Berenson, Crawford, Cohen, & Brook, 2005; Cordero & Israel, 2009), and parental bonding (Perry, Silvera, Neilands, Rosenvinge, & Hanssen, 2007). Self-esteem is also related to body satisfaction (e.g., Gleason, Alexander, & Somers, 2000; Green & Pritchard, 2003; Sira & White, 2010), and appears to play a causal role given that self-esteem scores in adolescence predict body dissatisfaction scores five years later (Paxton, Eisenberg, & Neumark-Sztainer, 2006). Moreover, one study's results suggested that weak parental bonding may lead to poor self-concept, which consequently may lead to problematic eating disturbances (e.g., eating guilt and strict dieting) in young adulthood (Perry et al., 2008). We suggest that the same is true for body dissatisfaction, and with regard to not only parental bonding, but also parental acceptance/rejection and separation anxiety. The key role of self-esteem could help explain the inconsistencies in the literature when relating general parental factors with specific body-related attitudes.

The Current Investigation

Using a sample of female college students, we examined various types of parental pressure (particularly body-related comments and teasing), and aspects of the parent-child relationship (specifically parental bonding/attachment and parental acceptance/rejection). We investigated how these factors individually and jointly related to body dissatisfaction in adulthood, while controlling

for body size. Controlling for body size is common in this line of research because being overweight could result in both greater body dissatisfaction and worse treatment by one's parents, causing the latter two to be correlated incidentally (e.g., Crandall, 1995). Thus, we observed what remained of the relationships between parental factors and body dissatisfaction after statistically removing the effects of body size.

In the present study, college females completed measures of current body dissatisfaction and then answered questions regarding how they perceived their primary caregiver(s) from the perspective of when they were children. Prior research has typically had participants respond to questions about their "mother," their "father," or their "parents." However, research on which parenting source is most influential is mixed (see Rodgers & Chabrol, 2009, for a review of research on adolescents), perhaps because researchers have not typically identified the participants' *primary* caregivers. Regardless of who it is, the primary caregiver should theoretically be the most influential person in the child's life, and thus have the biggest effect on development of self-views (Ainsworth, 2010). We believe that clearer and more consistent relationships would emerge in this line of research if researchers specifically focused on the primary caregiver.

In the present study, we hypothesized that all of the aforementioned childhood parenting dynamics would be significantly related to body dissatisfaction in adulthood, and collectively account for much of its variance. In addition, we predicted that self-esteem would completely mediate the connection between general parent-child relationship factors and body dissatisfaction. We also examined, on an exploratory basis, whether closeness with one's primary caregiver(s) moderated the relationship between parental comments/teasing and body dissatisfaction. There are a variety of research methodologies that could be used to investigate the questions posed here. Because of the ethical problems with conducting experimental research or research in which children are surveyed about sensitive topics, we chose to employ a retrospective design in which we surveyed adult women about their childhood experiences.

METHOD

Participants

Participants were 174 adult female undergraduate students at a university in the Northwestern United States. There were no exclusion criteria based on history or diagnosis of eating disorders because we were interested in a more general sample of female undergraduates. They completed the study for research credit (required or extra credit class points) in a psychology course, primarily General Psychology. The study was titled "Family Background Study," so that women with a variety of body perceptions might participate.

Participant age ranged from 18 to 44 years old (M = 21.72, SD = 4.29). We excluded two participants whose BMI could not be computed because they chose not to report their weight. The final sample consisted of 75% Caucasians, 9% Latinos/Chicanos, 6% Asians/Asian-Americans or

Pacific Islanders, 3% African Americans, 1% Native Americans, and 5% mixed-race participants. Most participants (n = 104) identified both mother and father as their primary caregivers, with the remaining identifying mother only (n = 53), father only (n = 7), grandparents (n = 3), foster parents (n = 2), aunt (n = 1), older sibling, father and stepmother (n = 1), friend's parents (n = 1), and mother, father, and older brother (n = 1). Only 27 participants still lived with their primary caregiver(s). Among the 147 participants who did not, it had been an average of 3.73 years (SD = 4.77) since they lived with them.

Procedure

There were two batches of data collection. The first batch was collected in the lab, where up to six participants at a time arrived for a session. Each participant completed the study at a computer terminal in a private room. To increase the sample size and speed up data collection, we collected a second batch of data online. Participants signed up for and completed the study online at the time and location of their choice. In both cases, we emphasized to participants that their responses would be completely anonymous.

The study began with two body dissatisfaction measures, followed by a series of parenting measures, which included (in order) two parental bonding measures, a parental comments measure, a parental teasing measure, a separation anxiety measure, and a parental acceptance/rejection measure. A brief assessment of self-esteem followed. Then participants recorded their weight and height, from which we later computed their body mass index (BMI).[1] The BMI in our sample ranged from 15.39 to 47.75 (M = 25.77, SD = 6.50). According to the U.S. Department of Health and Human Services (2012), a BMI between 18.5 and 24.9 constitutes healthy weight and a BMI of 30 or more constitutes obesity. The remaining items in the study requested information regarding participants' closeness with their primary caregiver(s), their current living situation, and some general demographic variables. At the end of the study, participants indicated their perceptions of the study's purpose, and then were debriefed and dismissed.

Body Dissatisfaction

The first body dissatisfaction measure was the Body Dissatisfaction subscale of the Eating Disorder Inventory (BD-EDI; Garner, Olmstead, & Polivy, 1983), which contains nine statements, such as "I think that my stomach is too big," to be rated on a scale from 1 (*never*) to 6 (*always*) based on feelings over the last four weeks. Scores on the subscales of the BD-EDI have been shown to correspond to external ratings by clinicians, supporting the measure's validity (Garner et al., 1983). Means, standard deviations, and Cronbach's αs (estimates of internal consistency reliability) for all measures are presented in Table 1.

Table 1. **Descriptive Statistics of Primary Measures**

	M	*SD*	α	Scale
Body Dissatisfaction Measures:				
BD-EDI	3.64	1.09	.91	1 to 6
BSQ	3.01	1.05	.97	1 to 6
General Parenting Measures:				
IPPA (Attachment) overall	3.08	0.69	.96	
IPPA Trust scale	3.19	0.70	.92	1 to 4
IPPA Communication scale	2.93	0.78	.92	1 to 4
IPPA Alienation scale	1.91	0.71	.86	1 to 4
PBI (Bonding) overall	3.07	0.59	---	1 to 4
PBI Care scale	3.30	0.74	.96	1 to 4
PBI Control/Overprotection scale	2.15	0.64	.89	1 to 4
SASI (Separation Anxiety) overall	1.84	0.53	.87	1 to 4
PARQ (Rejection) overall	1.54	0.63	.97	1 to 4
PARQ Warmth scale	3.37	0.71	.93	1 to 4
PARQ Hostility/Aggression scale	1.40	0.63	.89	1 to 4
PARQ Indifference/Neglect scale	1.68	0.73	.90	1 to 4
PARQ Undifferentiated Rejection scale	1.37	0.62	.84	1 to 4
Parental Comments/Teasing:				
PCS Negative Comments	1.98	0.96	.88	1 to 5
PCS Positive Comments	3.09	1.00	.82	1 to 5
PCS Comparison Comments	2.03	0.96	.87	1 to 5
POTS Weight Teasing	1.14	0.37	.87	1 to 5
POTS Competence Teasing	1.70	0.95	.91	1 to 5
Self-Esteem Measure:				
RSES	3.19	0.60	.91	1 to 4
Parental Closeness Measures:				
Closeness in Childhood	4.78	1.26	---	1 to 6
Current Closeness	4.89	1.21	---	1 to 6
Speaking/Interaction Frequency	4.85	1.18	---	1 to 6

Note: Prior use of some of these measures had response scales starting at 0 (with the same number of options), but we modified them (so that each started at 1) for ease of responding.

The second measure was the Body Shape Questionnaire (BSQ), whose validity is supported by its correlations with other measures of body dissatisfaction, including the BD-EDI subscale above (Cooper, Taylor, Cooper, & Fairburn, 1987). The measure consists of 34 questions regarding how individuals feel about their body and the impact it has on their daily life (e.g., "Has eating even a small amount of food made you feel fat?"). Participants responded on a scale from 1 (*never*) to 6 (*always*). Because the BD-EDI and the BSQ correlated very strongly, $r(172) = .82$, $p < .001$, we created a composite measure of body satisfaction by converting the two to z-scores (to equate the two means and standard deviations) and then averaging them together.

Primary Caregiver

Before completing the parenting measures, participants identified who they considered to be their primary caregiver(s) when they were younger. They were to keep their primary caregiver(s) in mind when responding to each parenting measure. We replaced the terms "mother," "father," or "parent(s)" with "parent(s)/primary caregiver(s)" within each measure to facilitate this. Doing so makes all measures applicable to all participants, including those raised without a mother and/or father. Participants responded to each measure from the perspective of when they were younger. We rephrased any present tense items to make them past tense.

Parental Bonding

Table 2 presents the primary parenting variables and their inter-correlations. Aspects of parental bonding were assessed using three questionnaires. We used the parent subscale of the Inventory of Parent and Peer Attachment (IPPA), a measure originally developed by Greenberg, Siegel, and Leitch (1983). We excluded three items to be consistent with more recent versions (Greenberg, 2009; Pace, San Martini, & Zavattini, 2011). Concurrent validity of the measure has been established (Greenberg, 2009). There was a 10-item trust subscale, a 10-item communication subscale, and a 6-item alienation subscale. The trust subscale assessed mutual trust, and respect and understanding from one's parents (e.g., "My parent(s)/primary caregiver(s) respected my feelings"). The communication subscale assessed the quantity and quality of child-parent verbal interaction (e.g., "I told my parent(s)/primary caregiver(s) about my problems and troubles"). The alienation subscale assessed feelings of isolation, alienation, and anger towards one's parents (e.g., "I got upset a lot more than my parent(s)/primary caregiver(s) knew about"). The response scale ranged from 1 (*almost never or never true*) to 4 (*almost always or always true*).

***Table 2*. Correlation Matrix Including Parenting Dynamics, Closeness, Self-Esteem, and BMI**

	Variable													
Variable	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**
1. IPPA Overall (Attachment)	__													
2. PBI Overall (Bonding)	.85**	__												
3. SASI (Separation Anxiety)	-.20**	-.18*	__											
4. PARQ Overall (Rejection)	-.88**	-.82**	.31**	__										
5. PCS Negative Comments	-.23**	- .21**	.07	.21**	__									
6. PCS Positive Comments	.41**	.36**	-.07	-.39**	-.47**	__								
7. PCS Comparison Comments	-.40**	-.40**	.23**	.40**	.66**	- .30**	__							
8. POTS Weight Teasing	-.30**	-.31**	.19*	.30**	.43**	-.34**	.43**	__						
9. POTS Competence Teasing	-.48**	-.45**	.32**	.56**	.24**	-.20**	.41**	.38**	__					
10. Closeness in Childhood	.74**	.66**	-.08	-.70**	-.17*	.39**	-.20*	-.26**	- .30**	__				
11. Current Closeness	.65**	.65**	-.01	-.67**	-.18*	.40**	-.28**	-.32**	-.31**	.74**	__			
12. Speaking Frequency	.54**	.45**	.00	-.54**	-.08	.34**	-.20**	-.20**	- .24**	.51**	.68**	__		
13. Self-Esteem	.59**	.52**	-.23**	-.55**	-.24**	.29**	-.36**	-.22**	-.28**	.33**	.44**	.40**	__	
14. BMI	-.14$^{m.s.}$	-.06	.09	.12	.47**	-.36**	.22**	.22**	.02	-.10	-.06	-.05**	-.14$^{m.s.}$	__

Note: *$p < .05$, **$p <. 01$, $^{m.s.}p < .10$, $df = 172$

The second measure of bonding that we used was the Parental Bonding Instrument (PBI; Parker et al., 1979), which has satisfactory reliability and validity (Parker, 1989). It contains a 12-item care subscale, assessing how much parents cared about their child and expressed warmth towards them (e.g., "spoke to me in a warm and friendly voice"), and a 13-item control/overprotection subscale, assessing how controlling and authoritarian the parents were (e.g., "tried to control everything I did"). Participants responded on a scale from 1 (*very unlike*) to 4 (*very like*). We analyzed both subscales separately, as well as a composite measure of parental bonding which was the average of the control/overprotection subscale reversed and the care subscale.

The third relevant measure was the Separation Anxiety Symptom Inventory (SASI; Silove et al., 1993), a 15-item questionnaire on which participants responded to items such as "I was afraid of being harmed or kidnapped when I was alone," on a scale from 1 (*I never had this feeling*) to 4 (*this feeling occurred very often*). Validity was supported by higher SASI scores being observed in populations which should theoretically have more issues with separation anxiety (Silove et al., 1993). Silove et al. identified subscales within the measure which assess "general separation anxiety," "school phobia," "distress at being away from a secure base," and a "fear of harm befalling family members." However, because the authors recommended using the overall score, and because two of the subscales in our study had less than ideal values for internal consistency (i.e., a Cronbach's alpha below the recommended .80), we decided to analyze only the overall score on the measure.

Parental Acceptance

General parental acceptance was assessed with the short form of the Parental Acceptance-Rejection Questionnaire (PARQ; Rohner & Khaleque, 2005), which contains 8 warmth items (e.g., "My parent(s)/primary caregiver(s) said nice things about me"), 6 hostility/aggression items (e.g., "My parent(s)/primary caregiver(s) hit me, even when I did not deserve it"), 6 indifference/neglect items (e.g., "My parent(s)/primary caregiver(s) paid no attention to me"), and 4 undifferentiated rejection items, (e.g., "My parent(s)/primary caregiver(s) saw me as a big nuisance"). Participants responded on a scale from 1 (*almost never true*) to 4 (*almost always true*).

Parental Pressure

The first assessment of parental pressure was the Parental Comments Scale (PCS; Rodgers, Faure, & Chabrol, 2009), which contained three subscales. Six items assessed negative comments, all of which implied that the child should put effort into losing weight. Some of these were critical comments regarding the child's eating habits, fitness, or body (e.g., "If you eat that, you'll get fat.") and some seemed complimentary, but simultaneously reinforced weight loss ("You look great, you must have lost weight!"). Five items assessed

positive comments that discouraged weight loss and sent the message that weight is irrelevant to beauty (e.g., "It's okay if you put on some weight, don't worry about it"). Six items constituted comparison/importance comments, which emphasized the importance of physical appearance and/or included mention of others' bodies (e.g., "My parent(s)/primary caretaker(s) commented on the shape or weight of my friends"). Participants responded using a scale ranging from 1 (*never*) to 5 (*always*).

The second assessment of parental pressure was the Perception of Teasing Scale (POTS; Thompson, Cattarin, Fowler, & Fisher, 1995), which assessed participants' recollection of how much, on a scale from 1 (*never*) to 5 (*very often*), they were teased by their primary caregiver(s) when they were younger. Of most relevance was the 6-item weight teasing subscale (e.g., "Made fun of you because you were heavy"), but there was also a 5-item competence-teasing subscale (e.g., "Made fun of you because you were afraid to do something").

Self-Esteem

Global self-esteem was measured with the widely used Rosenberg Self-Esteem Scale (RSES; Rosenberg, 1965), a 10-item questionnaire with items such as, "On the whole, I am satisfied with myself," and a response scale ranging from 1 (*strongly disagree*), to 4 (*strongly agree*).

Supplemental and Demographic Questions

Toward the end of the study, participants answered some demographic questions and some general questions about their primary caregiver(s). Three items assessed factors relevant to closeness. Participants responded to the questions, "When you were growing up, how close would you say you were with the caregiver(s) you identified?" and "How close are you now with the caregiver(s) you identified?" on a scale from 1 (*not close at all*) to 6 (*extremely close*). They were also asked, "Approximately how often do you speak/interact with the caregiver(s) you identified," and responded on a scale from 1 (*Never*) to 6 (*Always*). Because these three items correlated strongly with one another, $rs(172) = .51$ to $.74$, $ps < .001$, we converted them to z-scores and averaged them together to form a composite measure of closeness.

RESULTS

Correlations between Parenting Variables and Body Dissatisfaction

We performed Pearson correlations between the parenting measures and the three measures of body dissatisfaction (the BD-EDI, the BSQ, and the composite measure which

averages the two). We also computed partial correlations between the parenting measures and the composite body dissatisfaction measure while controlling for BMI. All of these zero-order and partial correlations are presented in Table 3.

***Table 3*. Correlations between Parenting Variables and Body Dissatisfaction, With and Without Controlling for BMI**

	BD-EDI *r*	BSQ *r*	Composite *r*	Composite $r_{partial}$
General Parent-Child Relationship:				
IPPA Overall (Attachment)	-.30**	-.23**	-.28**	-.24**
IPPA Trust Scale	-.30**	-.23**	-.28**	-.24**
IPPA Communication Scale	-.26**	-.19*	-.24**	-.20**
IPPA Alienation Scale	.27**	.23**	.26**	.26**
PBI Overall (Bonding)	-.23**	-.21**	-.23**	-.23**
PBI Care Scale	-.24**	-.19*	-.22**	-.20**
PBI Control/Overprotection Scale	.16*	.16*	.17*	.21**
SASI Overall (Separation Anxiety)	.15*	.21**	.19*	.17*
PARQ Overall (Rejection) Score	.25**	.23**	.25**	.22**
PARQ Warmth Scale	-.27**	-.22**	-.26**	-.23**
PARQ Hostility/Aggression Scale	.18*	.19*	.19*	.16*
PARQ Indifference/Neglect Scale	.24**	.22**	.24**	.22**
PARQ Undifferentiated Rejection Scale	.18*	.20*	.20*	.18*
Parental Comments/Teasing:				
PCS Negative Comments	.51**	.57**	.57**	.42**
PCS Positive Comments	-.40**	-.37**	-.40**	-.26**
PCS Comparison Comments	.32**	.45**	.41**	.35**
POTS Weight Teasing	.32**	.40**	.38**	.31**
POTS Competence Teasing	.10	.17*	.14[m.s.]	.15*
Self-Esteem:				
RSES	-.45**	-.41**	-.45**	-.45**
Body Size:				
BMI	-.52**	-.54**	-.56**	----

Note: * $p < .05$, ** $p < .01$, [m.s.] $p < .10$. The first three columns are zero-order correlations (df = 172). "Composite" refers to the average of the two (standardized) body dissatisfaction measures. The final column contains the same correlations as the "Composite" column, except that they are partial correlations controlling for BMI (df = 171).

The results strongly supported our predictions. Every parenting variable except competence teasing, which was least pertinent to the present study, was significantly related to all three body dissatisfaction scores in the predicted direction. The strongest relationships involved the body-related comments and teasing measures. Specifically, participants were more dissatisfied with their bodies to the extent that they recalled their parents teasing them about their weight, making negative comments about their weight/body/eating/exercise, or making body-related importance or comparison comments. In contrast, participants were less dissatisfied with their bodies to the extent that parents made positive comments which deemphasized weight. The strength of some of these relationships was even on par with the relationships between self- esteem or BMI and body dissatisfaction. Moreover, when examining partial correlations which controlled for BMI, every parenting variable remained significantly correlated with the composite body dissatisfaction measure (see Table 3).

We had no predictions involving competence teasing, given that this type of teasing is irrelevant to body issues. Surprisingly, though, competence teasing was positively correlated with one of the body dissatisfaction measures (see Table 3). We suspected that this relationship occurred because the same parents who tease their children on their body weight also tease their children on their competence, a notion which is supported by the positive correlation between the two types of teasing (see Table 2). To explore this idea, we examined the partial correlation between competence teasing and body dissatisfaction while controlling for weight teasing. As we presumed, the relationships between competence teasing and each of the three body dissatisfaction measures were near-zero when removing the influence of weight teasing, *r*s(171) = -.03 to .02, *p*s =.738 to .986.

Simultaneous Multiple Regressions

To examine the full extent to which these parenting variables can account for women's body dissatisfaction, we performed a simultaneous multiple regression analysis on the composite measure of body dissatisfaction, while including all childhood parenting dynamics variables as predictors (except for the individual subscales of the general parenting measures, given the problem of multicollinearity that would exist between them and the overall score). The model was significant, $F(9, 164) = 11.86$, $p < .001$, and the nine predictors collectively accounted for nearly 40% of the variability in body dissatisfaction scores ($R^2 = .39$). The regression coefficients from this analysis are presented in the first column of Table 4. As shown, only negative parental comments, $t = 4.96$, $p < .001$, $\beta = .46$, and overall separation anxiety, $t = 2.28$, $p = .024$, $\beta = .15$, were significant predictors in the model, illustrating that these variables have effects that are independent of the other parenting variables. There were also marginally significant effects of the weight teasing and competence teasing subscales of the POTS.

***Table 4*. Regression Coefficients from Simultaneous Multiple Regression With and Without BMI Included in Model**

	Without including BMI		With BMI in Model	
	β	*p*	*β*	*p*
General Parent-Child Relationship:				
IPPA Overall (Attachment)	-.18	.224	-.12	.377
PBI Overall (Bonding)	.04	.737	-.03	.823
SASI Overall (Separation Anxiety)	.15*	.024	.12[m.s.]	.061
PARQ Overall (Rejection)	-.02	.875	-.04	.761
Parental Comments/Teasing:				
PCS Negative Comments	.46**	.000	.29**	.002
PCS Positive Comments	-.12	.128	-.06	.395
PCS Comparison Comments	-.02	.868	.04	.661
POTS Weight Teasing	.14[m.s.]	.061	.12[m.s.]	.075
POTS Competence Teasing	-.14[m.s.]	.068	-.10	.192
BMI (Body Mass Index)	------	------	.35**	.000

Note: * $p < .05$, ** $p < .01$, [m.s.] $p < .10$. Regression coefficients of general parenting variables and parental comments/teasing measures in a simultaneous multiple regression performed on the composite index of body dissatisfaction with and without including BMI as a predictor in the model.

We performed the same analysis with BMI also entered into the model, $F(10, 163) = 15.01$, $p < .001$, $R^2 = .48$ (see Table 4). BMI was a significant positive predictor of body dissatisfaction, $t = 5.17$, $p < .001$, $\beta = .35$. Importantly, the only parenting variable to remain statistically significant in this model was negative comments, $t = 3.14$, $p = .002$, $\beta = .29$. This finding, combined with the fact that negative comments was the parenting variable most strongly correlated with body dissatisfaction, suggests that it may be the biggest parental contributor to women's perceptions of their bodies. Weight teasing and separation anxiety were marginally significant in this model, suggesting that they may also play a unique role in women's body dissatisfaction.

The Mediating Role of Self-Esteem

One goal of the present research was to examine whether general parental factors, such as bonding/attachment and acceptance, result in lower body dissatisfaction because they lower a child's general self-esteem. Although we could not specifically test for causation, we were able to examine whether self-esteem mediated the relationship between

these parenting measures and the composite measure of body dissatisfaction. To pare down the number of analyses, we examined only the general scores on these parenting variables (IPPA, PBI, PARQ, and SASI overall scores).

In keeping with Baron and Kenny's (1986) steps for mediation testing, we first confirmed that each predictor had a significant relationship with both the outcome variable (body dissatisfaction) and the mediator (self-esteem). These criteria were met fully, as shown in Tables 2 and 3. To continue, we examined whether a regression simultaneously examining the effects of the predictor and the mediator on the outcome variable would result in a significant effect of only the mediator and not the predictor. If so, we followed up with Sobel tests to specifically test the indirect effect of the predictor on the outcome variable via the mediator.

The regression analysis examining the effect of IPPA and self-esteem on body dissatisfaction confirmed that higher IPPA (attachment) scores were unrelated to body dissatisfaction, $t = -0.23$, $p = .821$, $\beta = -.02$, when the (statistically significant) predictor of self-esteem, $t = -5.20$, $p < .001$, $\beta = -.44$, was included in the model. Confirming complete mediation, we also found that the indirect effect of IPPA on body dissatisfaction via self-esteem was statistically significant, *Sobel* $z = -4.55$, $p < .001$.

Similarly, the regression analysis examining the effect of PBI on body dissatisfaction confirmed that PBI (bonding) was not significantly associated with body dissatisfaction, $t = 0.07$, $p = .944$, $\beta = .01$, when the significant predictor of self-esteem, $t = -5.65$, $p < .001$, $\beta = -.45$, was entered into the model. Confirming complete mediation, we also found that the indirect effect of PBI on body dissatisfaction via self-esteem was statistically significant, *Sobel* $z = -4.61$, $p < .001$.

Once again, only self-esteem emerged as a significant predictor, $t = -5.47$, $p < .001$, $\beta = -.45$, in the model that simultaneously examined the effects of the parenting variable, PARQ rejection, $t = -0.01$, $p = .996$, $\beta = .00$, and self-esteem on body dissatisfaction. The indirect effect of PARQ on body dissatisfaction via self-esteem was also statistically significant, *Sobel* $z = 4.62$, $p < .001$.

Similarly, when simultaneously examining the effects of SASI and self-esteem on body dissatisfaction, the effect of SASI was not significant, $t = 1.28$, $p = .202$, $\beta = .09$, whereas the effect of self-esteem was significant, $t = -6.12$, $p < .001$, $\beta = -.43$. A Sobel test confirmed that self-esteem accounted for the relationship between SASI and body dissatisfaction, *Sobel* $z = 2.80$, $p = .005$. In sum, these analyses provide support for the possibility that a better parent-child attachment/bond, less parental rejection, and lower separation anxiety may each lead to lower body dissatisfaction in adulthood by way of enhancing general self-esteem.

We did not expect self-esteem to be responsible for the relationship between comments/teasing and body dissatisfaction, given that body-specific comments and teasing should directly impact body dissatisfaction as both are domain-specific. To confirm this,

we performed regressions that separately examined the effect of each of the comments/teasing measures on body dissatisfaction, while including self-esteem as a predictor in the model. The models examining negative comments, $t = 8.08$, $p < .001$, $\beta = .48$, positive comments, $t = -4.42$, $p < .001$, $\beta = -.30$, comparison/importance comments, $t = 4.00$, $p < .001$, $\beta = .28$, and weight-related teasing, $t = 4.42$, $p < .001$, $\beta = .29$, found that each parenting predictor was significant regardless of self-esteem's inclusion in the model. Thus, parental body-related comments and teasing behaviors were associated with body dissatisfaction even when controlling for self-esteem. Note, however, that self-esteem was correlated with all four of these variables (see Table 2), similar to past research linking self-esteem and weight/appearance-related comments from people in general (Herbozo & Thompson, 2006).

The Moderating Role of Parental Closeness

The composite measure of parental closeness was used to examine the possibility that harmful parental comments and teasing behavior could have a stronger impact on children closer with their parents. We first performed a parental closeness × weight teasing General Linear Model (GLM) analysis on the composite measure of body dissatisfaction. The predictors were treated as continuous variables and both the main effects and the interaction were included in the model. Although both the parental closeness main effect, $F(1, 170) = 9.85$, $p = .002$, $\eta^2 = .06$, and weight teasing main effect, $F(1, 170) = 29.95$, $p < .001$, $\eta^2 = .14$, were statistically significant, they were qualified by the significant closeness × weight teasing interaction, $F(1, 170) = 6.72$, $p = .010$, $\eta^2 = .04$. The predicted scores based on this interaction are presented in Figure 1. As expected, there was a stronger relationship between teasing and body dissatisfaction for participants who were closer with their parents.

The parental closeness × comparison/importance comments GLM also revealed a significant interaction, $F(1, 170) = 5.05$, $p = .026$, $\eta^2 = .03$, as well as significant main effects of closeness, $F(1, 170) = 8.10$, $p = .005$, $\eta^2 = .05$, and comparison/importance comments, $F(1, 170) = 27.75$, $p < .001$, $\eta^2 = .14$. The pattern of predicted scores from this interaction (see Figure 2) was similar to that for weight teasing.

The interaction involving negative comments did not reach significance, $F(1, 170) = 2.52$, $p = .114$, $\eta^2 = .02$, but its pattern was the same as well. Its lack of statistical significance may be due to the overwhelming influence of the main effect of negative comments, $F(1, 170) = 70.53$, $p < .001$, $\eta^2 = .29$, which on its own accounted for nearly 30% of the variance in body dissatisfaction. Thus, we generally supported the prediction that harmful comments and teasing by parents could hurt children more when they have a close relationship with them.[2]

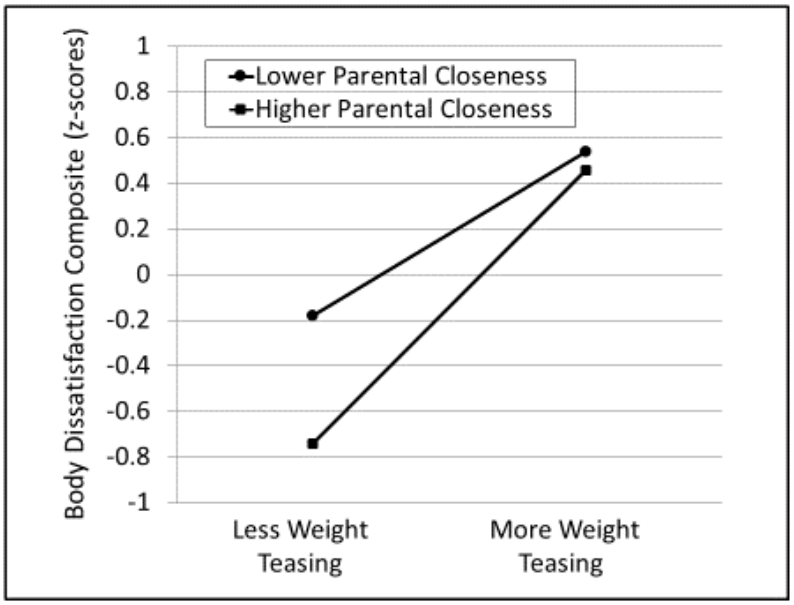

Figure 1. The interactive effects of parental closeness and the quantity of weight/body-related teasing parents did of their children when they were younger. Predicted scores for current body dissatisfaction are plotted one standard deviation below and above the mean on each continuous predictor.

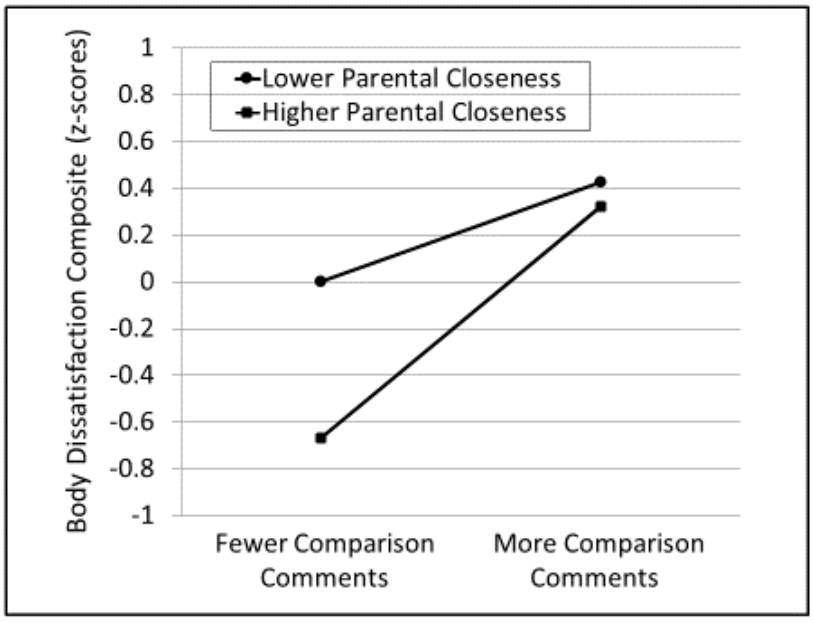

Figure 2. The interactive effects of parental closeness and the quantity of comparison/importance body-related comments parents made toward their children when they were younger. Predicted scores for current body dissatisfaction are plotted one standard deviation below and above the mean on each continuous predictor.

DISCUSSION

Our aim was to investigate the potential role of childhood parenting dynamics in the development of body dissatisfaction in adult women. We found that adult women's body dissatisfaction was correlated with the quality of the parent-child attachment/bond, parental acceptance/rejection, separation anxiety, and body-related parental pressure during childhood, even after controlling for body size.

Our results indicated that, of the parenting variables we assessed, negative comments made by one's primary caregiver(s) during childhood most strongly predicted the development of women's body dissatisfaction in adulthood. One possible explanation is the direct, verbal, and thus explicit nature of negative comments. In accordance with Erik Erikson's (1950) theory, the primary caregiver in a child's life serves as a mirror for the child's feelings, and the child looks to the parent for indicators of how she should feel about herself. Being told things such as, "you look like you've put on weight; you should watch what you eat," communicates that a person must be thin to be desirable and valuable, and that the child's body is not up to standards. These comments may communicate messages that stay with the child until she becomes an adult. This may account for why the other weight/body comments and teasing scales were also consistently related to body dissatisfaction, even when controlling for BMI or self-esteem.

The weakest relationship with body dissatisfaction involved separation anxiety. The separation anxiety measure did not specifically ask participants how their parents treated them, making it qualitatively different from the other parenting measures. Along the same lines, separation anxiety is something that could stem not only from parenting issues, but also from other social and personal issues. Separation anxiety assesses such things as a child's fear of being alone, which could emerge even if a child has warm and accepting parents. The weaker correlation between separation anxiety and the other parental bonding/acceptance measures (see Table 2) supports this notion. Nevertheless, to the best of our knowledge, the present study provided the first evidence yielding a statistically significant relationship between separation anxiety and body dissatisfaction in a non-clinical sample.

A primary goal of the present study was to examine a comprehensive set of parenting variables simultaneously in order to see how much variance in adult women's body dissatisfaction could be accounted for by considering parent-child issues during childhood. In all, we accounted for a sizeable amount (39%) of the variability in body dissatisfaction from the full set of parenting variables, which increased to 48% when also including body mass index. Although we cannot be certain of causation, nor can it be tested directly, we presume that the relationships children have with their parents, and the things that parents say to their children, may have lasting effects on a child's self-image. Perhaps researchers could employ the experimental method to investigate short-term effects of

positive body-related comments by parents on children's body image. If that cause-effect relationship can be established, then it would lend support to the notion that negative comments, teasing, and other parenting dynamics also serve a causal role in the development of body perceptions.

In some cases, these types of effects may be global, possibly affecting children's overall sense of self-worth. Our results supported the notion that general parenting factors relevant to parental attachment/bonding and acceptance, including separation anxiety, may have influenced body dissatisfaction by first influencing global self-esteem. Though, again, causation cannot be known, tests for mediation strongly supported this possibility. Accounting for self-esteem all but eviscerated the relationship between body dissatisfaction and attachment/bonding or acceptance/rejection. Future research examining the parent-child relationship in the context of body image should not overlook the key variable of self-esteem. Self-esteem was not responsible, however, for the relationships between parental comments or teasing by parents on their children's body dissatisfaction in adulthood. Because these parental pressure assessments were specific to weight-related or body-related comments or teasing, it makes sense that their effects would be more domain-specific, influencing body dissatisfaction in particular. It also makes sense that general factors related to the parent-child bond would be more likely to influence general self-perceptions of the child, ultimately impacting more specific self-perceptions as well, including body image.

This study was limited in its use of only female participants. It is not clear whether the same patterns would emerge for college-age men, but if past research is any indicator, one might expect fewer and weaker relationships in a male sample. It would also be fruitful to compare people with and without eating disorders to examine whether the strength of the relationships we observed would be consistent across both types of adults. Another limitation of our study was that we were unable to use body fat percentage as an assessment of body size. Though commonly used, BMI is limited in that it does not distinguish between body mass that is derived from muscle versus fat.

Although necessary to investigate our research questions, there are noteworthy limitations to the retrospective survey design used in the present study, such as its vulnerability to distorted or inaccurate perceptions of self or caregivers. Women may not remember how they were treated, or may have biased recollections depending on their current state of mind. It is possible, for example, that women's current body dissatisfaction and/or self-esteem could have distorted their recollections of how their parents treated them. Surveying parents would have fared no better, given that people tend to evaluate their own behaviors in an overly favorable light (e.g., Taylor & Brown, 1988). Moreover, it is really the perceptions of the daughters that are most important. Parents may not recognize or describe their treatment of their daughters as cold or critical, but if the daughters view it that way, then it could still have negative psychological consequences.

There are numerous parenting variables that were not investigated in the present study. These include more subtle or indirect parental behaviors, such as parental modeling of the importance of weight and weight loss, which may contribute to body issues in their grown children (e.g., Abraczinskas et al., 2012). Our focus was on how parents behave toward their children, rather than how they behave *around* them, but parents may also create a thin-ideal subculture in the home by setting norms for thinness, which could affect their children. For example, body image issues in children have sometimes been associated with parents' own body dissatisfaction (e.g., Rieves & Cash, 1996), dieting behavior (e.g., Rodgers, Chabrol, & Paxton, 2011), and hypersensitivity to their own weight (e.g., Byely, Archibald, Graber, & Brooks-Gunn, 2000; Vincent & McCabe, 2000), as well as with parents' comments regarding TV characters' appearance (Nathanson & Botta, 2003), and with fathers' weight-related comments towards their wives (e.g., Gross & Nelson, 2000). However, such parental modeling effects may have less impact on children's body image than more direct forms of influence, such as comments and teasing (Rodgers & Chabrol, 2009; see also Abraczinskas et al., 2012, and Bardone-Cone et al., 2011, for more complex accounts).

All in all, the present study opens the door to further exploring the role of parenting in body dissatisfaction. The results indicate that what happens to an individual during childhood —particularly what is said to an individual as a child — may have effects that persist into at least early adulthood. Future research could specifically sample older women to see how long these potential effects might last.

Another future research direction could be to investigate the relative influence of hearing negative comments from a child's primary caregiver or from other people in the child's life, such as siblings, friends, teachers, or coaches. If a child grows to become very close with someone, that person, even if not a primary caregiver, could play a key role in the child's self-image development. This is consistent with our findings that greater closeness to one's primary caregiver results in a stronger connection between parental pressure and body dissatisfaction. Although there are benefits to being close to the people in our lives, such closeness also provides those people with more power to hurt us with their words.

With the knowledge gained from this study, we can begin to educate parents and other primary caregivers about the potentially lasting effects that negative weight-related comments may have on children. Although parental pressure regarding weight and weight loss may sometimes be important, as when a child is at an unhealthy weight, parental pressure often exists in the absence of any weight problems (Fulkerson et al., 2002). Thus, parents should be cautioned against putting undue pressure on their children to have an ideal body. Parents could also reinforce healthy behaviors, such as playing sports, without causing children to associate those behaviors with weight or weight-loss goals and without expressing hurtful criticism. It may be hard to influence how parents choose to treat their

children. Fortunately, if negative parental behaviors do, indeed, cause children to develop a negative body image, the children can later take action to offset those effects. A recent experimental study found that a few weeks of self-compassion meditation can reduce body dissatisfaction and body shame in women of various ages (Albertson, Neff, & Dill-Shackleford, 2015). Thus, body images shaped by parental behavior need not be permanent.

It is also hoped that this research can be used to develop a better understanding of our society at a broader level. For example, future research could consider the aspects of our culture that cause parents to make body-related comments to their children in the first place. Parents may certainly be influenced by media images and thus strive to have their children achieve the standards of beauty presented in those images. Because Western culture is individualistic, with a focus on personal competition, parents may also compare and contrast their children with those of others. That could result in the parents pressuring their children to look at least as good as other people's children. Parents may include their children within their own self-concept, so personal competition from an individualistic culture can involve their children's achievements, outcomes, and beauty, as well as their own. Future research can also continue to explore the societal factors that may impede a healthy parent-child bond. Researchers have examined the various effects of such things as parental employment and daycare on the parent-child bond. To the extent that a healthy bond is associated with good outcomes, we might consider how parents can foster it despite daycare and financial needs.

We should also ponder the potential effects of the present issues on the larger society. If parental factors influence self-esteem and body dissatisfaction, then they most likely influence such things as depression and perhaps even suicidal tendencies in their children. Depression is very costly to society, not just in terms of treatment, but also because of co-occurring illness, missed work, and reduced workplace productivity. One estimate is that depression costs American society $210 billion per year (Greenberg, 2015). Part of the cost to society is from suicides. Further exacerbating the influence of suicide on society, various studies in psychology point to the possible contagion of suicide (i.e., copycat suicide), suggesting that one case may lead to another (e.g., Jones, 1992). If preventing the development of low self-esteem and low body dissatisfaction reduces depression, as many researchers would believe, then there may be economic gains, both on a societal and personal level, from parents treating their daughters with more care and less criticism. Thus, this topic of research is relevant not only to psychologists, but also to sociologists and even economists.

Footnotes:

1. The lab participants were given the opportunity to have the experimenter set up a scale for them to weigh themselves in the room anonymously. Although most people know their weight, the scale also assessed body fat percentage, which was requested in the lab-version of the study. To facilitate the process of gathering that information, participants' height was measured upon entering the lab so that the experimenter would be able to set up a body fat scale for them later in the study. However, because many participants opted out of being weighed (despite the fact that they would do it privately) and did not know their body fat percentage, we decided to follow past research and use body mass index (BMI) as a covariate instead of body fat percentage. In the online version of the study that we used for our second batch of data collection, we simply requested participants' height and weight and did not ask them about body fat percentage.

2. Using the same type of GLM analyses, we also examined whether comments/teasing interacted with BMI to influence body dissatisfaction. This was an exploratory analysis based on the notion that larger women may be more impacted by having a history of receiving negative weight-related comments or teasing from the parents. Accordingly, we found significant BMI × weight teasing, $F(1, 170) = 12.12$, $p = .001$, $\eta^2 = .07$, BMI × negative comments, $F(1, 170) = 6.36$, $p = .013$, $\eta^2 = .04$, and BMI × comparison/importance comments, $F(1, 170) = 7.53$, $p = .007$, $\eta^2 = .04$, interactions. Interestingly, though, the pattern for each reflected a stronger relationship between comments/teasing and body dissatisfaction for participants with a lower BMI than those with a higher BMI. Perhaps women with a higher BMI are already inclined to have a poorer body image due to thinness norms in the media, and thus are less affected by the views and pressures that come from others.

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AUTHOR INFORMATION:

Adrienne Kerbs, M.S. received her Master's degree in Clinical Psychology from Eastern Washington University. This research was conducted as part of her thesis requirements. She currently works at an escrow and title insurance company. Address: Ms. Kerbs, 3410 South Loretta Drive, Spokane Valley, WA 99206, USA. Email: adriennefk@gmail.com

Amani El-Alayli, Ph.D. is a Full Professor in the Psychology Department at Eastern Washington University. She received her Doctorate in Social and Personality Psychology from Michigan State University in 2002. Her primary research interests are in the areas of self-concept, distorted self-perceptions, and stereotyping. The resulting collaboration between Ms. Kerbs and Dr. El-Alayli resulted in the development of this project, which integrates clinical, social, health, and developmental psychology, and is relevant to various other disciplines, such as communications, women's studies, social work, health, and sociology. Address: Dr. El-Alayli, 135 Martin Hall, Psychology Department, Cheney, WA 99004, USA. Email: amani@ewu.edu