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The Role of Friends and Peers in Adolescent Body Dissatisfaction:  
A Review and Critique of 15 Years of Research

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**Abstract**

We review the research conducted in the past 15 years concerned with the role of friends and peers in adolescent body dissatisfaction, while drawing from social influence perspectives. Overall, a number of characteristics of friends and peer groups have been associated with heightened body dissatisfaction both concurrently and longitudinally. Most widely studied and more consistently linked to body dissatisfaction are appearance teasing and perceived pressure from friends to be thin. Other interactions between friends and peers that communicate and strengthen appearance ideals and direct attention to appearance also have been associated with greater body dissatisfaction; these include appearance-related conversations, friends' modeling of dieting behavior, and perceptions of friends' appearance-related attitudes. On the positive side, social support from friends was identified as a potential buffer against body dissatisfaction. Finally, the research is critiqued, new directions considered, and strategies are proposed that could be implemented to reduce body dissatisfaction.

*Keywords:* Body Dissatisfaction; Friends; Peers; Adolescent

## **The Role of Friends and Peers in Adolescent Body Dissatisfaction:**

### **A Review and Critique of 15 Years of Research**

Body dissatisfaction among children and adolescents is a perplexing and complicated concern that has attracted increasing research attention due to its high prevalence, and because of the evidence that it is multiply determined and has complex effects on behavior, emotion, mental health, and well-being (Keery, van den Berg, & Thompson, 2004; Levine & Smolak, 2002; Presnell, Bearman, & Stice, 2004; Stice, 2002). Body dissatisfaction often emerges during childhood (McCabe & Ricciardelli, 2003) and peaks in adolescence when many young people are ‘acutely attuned’ to their body weight and shape (Ata, Ludden, & Lally, 2007, pp. 1024; Littleton & Ollendick, 2003). Of all the potential correlates of body dissatisfaction addressed in the literature, interest in the research on peer relationships is probably accelerating the most rapidly. Adolescence marks an increasing amount of time spent with friends and romantic partners in and out of school (Crockett, Losoff, & Petersen, 1984; Zimmer-Gembeck, 1999), and is characterized by increased concern about peer acceptance and greater intimacy with friends (Crockett et al., 1984; Furman & Buhrmester, 1992; Veronneau & Dishion, 2010). Despite recent calls for researchers to focus additional attention in this area (Dishion & Tipsord, 2011; Jones, 2004; Jones, Vigfusdottir, & Lee, 2004), there has been no comprehensive review of recent research that has addressed what particular aspects of friend and peer relationships increase or mitigate adolescent body dissatisfaction. Accordingly, in this review the aim was to summarize what is known about friend and peer influences on body dissatisfaction in adolescents, identify gaps in research, and propose productive paths for new research that can guide effective intervention efforts.

### **Theoretical Background**

Our focus on body dissatisfaction as socially influenced was guided by two theories. First, we drew from Social Identity Theory (Tajfel, 1978; Turner, Hogg, Oakes, Reicher & Wheterel,

1987) to consider how an individual's self concept is derived from his or her perceived membership to a relevant social group (Worchel, Iuzzini, Coutant & Ivaldi, 2000). Social Identity theorists (e.g., Deauz, 2000; Worchel et al., 2000) suggest that self-conceptions are intimately tied to social relationships, being outcomes of exposure to shared group representations, group pressure for uniformity, and participation in group activities that emphasize the shared meaning and representations of the group. Hence, influences from friends and peer groups might come from direct exposure to the body dissatisfaction of others, shared conversations and interactions that promote uniformity in views of the body, and participation in activities that promote body dissatisfaction (e.g., restrictive dieting).

Social Learning Theory (Bandura, 1977) places a more direct focus on learning from others by describing how learning occurs in a social context, principally through experiencing the consequences of elicited behaviors (instrumental learning), and the imitation of others (observational learning; Akers 1998). Social Learning Theory leads us to expect that appearance-related attitudes and behaviors can be strengthened by friends and peers through, for example, imitating others' weight loss behaviors following the observation of desirable outcomes, symbolic sharing of behaviors that have produced or are expected to produce positive outcomes, encouragement or reinforcement from friends, and attempts to avoid the social disapproval associated with failing to meet peer appearance ideals.

### **Aims and Organization of the Review**

The purpose of this review is to identify key characteristics of friend and peer relationships that are linked with adolescent body dissatisfaction. We focused on the past 15 years of research to allow us to include almost all of the relevant research on this topic, and to capture the current state of the evidence where changes may be occurring rapidly given new media sources and changes in adolescents' social relationships (Brown & Bobkowski, 2011; Larson, Wilson, Brown,

Furstenberg & Verma 2002). We organize sections in this review according to the theoretically derived ways that friends and other peer relationships might covary with or affect body dissatisfaction. Hence, we cover victimization, friends' body dissatisfaction, socialization, perceptions of friends' attitudes and behaviors, peer group belonging, and friendship quality. We end with a critique and recommendations for future research.

## **Method**

### **Literature Search**

To identify articles for this review, electronic searches were conducted using PsycINFO and Medline. The search terms were body dissatisfaction, body satisfaction or body image combined with friends, peers, or socio-cultural influences. The reference lists of relevant research articles were searched for additional articles. Each article had to be published in a peer-reviewed journal, with a Western sample, in English, between 1997 and 2012. Although ethnicity is addressed in this review, our focus on Western populations is due to the documented cross-cultural differences in body dissatisfaction and related constructs (Jung & Lee, 2006; Swami et al., 2010), which are beyond the scope of this article. The target date range was selected as it incorporates much of the contemporary research conducted in the body dissatisfaction field. Other inclusion criteria were the mean age of the sample between 10 and 18 years, the article reported the results of analyses of friend or peer influences separately from parent and media influences. Finally, influences must have been examined in relation to body dissatisfaction or a comparable construct, such as body esteem or body image concern (and not for example, appearance preoccupation or disordered eating), because this is the most prevalent issue and it has been argued to be one of the 'most consistent and robust risk and maintenance factors for eating pathology' (Stice, 2002, pp 833).

Fifty-eight articles including 56 independent samples were identified in electronic and subsequent reference list searches; nine were longitudinal, 44 cross-sectional, and five qualitative

(see Table 1). These articles investigated a number of associations between friend or peer influences and body dissatisfaction, including similarity between friends (five articles). Articles also examined body dissatisfaction in association with friends' appearance-related teasing and criticism (19 articles), modeling of weight loss behaviors (10 articles), appearance-related conversations (13 articles), peer pressure (14 articles), anti-dieting encouragement (two articles), social comparison (eight articles), friends' appearance preoccupation (eight articles), perceptions that thinness will improve friendships (six articles), social support and friendship quality (11 articles), and conflict and bullying (four articles). One article was excluded due to unclear results. The Results provide summaries of the findings, and Table 1 presents effect sizes, when available.

### **Definitions of Friends versus Other Peer Relationships**

In the 58 included studies, the terms 'friends' and 'peers' were used in varying ways, with many studies using the term 'peers' to describe both close friends and the wider peer group. However, the importance of differentiating between 'friends', defined as individuals who interact regularly and have a degree of mutual positive liking, and 'peers', defined as encompassing the wider social group of acquaintances, has previously been highlighted for conceptual and empirical reasons (Bukowski, Hoza, & Boivin, 1993; Jones, 2001). As such, when a study used the term 'friend' in their questionnaire or interview, the study will be described (in text and Tables) as targeting friend influences. When a study avoided the term 'friend' (e.g., referring to 'other boys or girls you know'), the study will be described as targeting peer influences. We also noted whether the study specified that friends or peers were of the same- or other-sex, or whether, instead, the target of the study could have been a mixed-gender peer group.

## **Results**

### **Victimization Related to Weight and Appearance**

**Teasing.** Teasing about appearance and weight is the most frequently researched social correlate of adolescent body dissatisfaction. Sixteen studies have focused on appearance and weight teasing, with only two studies failing to find a concurrent association between teasing and body dissatisfaction in girls or boys. Specifically, researchers have shown a consistent association between body dissatisfaction and appearance teasing or criticism by mixed-gender friends and peers (Ata et al., 2007; Eisenberg, Neumark-Sztainer & Story, 2003; Kichler & Crowther, 2009; Lawler & Nixon, 2011; Lunde, Frisen & Hwang, 2006; Lunner et al., 2000), with the association remaining significant even when researchers controlled for a large range of variables (Jones et al., 2004; Paxton et al. 1999; Taylor et al., 1998; Vander Wal & Thelen 2000). In contrast, despite a positive bivariate association between weight teasing and body dissatisfaction in girls, Hutchinson and Rapee (2007) found that the association did not remain significant when controlling for BMI, self-esteem, depression, negative emotionality, psychological constraint, alcohol and cigarette use, friends' concerns with thinness/dieting, perceptions that friends influence own weight beliefs and behaviors, and peer pressure to be thin. Two studies found that appearance or weight teasing from an unspecified source was associated with body dissatisfaction in boys and girls. In both studies, peers were indicated as the primary source of teasing, followed by friends, then family (Barker & Galambos, 2003; Hayden-Wade et al., 2005). Interestingly, a study that employed not only self-reported appearance teasing by peers, but also classmate-reported teasing, found that lower body esteem was associated with higher levels of self-reported and classmate-reported teasing (Lieberman et al., 2001). This result indicates that the link between teasing and body dissatisfaction is not only due to the shared method of self-report across all measures, but that the association holds even when reports of teasing are based on classmates' observations. Two studies found no association between body dissatisfaction in boys or girls and appearance-related criticism from friends, a romantic partner, or peers (Shomaker & Furman, 2009; Vincent & McCabe, 2000).



Three studies have assessed the longitudinal associations, with inconsistent results. Jones (2004) found that appearance teasing by friends in boys and girls did not prospectively predict changes in body dissatisfaction over one year. On the other hand, Paxton and colleagues (2006) found appearance teasing by peers to be linked with greater body dissatisfaction five years later. However, across two studies this relationship was not significant when controlling for a range of influences (Paxton et al., 2006; Helfert & Warschburger, 2011).

In summary, boys and girls who report more teasing about their weight and appearance by their mixed-gender friends or peers show greater concurrent body dissatisfaction. Studies have predominantly assessed teasing by peers rather than friends. In contrast to many other areas of research on body image that find associations are stronger or only exist among girls, these associations between weight or appearance teasing and body dissatisfaction have tended to be stronger in boys (Barker & Galambos, 2003; Eisenberg et al., 2003; Lawler & Nixon, 2011; Paxton et al., 2006). Importantly, there are inconsistencies in terms of whether a longitudinal association exists, and whether the concurrent association remains significant when controlling for other factors. Other weight and body-related measures have been associated with both teasing and body dissatisfaction (e.g., BMI), suggesting that multiple interrelated weight and image concerns are important to consider, perhaps as a third-variable explanation. Future research should consider multivariate pathways and processes that can add to what is currently emerging about the direct and indirect associations between body dissatisfaction and teasing. In fact, across all types of friend and peer influences these multivariate pathways and processes, including those that relate to BMI, are important research targets. In the above studies, no single measured or extraneous variable has been identified as a clear mediator of associations between other measures.

Nevertheless, the reviewed studies suggest that children and adolescents who experience appearance teasing from friends or peers are likely to be more dissatisfied with their bodies

relative to others. In relation to Social Learning Theory, weight and appearance teasing are likely to be poignant negative consequences attributed to an appearance that does not match peers' ideals. Appearance teasing clearly communicates how one's appearance differs from socially accepted appearance ideals, shaping the sufferer's beliefs and internalized standards of beauty, body shape, and body size. One outcome of these experiences is body dissatisfaction, because it is difficult for girls to resist the thin ideal and for both girls and boys to meet standards of body shape and size. Hence, children and adolescents often perceive that they cannot achieve the ideal, and body image concerns can result (Kopp & Zimmer-Gembeck, 2011).

### **Friends' Body Dissatisfaction**

Two processes typically explain the similarity in attitudes and behaviors often seen between friends: selection, the formation of groups on the basis of relevant attitudes and behaviors; and socialization, behavior/attitude change as a result of group membership (Ennett & Bauman, 1994; Fisher & Bauman, 1988). No study has attempted to differentiate selection from socialization when studying dyadic or friendship group influences on body dissatisfaction leaving a gap that could be filled with future research. However, five studies have assessed friend similarity in body dissatisfaction. Four studies (Hutchinson & Rapee, 2007; Farrow, Haycraft, & Meyer, 2011; Paxton, Schutz, Wertheim, & Muir, 1999; Woelders, Larsen, Sholte, Cillessen, & Engels, 2010), obtained independent reports of friends' self-reported body dissatisfaction. In general, these studies suggest that friends are similar in their body dissatisfaction, just as has been found in other domains, including school performance, alcohol, drug and cigarette use, hobbies and interests, and deviant behavior (Ali & Dwyer, 2011; Burgess, Sanderson, & Umana-Aponte, 2011; Kandel, 1978b; Selfhout, Branje, ter Bogt & Meeus, 2009; Urberg, Degirmencioglu & Pilgrim; 1997). However, all studies included girls only, and findings depended on age. Associations between the body dissatisfaction of friends were found in older samples (Paxton et al., 1999; Woelders et al.,

2010), but not when participants were younger than an average age of 13 (Farrow et al., 2011; Hutchinson & Rapee, 2007). Interestingly, Hutchinson and Rapee (2007) found that early adolescent girls within friendship groups were similar in dietary restraint, extreme weight loss behaviors, and binge eating. It is noteworthy that BMI was not consistently controlled for; however the presence or absence of BMI as a control did not differentiate between the studies that did find similarity in body dissatisfaction, and those that did not. Regardless of the findings above, young adolescent girls perceive similarity with their friends, as girls' body dissatisfaction was associated with perceptions of their friends' dissatisfaction (Clark & Tiggemann, 2006).

### **Friendship Socialization**

**Friends' modeling.** The link between body dissatisfaction and modeling of weight loss behaviors by friends or peers has been the focus in two qualitative (Carey et al., 2011; Wertheim et al., 1997), six cross-sectional survey (Blowers et al., 2003; Farrow et al., 2011; Kelly, Wall, Eisenberg, Story, & Neumark-Sztainer, 2005; Lieberman et al., 2001; Page et al., 2006; Vincent & McCabe, 2000), and two longitudinal survey studies (Helfert & Warschburger, 2011; Paxton et al., 2006). In three cross-sectional studies, greater body dissatisfaction was found in early adolescent girls who reported that their friends model dieting or weight loss behaviours (Blowers et al., 2003; Farrow et al., 2011), with the association remaining when controlling for age, BMI, popularity, self-esteem, externalized self-perception, appearance-related attributions, appearance teasing, and social reinforcement (Lieberman et al., 2001). Interestingly, the purpose of dieting may be important, as positive body satisfaction was found to be lower in early adolescent girls who reported that their friends diet to lose weight, and higher in girls who described their friends as caring about exercise and being fit (Kelly et al., 2005). In the one study of dieting among peer groups, European girls, but not boys, who perceived themselves as "too fat" estimated that a higher percentage of same-sex peers at school were dieting to lose weight (Page et al., 2006). This

finding indicates that an individual's appearance concerns may influence estimates of peers' appearance concerns and behaviors, and suggests that researchers need to expand their use of methods beyond self-report assessments of peers' attitudes and behaviors.

Notably, evidence for an association between peers' dieting and body dissatisfaction is weaker when measurement quality is lower. When a single item measure of peer modeling was used, peer modeling of weight loss behaviors did not uniquely account for body dissatisfaction in girls or boys when controlling for relationship quality, and appearance-related conversation, encouragement, and negative commentary from peers and family (Vincent & McCabe, 2000). The univariate association was not reported. The development and use of quality measures is one important area for future research.

Results from two longitudinal studies (Helfert & Warschburger, 2011; Paxton et al., 2006) are less clear. Friends' modeling of dieting behaviours prospectively predicted increased body dissatisfaction over time in early adolescent girls, but not in early or middle adolescent boys, when controlling for individual, parent, and peer influences (Paxton et al., 2006). On the other hand, findings for mid-adolescent girls are mixed, with increased body dissatisfaction over time being demonstrated in one study (Helfert & Warschburger, 2011) but not the other (Paxton et al., 2006).

The two qualitative studies provide adolescents' views that could explain why these associations between friend and peer modeling of dieting behaviour and body dissatisfaction have been found. Adolescent girls have described weight and dieting as a group activity, whereby entire cliques engage in dieting to fit in with others and demonstrate shared commitment to the thin ideal (Carey et al., 2011). However, dieting friends make girls feel concerned about their own weight, and make them feel that they too ought to be dieting (Wertheim et al., 1997).

In summary, modeling of weight loss behaviors may encourage friends to question their own eating or weight, and create an incentive to engage in similar behaviors through creating

expectations of positive results. Appearance concerns may develop from an inability to achieve the thinness ideal that is becoming increasingly difficult to reach (Myers & Crowther, 2007). The results of cross-sectional and longitudinal studies indicate that during early adolescence modeling of dieting behaviors by mixed-gender friends or peers have correlational associations with adolescent girls' body dissatisfaction, both concurrently and longitudinally. Yet, by mid-adolescence, dieting becomes more common, and may not have the impact that it did in earlier years. Alternatively, Paxton and colleagues (2006) proposed that major changes occurring within the friend and peer context from early to middle adolescence may weaken associations between friends' dieting and body dissatisfaction. Furthermore, it is important also to consider the nature of the message being socially transmitted, as body satisfaction may differ according to whether friends are modeling strategies to be thinner or strategies to support good health (Kelly et al., 2005). Finally, modeling of dieting behaviors among males appears to be less common and may have less on boys' body image (e.g., Paxton et al., 2006), but this finding requires replication.

**Friends' conversations about appearance.** Conversations with friends relating to body size and shape, diet, exercise and clothing, have been theorized to heighten awareness of appearance ideals, and increase attention to the body (Jones, 2004), and girls report that their conversations often focus on these issues (Wertheim et al., 1997). In 10 cross-sectional and two longitudinal studies, conversation with friends has been addressed but has been measured in a variety of ways. Despite this variety, findings show a consistent positive association between appearance conversations with friends and body dissatisfaction, concurrently and longitudinally.

Across five studies, greater frequency of conversations with friends that focused on appearance was associated with heightened body dissatisfaction and poorer body esteem (Clark & Tiggemann, 2006, 2007; Jones et al., 2004; Shroff & Thompson, 2006a; Sinton & Birch, 2006). This was found for both girls and boys, but the association was weaker in boys. Lawler and Nixon

(2011) found that appearance conversations with friends were associated with body dissatisfaction in girls but not boys. The same finding was reported by Vincent and McCabe (2000), who also controlled for relationship quality, and appearance-related encouragement, modeling, and negative commentary from peers and family. These gender differences might be explained to some extent by a study that looked more closely at boys' appearance concerns and conversations (Jones & Crawford, 2005). These authors concluded that while girls may show a singular pathway to body dissatisfaction through weight concerns, there might be two pathways among boys: one via weight concerns, and a second pathway via muscularity concerns. In their male sample, Jones and Crawford (2005) found that appearance conversations with friends predicted weight concern, whereas muscle-building conversations predicted muscularity concern. Body dissatisfaction was predicted by weight concern and muscularity concern. Notably, Jones, Bain and King (2008) proposed that weight concerns remain prominent for early adolescent boys, whereas muscularity concerns may become more important as adolescent boys mature. These results highlight the importance of considering constructs and measures relevant to both boys and girls, to provide a clearer understanding of adolescent body image. Thus the gender differences in associations between appearance conversations and body dissatisfaction may reflect a real difference in the degree to which body image in boys and girls is linked with appearance conversation with friends, or they may reflect an assessment bias toward female-oriented attitudes and concerns.

While a consistent association between appearance conversations with friends and body dissatisfaction is evident, two studies (Clark & Tiggemann, 2007; Thompson et al., 2007) found that the significant bivariate association does not remain significant when controlling for other influences, including BMI, age, exposure to appearance TV and magazines, emotional autonomy, appearance schemas, appearance-related attributions, appearance teasing, perceptions that friends influence own appearance-related beliefs, and perceived friend preoccupation with weight/dieting.

Longitudinally, appearance conversations with friends were associated with higher body dissatisfaction, and prospective increases in body dissatisfaction one year later in boys and girls (Blodgett Salafia & Gondoli, 2011; Jones, 2004). The association did not remain significant when Jones (2004) controlled for BMI, peer appearance teasing, perceptions that one's acceptance is dependent on appearance, social comparison, and internalization of appearance ideals.

A specific type of appearance conversation is that of 'fat talk', which is conversing with friends or peers about one's weight or body in a self-disparaging manner (Nichter, 2000). In a qualitative study, girls were found to use emphatically negative terminology to describe themselves, for example, they used the words 'fat', 'thunder thighs', and 'heifers' (Tiggemann, Gardiner, & Slater, 2000). Fat talk predominantly occurs among females, and has been proposed to perform a range of functions, including to express distress, conform to perceived social norms, strengthen group cohesion, elicit emotional support or feedback, to establish sameness (rather than superior thinness) to friends, and to call attention to one's own imperfections before others notice (Britton, Martz, Bazzini, Curtin, & LeaShomb, 2006; Nichter, 2000).

In general, findings indicate that adolescent boys and girls who more frequently engage in appearance conversations with mixed-gender friends report greater body dissatisfaction, both concurrently and longitudinally. This association tends to be stronger in girls, and may be reduced in size after accounting for BMI, other peer relationship factors, and personal attitudes. These findings suggest that appearance conversations with friends are linked indirectly with body dissatisfaction, perhaps via strengthening of personal attitudes/beliefs or internalization of beauty standards that are transmitted through conversation. Talking with friends about dieting, exercise, and clothing appears to influence beliefs about, and investment in appearance, which in turn may impact body dissatisfaction. From a Social Identity perspective, the conversations that occur between members of a social group play a key role in transmitting group norms and behaviors.

Conversations relating to diet, exercise, and clothing are likely to provide a vehicle for sharing and reinforcing the group's appearance-related ideals and representations. Further, Social Learning Theory recognizes that behavior and attitudes can be learned through symbolic sharing of effective actions. The persistent conversational emphasis on unhealthy and narrow appearance ideals between friends, coupled with the use of emphatic terminology appears to be creating an influential interpersonal context.

**Peer pressure to achieve a more ideal body.** Peer pressure is one of the most frequently studied characteristics of friendships and peer groups, with 11 cross-sectional and three longitudinal studies testing associations with adolescent body dissatisfaction. Across seven cross-sectional studies, adolescent boys and girls were less satisfied with their bodies when they perceived more pressure from mixed-gender friends or peers to be thin (Peterson, Paulson, & Williams, 2007; Shomaker & Furman, 2009; Tremblay & Lariviere, 2009), and the association remained significant even when researchers controlled for a large range of sociocultural and individual biological and psychological influences (Dunkley, Wertheim, & Paxton, 2001; Hutchinson & Rapee, 2007; Lieberman et al., 2001; Paxton et al., 1999). Similarly, girls were more dissatisfied with their bodies when they believed friends had an influence on their own ideas about the perfect body and use of weight loss strategies (Shroff & Thompson, 2006), with the relationship remaining significant in over-weight girls, but not average-weight girls, when applying a number of controls. Two studies of Australian adolescents did not find an association (Blowers et al., 2003; Vincent & McCabe, 2000), with Vincent and McCabe (2000) controlling for relationship quality, and appearance-related conversation, modeling, and negative commentary from friends or family. A univariate association was not reported. Notably, these two studies found relatively low levels of pressure from friends or peers compared to other studies.



In two studies, appearance-related pressure from friends was examined more closely by identifying the source (male and female best friends) and/or the type of pressure perceived (lose weight and increase muscle tone). Conflicting findings were found. In the first study (Stanford & McCabe, 2005), body dissatisfaction in boys was associated with perceived pressure to be thin from other-sex best friend, but not same-sex best friend, while in the second study body dissatisfaction in girls and boys was not associated with perceived pressure to lose weight or increase muscles from same-sex or other-sex best friends. Interestingly in this second study, pressure from same-sex best friend to increase muscles uniquely predicted engagement in strategies to increase muscles in boys and girls, whereas pressure from same-sex friend to lose weight uniquely predicted engagement in strategies to lose weight in boys, but not girls (Ricciardelli & McCabe, 2001). It may be that the influence of the source of pressure may differ between adolescents in different locations. In some schools, the attention and perceived pressure from same-sex friends may be particularly salient (as in Ricciardelli & McCabe's study above), while in other schools the schoolyard culture may dictate that other-sex friends are a more salient influence. Moreover, the impact of perceived pressure may also differ. Some adolescents develop body dissatisfaction in association with pressure from friends or peers, while others enlist active and positive strategies to manage this without becoming dissatisfied with their appearance. Researchers might explore concepts such as locus of control, problem solving, or coping styles (e.g., see Furnham & Greaves, 1994; VanBoven & Espelage, 2006) to explain these differences.

The link between perceived pressure to be thin and body dissatisfaction has also been assessed in three longitudinal studies. Early and middle adolescents who experienced greater pressure from friends to be thin reported elevated body dissatisfaction nine and 12 months later (Blodgett Salafia & Gondoli, 2011; Presnell et al., 2004). When controlling for BMI and negative affect, the relationship between perceived pressure from friends to be thin and change in body

dissatisfaction was no longer significant (Presnell et al., 2004). On the other hand, McCabe and Ricciardelli (2005) found that perceived pressure to change one's body (i.e., lose weight or increase muscles) from parents, best male friend, and best female friend was not associated with changes in body dissatisfaction over 16 months in boys or girls. However, the stability of body dissatisfaction and perceived pressure in this sample over 16 months might explain the null result.

In summary, the evidence shows that boys and girls who perceive more pressure from their friends or peers to lose weight, be thin, or strive for the perfect body consistently report greater body dissatisfaction. Also, perceived pressure from friends to lose weight is associated with increases in body dissatisfaction over time for older adolescents. However a unique predictive relationship was not consistently detected, possibly due to the roles of BMI and negative affectivity in accounting for these associations. Social Identity Theory suggests that group pressure to conform to appearance norms is aimed at promoting group congruency, with body dissatisfaction likely resulting from an inability to achieve thinness ideals. Notably, this topic is one in which researchers have considered, and found conflicting findings, regarding the source of social pressure (i.e., same-sex versus other-sex friends), and the potential appearance-related correlate (i.e., body dissatisfaction or adoption of body changing techniques). Further research is needed to identify potential moderators and provide explanations for divergent results.

**Friends' anti-dieting advice.** In contrast to the studies above, which assessed perceived pressure among adolescents to achieve appearance ideals, some adolescents might attempt to discourage friends from dieting. However, two studies based on the same female sample suggest that those who received anti-dieting advice from mixed-gender friends did not show lower body dissatisfaction (Shroff & Thompson, 2006; Thompson et al., 2007). In fact, friends' anti-dieting advice was positively associated with appearance conversations with friends and perceptions that friends are preoccupied with weight/dieting (Shroff & Thompson, 2006). Thus, although very

little research has been conducted, friends' anti-dieting advice may be counter-productive; it may increase attention given to appearances, and facilitate appearance conversation and the recognition of the importance of appearances among friends. These interactions may strengthen dysfunctional body image attitudes and behaviors (Jones, 2004).

**Social appearance comparison.** Drawing from Social Comparison Theory (Festinger, 1954), social appearance comparisons involve comparing qualities of one's own appearance to the appearance of others, for the purpose of self-evaluation (Schutz, Paxton, & Wertheim, 2002). According to Social Identity Theory, individuals tend to compare themselves to others who are similar to the self in some way, and therefore ingroup members are most commonly selected as a comparison source (Worchel et al., 2000). Accordingly, adolescents have been shown to compare themselves to friends and close peers most frequently, with more distal peers, family members and individuals in the media being less frequent, but still important, comparison targets (Jones, 2001; Schutz et al., 2002). Importantly, across six studies adolescent engagement in social comparison with peers and models showed a moderate to strong, positive association with body dissatisfaction (Blowers et al., 2003; Jones, 2001; Jones, 2004; Schutz et al., 2002; Paxton et al., 1999; Vander Wal & Thelen, 2000). These associations remained significant in girls both concurrently (Vander Wal & Thelen, 2000) and longitudinally (Jones, 2004), when controlling for range of influences, including BMI, social anxiety, appearance teasing and conversations, appearance-dependent acceptance and internalized ideals. Notably, social comparison has demonstrated evidence as a mediator of the association between socio-cultural influences and body dissatisfaction (Jones, 2004; Keery et al., 2004; Shroff & Thompson, 2006). Engaging in social comparisons may contribute to body dissatisfaction by highlighting perceived physical deficits (Jones, 2001).

### **Adolescents' Perceptions of their Friends**

**Valuing thinness and preoccupation with appearance.** Nine studies have investigated the link between girls' body dissatisfaction and the belief that friends value attractiveness or are preoccupied with appearance in boys. Overall, results showed that adolescent girls who believe their mixed-gender friends are preoccupied with thinness and dieting, or perceive that their friends place high importance on appearances, report greater body dissatisfaction (Clark & Tiggemann, 2006; Paxton et al., 1999; Schutz & Paxton, 2007; Shroff & Thompson, 2006a; Thompson et al., 2007). Similarly, perceived importance of own body to one's best girlfriend and boyfriend was linked with greater body dissatisfaction (Griffiths & McCabe, 2000). However, these associations do not always remain after controlling for other individual and social influence variables (Griffiths & McCabe, 2000; Hutchinson & Rapee, 2007; Vander Wal & Thelen, 2000). Importantly, Sands and Wardle (2003) found that the association between body dissatisfaction and best girl friends' appearance preoccupation was no longer significant when internalization of appearance ideals (i.e., personal acceptance of society's appearance ideals) was also entered into the analysis, suggesting internalization as a possible mediator.

According to Social Identity Theory, a social group that values thinness and is preoccupied with appearance is likely to expose group members to attitudes and behaviors consistent with these norms, and create pressure for members to adopt similar behavioral and attitudinal patterns. Identification with an appearance-preoccupied social group could encourage concerns about one's own appearance. The results of this review support this theory in girls, however the link between body dissatisfaction and friends' appearance preoccupation has not been examined in boys.

**Achieving acceptance via conforming to the ideal body.** In a qualitative study, mid-adolescent girls reported that being thin is important because they perceive it to impact their acceptance by friends (Mooney, Farley, & Strugnell, 2009). Likewise in another qualitative study, the second most frequent reason for wanting to be thinner (following the influence of models and

the media) was to be attractive and receive more attention (Tiggemann et al., 2000). Across three cross-sectional studies of girls, body dissatisfaction was found to be associated with the perception that thinness would be advantageous to interpersonal relationships, or important for attracting the attention of boys (Schutz & Paxton, 2007; Paxton et al., 1999; Paxton, Norris, Wertheim, Durkin, & Anderson, 2005). These correlations remained significant even when controlling for a large number of individual biological and psychological factors, as well as other friend, family and media influences. The final study employed a longitudinal research design, and found that the belief that acceptance by peers is dependent on appearance was associated with increases in body dissatisfaction over one year in girls, but not in boys (Jones, 2004). However, the association among girls did not remain significant when controlling for BMI, Time 1 body dissatisfaction, appearance conversations and teasing, social comparison, and internalized appearance ideals.

Overall, adolescent girls who believe that their acceptance or liking by same- and other sex-friends is influenced by their appearance are more dissatisfied with their bodies. While studies have shown that adolescents who are rated as more physically attractive are also more popular (i.e., more prominent and well known), they are not necessarily better liked by peers (e.g., Wang, Houshyar, & Prinstein, 2006). Nevertheless, many young people appear to have formed expectancies that attractiveness is rewarded with greater attention and social acceptance, and consequently form the belief that being thinner would be beneficial to their social relationships. Extreme and dysfunctional expectancies are proposed to play a role in the development of an extreme drive for thinness by shaping behaviour and attitudes (Hohlstein, Smith & Atlas, 1998). It follows that body dissatisfaction may also result from an inability to achieve these appearance and social goals.

### **Friendship Quality: Social Support and Conflict**

Although direct communication about body concerns and attractiveness is likely to have the strongest socializing role among adolescents, general quality of friendship may also be relevant to understanding self-concepts and esteem when related to the body.

**Social support.** We located five studies that examined associations of social support and body dissatisfaction, and another five studies that examined friendship quality. It has been hypothesized that social support from friends (i.e., the satisfaction of one's needs for support, information and feedback; Procidano & Heller, 1983) may help defend against socio-cultural pressures and support a more positive body image (Stice & Whitenton, 2002). Three studies support this idea, finding that social support from mixed-gender friends or peers was associated with lower body dissatisfaction in boys and girls, both currently and one and two years later (Ata et al., 2007; Bearman, Presnell, Martinez, & Stice, 2006; Stice, Presnell, & Spangler, 2002). Notably, there were inconsistencies in terms of whether the relationship remained when using a figure-rating assessment of body dissatisfaction, and when controlling for other individual and socio-cultural influences. In contrast to the findings above, two studies did not find associations (Paxton et al., 1999; Shisslak et al., 1998). Targeting social support from friends, compared to the support of peers, did not differentiate studies that did find associations from those that did not.

Five studies reported about associations between adolescents' body dissatisfaction and friendship quality. Lower body dissatisfaction in boys and girls was associated with a stronger sense of trust, sensitivity, and helpfulness from friends (O'Koon, 1997), and higher quality friend and classmate relationships (Holsen, Jones & Skogbrott Birkeland, 2012). In another study, lower body dissatisfaction was associated with higher quality peer relationships in boys but not girls (Vincent & McCabe, 2000). In contrast however, two studies found quality of communication with friends, friendship security, and friendship intimacy were not associated with body

dissatisfaction (Palmqvist & Santavirta, 2006; Schutz & Paxton, 2007). Overall, the relationship between body dissatisfaction and factors relating to friendship quality or support remains unclear.

Caccavale, Farhat and Iannotti (2012) investigated the frequency and ease of interactions with a range of same- and other-sex peers (“social engagement”), and found that body satisfaction was associated with greater social engagement in boys and younger girls. Body satisfaction may be associated with greater self-confidence, with confident youth feeling more at ease in social interactions. On the other hand, social engagement may provide a buffer against negative socio-cultural influences in boys and young girls, whereas older girls show the highest levels of body dissatisfaction and may not benefit from the positive effects of social engagement.

**Negative friendship qualities.** Looking to the other end of the relationship quality spectrum, it has been theorized that negative interactions within friendships and peer groups, such as conflict, may be associated with poorer body image. Across three studies (one including boys), adolescents with higher body dissatisfaction reported more verbal bullying, physical bullying, and social bullying (Fox & Farrow, 2009), conflict with friends and emotional detachment (Schutz & Paxton, 2007), and social exclusion from peers (Lunde, Frisen & Hwang, 2006). Helfert and Warschburger (2011) found that adolescent boys with increasing feelings of appearance-based social exclusion from peers reported increased body dissatisfaction a year later, controlling for BMI, age, and parent, friend and peer influences. This association was not found for girls.

Research shows that friendships early in life can have many benefits, such as promoting happiness through need fulfillment and enhancement of adaptive functioning later in life (Bagwell, Newcomb, & Bukowski, 1998; Demir & Ozdemir, 2010). From a Social Learning perspective, higher quality relationships that provide unconditional reinforcement regardless of appearance could encourage extinction of dysfunctional appearance attitudes. Alternatively however, young people may be especially likely to imitate and learn from friends with whom they have a closer

relationship. Similarly, Social Identity Theory recognizes that identification with a social group fosters adherence to the group's norms, and relationships that are more intimate or that have greater social support are likely to cultivate closer identification with the social group, and will subsequently encourage greater adherence to the group's (potentially unhealthy) norms. It is likely that friendships, even when high quality, can include the transmission of messages that negatively affect body dissatisfaction via comparisons and shared norms about body size and shape. As such, positive friendship quality may moderate associations between risk factors in the friend or peer group and body dissatisfaction, such that the effects are strongest when friendship quality is high. However this hypothesis has not been examined in the reviewed literature.

The results of this review indicate that negative social interactions, such as verbal and physical bullying or social exclusion from mixed-gender friends and peers, may be a risk factor for increased body dissatisfaction, with preliminary longitudinal research suggesting that negative social interactions may lead to subsequent body dissatisfaction. On the other hand however, the evidence was conflicting regarding measures of positive relationship quality. Friendship quality and social support from friends or peers may provide an indication of the overall emotional context of the relationship, but in the reviewed literature they do not show consistent associations with body dissatisfaction. In consideration of the clear and consistent associations demonstrated by the more direct appearance-focused interactions between friends (e.g., appearance teasing, peer pressure and conversations), these broad and multifaceted friendship variables do not appear to be contributing to our understanding of adolescent body dissatisfaction. While protective influences are important and should continue to be a research focus, results of this review suggest that resources would be best targeted to more specific and direct appearance-related interactions between friends. Alternatively, a theoretical framework for conceptualizing the role of the broader



emotional context of friendships in body dissatisfaction may provide a clearer understanding of the findings and guide future research in this area.

### **Ethnicity**

Historically, body dissatisfaction has been believed to differ between ethnic groups within Western countries due to a variation in socio-cultural ideals, values, and influences, with researchers suggesting that White American participants report higher body dissatisfaction than do Black, Hispanic and Asian American individuals, for example (Barry & Grilo, 2002; Claudat, Warren & Durette, 2012; Mintz & Kashubeck, 1999). However, some researchers have challenged the view that meaningful ethnic differences within Western countries currently exist (e.g., Arriaza & Mann, 2001; Grabe & Shibley Hyde, 2006; Shaw, Ramirez, Trost, Randall, & Stice, 2004). In the studies included in this review, researchers have predominantly sampled White adolescents, with the examination of ethnicity effects often precluded by the too small sample of those from minority ethnic backgrounds. Of particular relevant to the aims of this review are two studies that considered how the relationship between body dissatisfaction and friend or peer influences may differ according to ethnicity. In both studies (one in the US and one in Australia), there was no evidence of a difference in associations between ethnic groups (Eisenberg et al., 2003; Lunner et al., 2000).

### **Research Strengths and Limitations**

As can be seen in this review, the past 15 years has seen many friend and peer relationship characteristics examined as correlates of adolescents' body dissatisfaction. A large number of studies have focused on the potential negative influences of adolescent social groups (e.g., Fox & Farrow, 2009; Lunde et al., 2006; Shomaker & Furman, 2009; Taylor et al., 1998; Vander Wal & Thelen, 2000), however in recent years there has been an increase in attention to the ways that friends and peers may be positive and supportive to each other (e.g., O'Koon, 1997; Shisslak et al.,

1998; Stice et al., 2002). The many qualitative and cross-sectional studies in this area have been invaluable because they have described the processes involved in body dissatisfaction and relationships from the view of adolescents, and have identified associations and potential mediational pathways that warrant further investigation and investment. However, the valuable insights provided by the small number of longitudinal studies that have examined the role of friends and peers in shaping body dissatisfaction over time are particularly informative (e.g., Bearman et al., 2006; Jones, 2004; McCabe & Ricciardelli, 2005).

There has also been an improvement in study design and measurement, with most now assessing and accounting for a multitude of other factors when examining associations between friend or peer influences and body dissatisfaction, and using larger sample sizes. Researchers are increasingly attending to body dissatisfaction in males, and making use of measures modified or designed for males (e.g., McCabe & Ricciardelli, 2001; 2005; McCabe, Ricciardelli, & Ridge, 2006). Nevertheless, a common criticism of the body image literature (e.g., McCabe & Ricciardelli, 2001), and one that is still apparent in this review, is the remaining deficiency of research examining male body image, as well as associated concerns and behaviours, such as muscularity preoccupation.

A final point to be raised is in relation to measurement instruments. In terms of the measurement of body dissatisfaction, a figure-rating scale appears to provide an overall indication of an individual's divergence from their ideal size and/or shape, however it is less able to provide more fine-grained body evaluations, relating for example to muscle tone, firmness of flesh, or shape of particular body parts. On the other hand, multiple item questionnaire scales tend to target specific appearance concerns, potentially without capturing overall dissatisfaction with body size/shape. In some studies (e.g., Ata et al., 2007; Dunkley et al., 2001; Vander Wal & Thelen, 2000), researchers have used a multiple item scale in conjunction with a figure-rating scale, likely

to ensure comprehensiveness. It is noteworthy that at times significant results were found for one type of scale but not the other, demonstrating their potential difference and the value of using both. Unfortunately, there was not consistently a discussion of why these differences might occur.

### **Future Research Directions**

In the body of the review we have provided multiple suggestions for future research and we summarize these ideas, as well as additional ideas described below, in Table 2. The first additional suggestion for future research is one that arises regularly, but must be restated here. Future body image research should include both boys and girls. Furthermore, researchers are encouraged to make use of existing scales specifically designed or modified for boys, or to develop new measures that take into account the specific body image and weight management issues that concern boys and men. A number of findings identified in this review were tested in studies of girls but not boys, including similarity in friends' body dissatisfaction, and the association of body dissatisfaction with anti-dieting advice and perceptions of the importance of thinness (or muscularity) to friends. When studying the influence of friends on boys, it will be important to consider gender differences in peer relationships and the features of friendships that may be more or less important to girls compared to boys.

The mutually influential nature of adolescent friendships highlights the importance of examining how friends' body image and associated concerns may be linked. Three studies (Hutchinson & Rapee, 2007; Paxton et al., 1999; Woelders et al., 2010) have provided valuable understanding of how adolescent girls may be similar to their friends in terms of body dissatisfaction and eating behaviors, but longitudinal research that specifically aims to differentiate selection from socialization processes is needed to assist in the understanding of how appearance concerns develop. This research will inform our understanding of the formation and dissolution of friendships in relation to body image attitudes and behavior, and about the process of socialization,

which cannot be determined from cross-sectional designs (Kandel, 1978). Further, these findings could provide valuable guidance to clinicians in their use of adolescent friendships as an intervention platform for body dissatisfaction and related disorders.

Adolescence is a period of development characterized by an increase in interest in the opposite sex (Zimmer-Gembeck, 1999), and yet minimal research was identified in this review that addressed these relationships. Future research could provide greater emphasis on the role of the opposite sex, and romantic relationships in particular, in shaping adolescent body evaluations.

Finally, an area that has strong relevance among young people especially, but which was not addressed in the studies identified in this review, is the area of social media (see O'Keefe et al., 2011). Future research must consider the role of online social contacts, via facebook or twitter for example, in adolescent appearance concerns and behaviours. The direct interactions between individuals, as well as the indirect interactions through commentary, photographs and videos posted by online friends, transmit salient appearance-related messages, ideals and reinforcement.

## **Conclusion**

We have summarized the past 15 years of research that has investigated how friends and peers may influence adolescents' body dissatisfaction and esteem. Our aim was to identify the key characteristics of adolescent social relationships that are consistently linked with body dissatisfaction, and provide a foundation for research that seeks to intervene in the behaviors between friends or peers to reduce body dissatisfaction. Overall it was found that pressure to be thin and appearance teasing from friends were most widely studied and most consistently linked with poorer body dissatisfaction. Further, body dissatisfaction tends to be higher when adolescents are exposed to friends' appearance conversations or weight loss strategies, engage in social comparisons, and when messages between friends convey the importance of thinness and influence beliefs in the importance of appearance for social acceptance. Hence, elevated body

image concerns and dissatisfaction is most likely to be found when an “appearance culture” (Jones, 2004) is created within friend or peer groups via explicit and overt, or even inadvertent, teasing, pressure and exploration of appearance-related issues.

Despite evidence that friend and peer group experiences are associated with body dissatisfaction, there was less consistency in associations when controlling for individual factors (such as BMI), and when examining the links between body dissatisfaction and friendship factors longitudinally. A range of other variables is associated with friendship characteristics and body dissatisfaction, suggesting a complex pattern of influences. BMI is an important biological variable that has a consistent association with body dissatisfaction (Jones et al., 2004) as well as some peer influence variables, such as weight-teasing and pressure to lose weight (Blodgett Salafia et al., 2011; Neumark-Sztainer et al., 2002). However, controlling for BMI did not always reduce the association between peer influence variables and body dissatisfaction to nonsignificance. Overall, these findings suggest that the appearance culture between friends has multiple complex associations with body dissatisfaction. This complex pattern is beginning to be explored but much remains unclear, making it an important arena for continued research.

A number of recommendations can be formed in relation to the treatment or prevention of body dissatisfaction. A greater understanding by friends, parents, teachers, and practitioners of the ways in which adolescents are directly and inadvertently influenced through their interactions with friends may assist in reducing body dissatisfaction. It would be beneficial for an adolescent’s social contacts to understand how appearance-focused exchanges - even those aimed at encouraging a friend *not* to diet - increases attention given to appearance, reinforces appearance ideals, creates pressure for conformity, and subsequently may foster body dissatisfaction. Adolescent relationships are an influential learning context in which social approval is a salient reward, and disapproval is a poignant negative consequence. The results of this review suggest

that body image attitudes may be improved through teaching adolescents specific strategies to break their acceptance of, and beliefs that popularity or social liking depends on attractiveness. Further, existing strategies used to defend against bullying could be used similarly to defend against appearance teasing. Finally, adolescents should be educated about, and encouraged to create a culture within their friendships that is not appearance-focused. Identification with a friendship group that is preoccupied with thinness is likely to result in greater exposure to thin ideals and to activities that support and emphasize the thin ideal, creating pressure for uniformity among members. It would be beneficial to focus instead on adaptive and functional areas (e.g., creativity, interpersonal skills, active leisure activities for fun and fitness), reducing the attention given to superficial physical attributes (e.g., dieting, clothing, body shape), and resisting overt and covert pressures to conform to unhealthy appearance standards. The potential benefits of making use of, and addressing issues within friend and peer groups in prevention efforts was raised nearly two decades ago (Paxton, 1996). Since then, clinical research targeting some of these social risk factors, or making use of the adolescent social environment has progressed, with preliminary findings supporting the call for further applied research in this area (Richardson & Paxton, 2010; Steese et al., 2006; Thompson, Russell-Mayhew & Saraceni, 2012).

## References

\*Papers included in the review, see Table 1

Ali, M. M., & Dwyer, D. S. (2011). Estimating peer effects in sexual behavior among adolescents.

*Journal of Adolescence, 34*, 183-190.

Akers, R. L. (1998). *Social learning and social structure: A general theory of crime and deviance*.

Boston: Northeastern University Press.

Arriaza, C. A., & Mann, T. (2001). Ethnic differences in eating disorder symptoms among college

students: The confounding role of body mass index. *Journal of American College Health,*

*49*, 309–315. doi: 10.1080/07448480109596317

\*Ata, R. N., Ludden, A. B., & Lally, M. M. (2007). The effects of gender and family, friend, and

media influences on eating behaviors and body image during adolescence. *Journal of Youth*

*and Adolescence, 36*, 1024–1037. doi: 10.1007/s10964-006-9159-x

Bagwell, C. L., Newcomb, A. F., & Bukowski, W. M. (1998). Preadolescent friendship and peer

rejection as predictors of adult adjustment. *Child Development, 69*, 140–153.

doi: 10.1111/j.1467-8624.1998.tb06139.x

Bandura, A. (1977). *Social Learning Theory*. Englewood Cliffs, NJ: Prentice Hall.

\*Barker, E. T., & Galambos, N. L. (2003). Body dissatisfaction of adolescent girls and boys: Risk

and resource factors. *The Journal of Early Adolescence, 23*, 141–165.

doi: 10.1177/0272431603023002002

Barry, D. T., & Grilo, C. M. (2002). Eating and body image disturbances in adolescent psychiatric

inpatients: Gender and ethnicity patterns. *International Journal of Eating Disorders, 32*,

335–343. doi: 10.1002/eat.10082

- \*Bearman, S. K., Presnell, K., Martinez, E., & Stice, E. (2006). The skinny on body dissatisfaction: A longitudinal study of adolescent girls and boys. *Journal of Youth and Adolescence*, *35*, 229–241. doi: 10.1007/s10964-005-9010-9
- \*Blodgett Salafia, E. H., & Gondoli, D. M. (2011). A 4-year longitudinal investigation of the processes by which parents and peers influence the development of early adolescent girls' bulimic symptoms. *Journal of Early Adolescence*, *31*, 390–414.  
doi: 10.1177/0272431610366248
- \*Blowers, L. C., Loxton, N. J., Grady-Flessner, M., Occhipinti, S., & Dawe, S. (2003). The relationship between sociocultural pressure to be thin and body dissatisfaction in preadolescent girls. *Eating Behaviors*, *4*, 229–244. doi: 10.1016/S1471-0153(03)00018-7
- Britton, L. E., Martz, D. M., Bazzini, D. G., Curtin, L. A., & LeaShomb, A. (2006). Fat talk and self-presentation of body image: Is there a social norm for women to self-degrade? *Body Image*, *3*, 247–254. doi:10.1016/j.bodyim.2006.05.006
- Brown, J. D., & Bobkowski, P. S. (2011). Older and newer media: Patterns of use and effects on adolescents' health and well-being. *Journal of Research on Adolescence*, *21*, 95–113. doi: 10.1111/j.1532-7795.2010.00717.x
- Burgess, S., Sanderson, E., & Umana-Aponte, M. (2011). School ties: An analysis of homophily in an adolescent friendship network. *University of Bristol*. Retrieved from <http://www.bristol.ac.uk/cmpo/publications/papers/2011/wp267.pdf>
- Bukowski, W. M., Hoza, B., & Boivin, M. (1993). Popularity, friendship, and emotional adjustment during early adolescence. *New Directions for Child Development*, *60*, 23–37.  
doi: 10.1002/cd.23219936004



- \*Carey, R. N., Donaghue, N., & Broderick, P. (2011). 'What you look like is such a big factor': Girls' own reflections about the appearance culture in an all-girls' school. *Feminism & Psychology, 21*, 299–316. doi: 10.1177/0959353510369893
- \*Clark, L., & Tiggemann, M. (2006). Appearance culture in nine- to 12-year-old girls: Media and peer influences on body dissatisfaction. *Social Development, 15*, 628–643. doi: 10.1111/j.1467-9507.2006.00361.x
- \*Clark, L., & Tiggemann, M. (2007). Sociocultural influences and body image in 9- to 12-year-old girls: The role of appearance schemas. *Journal of Clinical Child & Adolescent Psychology, 36*, 76–86. doi: 10.1080/15374410709336570
- Claudat, K., Warren, C. S., & Durette, R. B. (2012). The relationships between body surveillance, body shame, and contextual body concern during sexual activities in ethnically diverse female college students. *Body Image, 9*, 448–454. doi: 10.1016/j.bodyim.2012.05.007
- Crockett, L., Losoff, M., & Petersen, A. C. (1984). Perceptions of the peer group and friendship in early adolescence. *The Journal of Early Adolescence, 4*, 155–181. doi: 10.1177/0272431684042004
- Demir, M., & Ozdemir, M. (2010). Friendship, need satisfaction and happiness. *Journal of Happiness Studies, 11*, 243–259. doi: 10.1007/s10902-009-9138-5
- Dishion, T. J., & Tipsord, J. M. (2011). Peer contagion in child and adolescent social and emotional development. *Annual Review of Psychology, 62*, 189–214. doi: 10.1146/annurev.psych.093008.100412
- \*Dunkley, T. L., Wertheim, E. H., & Paxton, S. J. (2001). Examination of a model of multiple sociocultural influences on adolescent girls' body dissatisfaction and dietary restraint. *Adolescence, 36*, 265–279.

- \*Eisenberg, M. E., Neumark-Sztainer, D., & Story, M. (2003). Associations of weight-based teasing and emotional well-being among adolescents. *Archives of Pediatrics & Adolescent Medicine, 157*, 733-738. doi: 10.1001/archpedi.157.8.733
- Ennett, S. T., & Bauman, K. E. (1994). The contribution of influence and selection to adolescent peer group homogeneity: The case of adolescent cigarette smoking. *Journal of Personality and Social Psychology, 67*, 653–663. doi: 10.1037/0022-3514.67.4.653
- \*Farrow, C., Haycraft, E., & Meyer, C. (2011). Similarities between eating attitudes among friendship groups. *Journal of Pediatric Psychology, 36*, 1144–1152. doi: 10.1093/jpepsy/jsp105
- Fisher, L. A., & Bauman, K. E. (1988). Influence and selection in the friend-adolescent relationship: Findings from studies of adolescent smoking and drinking. *Journal of Applied Social Psychology, 18*, 289–314. doi: 10.1111/j.1559-1816.1988.tb00018.x
- \*Fox, L. C., & Farrow, C. V. (2009). Global and physical self-esteem and body dissatisfaction as mediators of the relationship between weight status and being a victim of bullying. *Journal of Adolescence, 32*, 1287–1301. doi: 10.1016/j.adolescence.2008.12.006
- Furman, W., & Buhrmester, D. (1992). Age and sex differences in perceptions of networks of personal relationships. *Child Development, 63*, 103–115. doi: 10.1111/j.1467-8624.1992.tb03599.x
- Grabe, S., & Shibley Hyde, J. (2006). Ethnicity and body dissatisfaction among women in the United State: A meta-analysis. *Psychological Bulletin, 132*, 622–640. doi: 10.1037/0033-2909.132.4.622
- \*Griffiths, J. A., & McCabe, M. P. (2000). The influence of significant others on disordered eating and body dissatisfaction among early adolescent girls. *European Eating Disorders Review, 8*, 301–314. doi: 10.1002/1099-0968(200008)8:4<301::AID-ERV357>3.0.CO;2-C

- \*Hayden-Wade, H. A., Stein, R. I., Ghaderi, A., Saelens, B. E., Zabinski, M. F., & Wilfley, D. E. (2005). Prevalence, characteristics, and correlates of teasing experiences among overweight children vs. non-overweight peers. *Obesity Research, 13*, 1381–1392. doi: 10.1038/oby.2005.167
- \*Helfert, S., & Warschburger, P. (2011). A prospective study on the impact of peer and parental pressure on body dissatisfaction in adolescent girls and boys. *Body Image, 8*, 101–109. doi: 10.1016/j.bodyim.2011.01.004
- \*Holsen, I., Jones, D. C., & Skogbrott Birkeland, M. (2012). Body image satisfaction among Norwegian adolescents and young adults: A longitudinal study of the influence of interpersonal relationships and BMI. *Body Image, 9*, 201–208. doi: 10.1016/j.bodyim.2012.01.006
- Hohlstein, L. A., Smith, G. T., & Atlas, J. G. (1998). An application of expectancy theory to eating disorders: Development and validation of measures of eating and dieting expectancies. *Psychological Assessment, 10*, 49–58. doi: 10.1037/1040-3590.10.1.49
- \*Hutchinson, D. M., & Rapee, R. M. (2007). Do friends share similar body image and eating problems? The role of social networks and peer influences in early adolescence. *Behavior Research and Therapy, 45*, 1557–1577. doi: 10.1016/j.brat.2006.11.007
- \*Jones, D. C. (2001). Social comparison and body image: Attractiveness comparisons to models and peers among adolescent girls and boys. *Sex Roles, 45*, 645–664. doi: 10.1023/A:101481572585
- \*Jones, D. C. (2004). Body image among adolescent girls and boys: A longitudinal study. *Developmental Psychology, 40*, 823–835. doi: 10.1037/0012-1649.40.5.823

- Jones, D. C., Bain, N., & King, S. (2008). Weight and muscularity concerns as longitudinal predictors of body image among early adolescent boys: A test of the dual pathways model. *Body Image, 5*, 195–204. doi: 10.1016/j.bodyim.2007.12.001
- \*Jones, D. C., & Crawford, J. K. (2005). Adolescent boys and body image: Weight and muscularity concerns as dual pathways to body dissatisfaction. *Journal of Youth and Adolescence, 34*, 629–636. doi: 10.1007/s10964-005-8951-3
- \*Jones, D. C., Vigfusdottir, T. H., & Lee, Y. (2004). Body image and the appearance culture among adolescent girls and boys: An examination of friend conversations, peer criticism, appearance magazines, and the internalization of appearance ideals. *Journal of Adolescent Research, 19*, 323–339. doi: 10.1177/0743558403258847
- Jung, J., & Lee, S. (2006). Cross-cultural comparisons of appearance self-schema, body image, self-esteem, and dieting behavior between Korean and U.S. women. *Family and Consumer Sciences Research Journal, 34*, 350–365. doi: 10.1177/1077727X06286419
- Kandel, D. B. (1978). Homophily, selection, and socialization in adolescent friendships. *The American Journal of Sociology, 84*, 427–436.
- Kandel, D. B. (1978b). Similarity in real-life adolescent friendship pairs. *Journal of Personality and Social Psychology, 36*, 306–312. doi: 10.1037/0022-3514.36.3.306
- \*Keery, H., van den Berg, P., & Thompson, J. K. (2004). An evaluation of the Tripartite Influence Model of body dissatisfaction and eating disturbance with adolescent girls. *Body Image, 1*, 237–251. doi: 10.1016/j.bodyim.2004.03.001
- \*Kelly, A. M., Wall, M., Eisenberg, M. E., Story, M., & Neumark-Sztainer, D. (2005). Adolescent girls with high body satisfaction: who are they and what can they teach us? *Journal of Adolescent Health, 37*, 391–396. doi: 10.1016/j.jadohealth.2004.08.008

- \*Kichler, J. C., & Crowther, J. H. (2009). Young girls' eating attitudes and body image dissatisfaction: Associations with communication and modeling. *Journal of Early Adolescence, 29*, 212–232. doi: 10.1177/0272431608320121
- Kobus, K. (2003). Peers and adolescent smoking. *Addiction, 98*, 37–55. doi: 10.1046/j.1360-0443.98.s1.4.x
- Kopp, L., & Zimmer-Gembeck, M. J. (2011). Resisting the thin ideal and access to autonomy support: Women's global self-determination, body dissatisfaction and eating. *Eating Behaviors, 2*, 222-224.
- Larson, R. W., Wilson, S., Brown, B. B., Furstenberg, F. F., & Verma, S. (2002). Changes in adolescents' interpersonal experiences: Are they being prepared for adult relationships in the twenty-first century. *Journal of Research on Adolescence, 12*, 31–68. doi: DOI: 10.1111/j.1532-7795.2010.00717.x
- \*Lawler, M., & Nixon, E. (2011). Body dissatisfaction among adolescent boys and girls: The effects of body mass, peer appearance culture and internalization of appearance ideals. *Journal of Youth Adolescence, 40*, 59–71. doi: 10.1007/s10964-009-9500-2
- Levine, M. P., & Smolak, L. (2002). Body image development in adolescence. In T. F. Cash & T. Pruzinsky (Eds.), *Body image: A handbook of theory, research, and clinical practice* (pp. 74-90). New York: Guilford Press.
- \*Lieberman, M., Gauvin, L., Bukowski, W. M., & White, D. R. (2001). Interpersonal influence and disordered eating behaviors in adolescent girls: The role of peer modeling, social reinforcement, and body-related teasing. *Eating Behaviors, 2*, 215–236. doi: 10.1016/S1471-0153(01)00030-7

- Littleton, H. L., & Ollendick, T. (2003). Negative body image and disordered eating behavior in children and adolescents: What places youth at risk and how can these problems be prevented? *Clinical Child and Family Psychology Review*, 6, 51–66.  
doi: 10.1023/A:1022266017046
- \*Lunde, C., Frisen, A., & Hwang, C. P. (2006). Is peer victimization related to body esteem in 10-year-old girls and boys? *Body Image*, 3, 25–33. doi: 10.1016/j.bodyim.2005.12.001
- \*Lunner, K., Wertheim, E. H., Thompson, J. K., Paxton, S. J., McDonald, F., & Halvaarson, K. S. (2000). A cross-cultural examination of weight-related teasing, body image, and eating disturbance in Swedish and Australian samples. *International Journal of Eating Disorders*, 28, 430–435. doi: 10.1002/1098-108X(200012)28:4<430::AID-EAT11>3.0.CO;2-Y
- McCabe, M. P., & Ricciardelli, L. A. (2001). Parent, peer, and media influences on body image and strategies to both increase and decrease body size among adolescent boys and girls. *Adolescence*, 36, 225–240.
- McCabe, M. P., & Ricciardelli, L. A. (2003). Body image and strategies to lose weight and increase muscle among boys and girls. *Health Psychology*, 22, 39–46. doi: 10.1037/0278-6133.22.1.39
- \*McCabe, M. P., & Ricciardelli, L. A. (2005). A prospective study of pressures from parents, peers, and the media on extreme weight change behaviors among adolescent boys and girls. *Behavior Research and Therapy*, 43, 653–668. doi: 10.1016/j.brat.2004.05.004
- \*McCabe, M. P., Ricciardelli, L. A., & Ridge, D. (2006). “Who thinks I need a perfect body?” Perceptions and internal dialogue among adolescents about their bodies. *Sex Roles*, 55, 409–419. doi: 10.1007/s11199-006-9093-0
- \*Meyer, T. A., & Gast, J. (2008). The effects of peer influence on disordered eating behavior. *The Journal of School Nursing*, 24, 36–42. doi: 10.1177/10598405080240010601

Mintz, L. B., & Kashubeck, S. (1999). Body image and disordered eating among Asian American and Caucasian college students: An examination of race and gender differences.

*Psychology of Women Quarterly*, 23, 781–796. doi: 10.1111/j.1471-6402.1999.tb00397.x

\*Mooney, E., Farley, H., & Strugnell, C. (2009). A qualitative investigation into the opinions of adolescent females regarding their body image concerns and dieting practices in the Republic of Ireland (ROI). *Appetite*, 52, 485–491. doi: 10.1016/j.appet.2008.12.012

Nichter, M. (2000). *Fat talk*. Cambridge, MA: Harvard University Press.

O’Keeffe, G. S., Clarke-Pearson, K., & Council on Communications and Media (2011). The impact of social media on children, adolescents, and families. *American Academy of Pediatrics*, 127, 800–804. doi: 10.1542/peds.2011-0054

\*O’Koon, J. (1997). Attachment to parents and peers in late adolescence and their relationship with self-image. *Adolescence*, 32, 471–482.

\*Page, R. M., Ihasz, F., Uvacsek, M., Kalabiska, I., Johnson, E., Hantiu, I., Klarova, R., Simonek, J. (2006). Self-perception of body weight, weight management practices and goals, and other weight-related factors in central and eastern European adolescents. *International Quarterly of Community Health Education*, 27, 39-58. doi: 10.2190/IQ.27.1.d

\*Palmqvist, R., & Santavirta, N. (2006). What friends are for: The relationships between body image, substance use, and peer influence among Finnish adolescents. *Journal of Youth and Adolescence*, 35, 203–217. doi: 10.1007/s10964-005-9017-2

\*Paxton, S. J., Eisenberg, M. A., & Neumark-Sztainer, D. (2006). Prospective predictors of body dissatisfaction in adolescent girls and boys: A five-year longitudinal study. *Developmental Psychology*, 42, 888–899. doi: 10.1037/0012-1649.42.5.888

- \*Paxton, S. J., Norris, M., Wertheim, E. H., Durkin, S. J., & Anderson, J. (2005). Body dissatisfaction, dating, and importance of thinness to attractiveness in adolescent girls. *Sex Roles, 53*, 663–675. doi: 10.1007/s11199-005-7732-5
- \*Paxton, S. J., Schutz, H. K., Wertheim, E. H., & Muir, S. L. (1999). Friendship clique and peer influences on body image concerns, dietary restraint, extreme weight-loss behaviors, and binge eating in adolescent girls. *Journal of Abnormal Psychology, 108*, 255–266. doi: 10.1037/0021-843X.108.2.255
- \*Peterson, K. A., Paulson, S. E., & Williams, K. K. (2007). Relations of eating disorder symptomology with perceptions of pressures from mother, peers, and media in adolescent girls and boys. *Sex Roles, 57*, 629–639. doi: 10.1007/s11199-007-9296-z
- \*Presnell, K., Bearman, S. K., & Stice, E. (2004). Risk factors for body dissatisfaction in adolescent boys and girls: A prospective study. *International Journal of Eating Disorders, 36*, 389–401. doi: 10.1002/eat.20045
- \*Ricciardelli, L. A., & McCabe, M. (2001). Self-esteem and negative affect as moderators of sociocultural influences on body dissatisfaction, strategies to decrease weight, and strategies to increase muscles among adolescent boys and girls. *Sex Roles, 44*, 189–207. doi: 10.1023/A:1010955120359
- \*Sands, E. R., & Wardle, J. (2003). Internalization of ideal body shapes in 9–12-year-old girls. *International Journal of Eating Disorders, 33*, 193–204. doi: 10.1002/eat.10121
- \*Schutz, H. K., & Paxton, S. J. (2007). Friendship quality, body dissatisfaction, dieting and disordered eating in adolescent girls. *British Journal of Clinical Psychology, 46*, 67–83. doi: 10.1348/014466506X115993
- \*Schutz, H. K., Paxton, S. J., & Wertheim, E. H. (2002). Investigation of body comparison among adolescent girls. *Journal of Applied Social Psychology, 32*, 1906–1937.



doi: 10.1111/j.1559-1816.2002.tb00264.x

Selfhout, M. H. W. Branje, S. J. T., ter Bogt, T. F. M., & Meeus, W. H. J. (2009). The role of music preferences in early adolescents' friendship formation and stability. *Journal of Adolescence*, 32, 95–107. doi:10.1016/j.adolescence.2007.11.004

Shaw, H., Ramirez, L., Trost, A., Randall, P., & Stice, E. (2004). Body image and eating disturbances across ethnic groups: More similarities than differences. *Psychology of Addictive Behaviors*, 18, 12–18. doi: 10.1037/0893-164X.18.1.12

\*Shisslak, C. M., Crago, M., McKnight, K. M., Estes, L. S., Gray, N., & Parnaby, O. G. (1998). Potential risk factors associated with weight control behaviors in elementary and middle school girls. *Journal of Psychosomatic Research*, 44, 301–313. doi: 10.1016/S0022-3999(97)00256-0,

\*Shomaker, L. B., & Furman, W. (2009). Interpersonal influences on late adolescent girls' and boys' disordered eating. *Eating Behaviors*, 10, 97–106. doi: 10.1016/j.eatbeh.2009.02.003

\*Shroff, H., & Thompson, J. K. (2006). Peer influences, body-image dissatisfaction, eating dysfunction and self-esteem in adolescent girls. *Journal of Health Psychology*, 11, 533–551. doi: 10.1177/1359105306065015

\*Sinton, M. M., & Birch, L. L. (2006). Individual and sociocultural influences on pre-adolescent girls' appearance schemas and body dissatisfaction. *Journal of Youth and Adolescence*, 35, 165–175. doi: 10.1007/s10964-005-9007-4

\*Stanford, J. N., & McCabe, M. P. (2005). Sociocultural influences on adolescent boys' body image and body change strategies. *Body Image*, 2, 105–113.  
doi: 10.1016/j.bodyim.2005.03.002

Steese, S., Dollette, M., Phillips, W., Hossfeld, E., Matthews, G., & Taormina, G. (2006).

Understanding girls' circle as an intervention on perceived social support, body image, self-efficacy, locus of control and self-esteem. *Adolescence*, *41*, 55–74.

Stice, E. (2002). Risk and maintenance factors for eating pathology: A meta-analytic review.

*Psychological Bulletin*, *128*, 825–848. doi: 10.1037/0033-2909.128.5.825

\*Stice, E., Presnell, K., & Spangler, D. (2002). Risk factors for binge eating onset in adolescent

girls: A 2-year prospective investigation. *Health Psychology*, *21*, 131–138. doi:

10.1037/0278-6133.21.2.131

Stice, E., & Whitenton, K. (2002). Risk factors for body dissatisfaction in adolescent girls: A

longitudinal investigation. *Developmental Psychology*, *38*, 669–678. doi: 10.1037/0012-

1649.38.5.669

Swami, V., Frederick, D. A., Aavik, T., Alcalay, L., Allik, J., Anderson, D.,... & Zivcic-Becirevic.

(2010). The attractive female body weight and female body dissatisfaction in 26 countries across 10 world regions: Results of the International Body Project I. *Personality and Social Psychology Bulletin*, *36*, 309–325. doi: 10.1177/0146167209359702

*Personality and Social Psychology Bulletin*, *36*, 309–325. doi: 10.1177/0146167209359702

Tajfel, H. (1978). *Differentiation between social groups*. San Diego, CA: Academic Press.

\*Taylor, C. B., Sharpe, T., Shisslak, C., Bryson, S., Estes, L. S., Gray, N., McKnight, K. M.,

Crago, M., Kraemer, H. C., & Killen, J. D. (1998). Factors associated with weight concerns in adolescent girls. *International Journal of Eating Disorders*, *24*, 31–42.

doi: 10.1002/(SICI)1098-108X(199807)24:1<31::AID-EAT3>3.0.CO;2-1

Thompson, C., Russell-Mayhew, S., & Saraceni, R. (2012). Evaluating the effects of a peer-

support model: Reducing negative body esteem and disordered eating attitudes and

behaviours in grade eight girls. *Eating Disorders*, *20*, 113–126.

doi: 10.1080/10640266.2012.653946

\*Thompson, J. K., Shroff, H., Herbozo, S., Cafri, G., Rodriguez, J., Rodriguez, M. (2007).

Relations among multiple peer influences, body dissatisfaction, eating disturbance, and self-esteem: A comparison of average weight, at risk of overweight, and overweight adolescent girls. *Journal of Pediatric Psychology*, *32*, 24–29. doi: 10.1093/jpepsy/jsl022

\*Tiggemann, M., Gardiner, M., & Slater, A. (2000). “I would rather be size 10 than have straight A’s”: A focus group study of adolescent girls’ wish to be thinner. *Journal of Adolescence*, *23*, 645–659. doi: 10.1006/jado.2000.0350

\*Tremblay, L., & Lariviere, M. (2009). The influence of puberty onset, Body Mass Index, and pressure to be thin on disordered eating behaviors in children and adolescents. *Eating Behaviors*, *10*, 75–83. doi: 10.1016/j.eatbeh.2008.12.001

Turner, J. C., Hogg, M. A., Oakes, P. J., Reicher, S. D., & Wetherell, M. S. (1987). *Rediscovering the social group: A self-categorization theory*. Oxford, UK: Blackwell.

Urberg, K. A., Degirmencioglu, S. M., & Pilgrim, C. (1997). Close friend and group influence on adolescent cigarette smoking and alcohol use. *Developmental Psychology*, *33*, 834–844. doi: 10.1037/0012-1649.33.5.834

\*Vander Wal, J. S., & Thelen, M. H. (2000). Predictors of body image dissatisfaction in elementary-age school girls. *Eating Behaviors*, *1*, 105–122. doi: 10.1016/S1471-0153(00)00011-8

Veronneau, M., & Dishion, T. J. (2010). Predicting change in early adolescent problem behavior in the middle school years: A mesosystemic perspective on parenting and peer experiences. *Journal Abnormal Child Psychology*, *38*, 1125–1137. doi: 10.1007/s10802-010-9431-0

\*Vincent, M. A., & McCabe, M. P. (2000). Gender differences among adolescents in family, and peer influences on body dissatisfaction, weight loss, and binge eating behaviors. *Journal of Youth and Adolescence*, *29*, 205–221. doi: 10.1023/A:1005156616173

- Wang, S. S., Houshyar, S., & Prinstein, M. J. (2006). Adolescent girls' and boys' weight-related health behaviors and cognitions: Associations with reputation- and preference-based peer status. *Health Psychology, 25*, 658–663. doi: 10.1037/0278-6133.25.5.658
- \*Wertheim, E. H., Paxton, S. J., Schutz, H. K., & Muir, S. L. (1997). Why do adolescent girls watch their weight? An interview study examining sociocultural pressures to be thin. *Journal of Psychosomatic Research, 42*, 345–355. doi: 10.1016/S0022-3999(96)00368-6
- \*Woelders, L. C. S., Larsen, J. K., Sholte, R. H. J., Cillessen, A. H. N., & Engels, R. C. M. E. (2010). Friendship group influences on body dissatisfaction and dieting among adolescent girls: A prospective study. *Journal of Adolescent Health, 47*, 456–462. doi: 10.1016/j.jadohealth.2010.03.006
- Worchel, S., Iuzzini, J., Coutant, D., & Ivaldi, M. (2000). A multidimensional model of identity: Relating individual and group identities to intergroup behavior. In D. Capozza & R. Brown (Eds.), *Social identity processes: Trends in theory and research* (pp. 15-32). London: Sage.
- Zimmer-Gembeck, M. J. (1999). Stability, change, and individual differences in involvement with friends and romantic partners among adolescent females. *Journal of Youth and Adolescence, 28*, 419–438. doi: 10.1023/A:1021612907073

Table 1

*Description of Studies, Results and Effect Sizes*

Authors (year)	Sample ( $M_{age}$ )	Friend/peer measure	Outcome	Effect size
Ata et al. (2007) <i>United States</i>	Mid – late adol. boys & girls (15.8 years)	Appearance teasing – friends	Body weight less than ideal, rather than greater than ideal, controlling for pressure to lose weight or gain muscle from family, friends, and media	$r = -.15, p < .05$
		Social/emotional support – friends	Higher body-esteem, controlling for general self-esteem, parental social and emotional support, weight teasing from peers and family, and pressure to lose weight or gain muscle from peers, family, and the media	$\beta = .13, p < .05$
		Social/emotional support – friends	No association with figure rating discrepancy, controlling for general self-esteem, parental social and emotional support, weight teasing from peers and family, and pressure to lose weight or gain muscle from peers, family, and the media	$\beta = -.05, p > .05$
Barker & Galambos (2003) <i>Canada</i>	Mid adol. boys (14.3 years)	Appearance teasing – source unspecified	Higher body dissatisfaction, controlling for BMI, pubertal status, efforts to manage one’s figure, involvement in popular culture and resource factors	$\beta = .58, p < .05$
	Mid adol. girls	Appearance teasing – source unspecified	Higher body dissatisfaction, controlling for BMI, pubertal status, efforts to manage one’s figure, involvement in popular culture and resource factors	$\beta = .32, p < .05$
Bearman et al <sup>a</sup> (2006) <i>United States</i>	Mid adol. girls (13.6 years)	Social support – peers	Lower body dissatisfaction concurrently, as well as one year and two years later. These associations did not remain when controlling for negative affect, parental support and dietary restraint	$\beta = -.10, p < .05$ $\beta = -.14, p < .05$ $\beta = -.17, p < .05$
Blodgett Salafia & Gondoli <sup>a</sup> (2011) <i>United States</i>	Early adol. girls (10.6 years)	Conversations about dieting – friends	Higher body dissatisfaction measured one year later	$r = .49, p < .05$
		Pressure to be thin – friends	Higher body dissatisfaction measured one year later	$r = .54, p < .05$
Blowers et al (2003)	Early adol. girls (11.1 years)	Pressure to be thin – friends & peers	No association with body dissatisfaction	$r = .15, p > .05$

<i>Australia</i>		Modeling of disordered eating – friends	Higher body dissatisfaction	$r = .16, p < .05$
		Physical appearance comparisons – peers	Higher body dissatisfaction	$r = .39, p < .001$
Carey et al. <sup>b</sup> (2011) <i>Australia</i>	Mid adol. girls (range= 14-15)	Modeling of dieting behaviour	Entire cliques perceived to engage in dieting to fit in with others and demonstrate shared commitment to the thin ideal	Qualitative study
Clark & Tiggemann (2006) <i>Australia</i>	Early adol. girls (10.6 years)	Perceptions of friends' body dissatisfaction	Higher body dissatisfaction	$\beta = .28, p < .01$
		Appearance conversations – friends	Higher body dissatisfaction	$r = .27, p < .01$
		Appearance conversations – friends	Lower body esteem	$r = -.20, p < .05$
		Belief that friends value appearances	Lower body esteem	$r = -.20, p < .05$
Clark & Tiggemann (2007) <i>Australia</i>	Early adol. girls (10.6 years)	Appearance conversations – friends	Higher body dissatisfaction	$r = .17, p < .01$
		Appearance conversations – friends	Lower body esteem	$r = -.26, p < .001$
		Appearance conversations – friends	No association with body dissatisfaction when controlling for age, BMI, exposure to appearance-focused media, emotional autonomy and appearance schemas	$\beta = .06, p > .05$
		Appearance conversations – friends	No association with body esteem when controlling for age, BMI, exposure to appearance-focused media, emotional autonomy and appearance schemas	$\beta = -.05, p > .05$
Dunkley et al. (2001) <i>Australia</i>	Mid adol. girls (15.5 years)	Pressure to be thin – peers	Higher body dissatisfaction, controlling for parent and media pressure to be thin and diet	$\beta = .24, p < .001$
Eisenberg et al. (2003) <i>United States</i>	Early – late adol. boys (approx. 11-18)	Weight teasing – peers	Higher body dissatisfaction	OR=2.35, $p < .05$

	Early – late adol. girls	Weight teasing – peers	Higher body dissatisfaction	OR=1.50, $p < .05$
Farrow et al. (2011) <i>United Kingdom</i>	Early adol. boys & girls (10.5 years)	Friendship groups’ body dissatisfaction	No association with individual body dissatisfaction, controlling for gender	$r = .22, p > .05$
		Modeling of dietary restraint – friends	Greater body dissatisfaction, controlling for gender	$r = .34, p < .01$
Fox & Farrow (2009) <i>United Kingdom</i>	Early adol. girls (12.8 years)	Verbal bullying – peers	Higher body dissatisfaction	$r = .26, p < .01$
		Physical bullying – peers	Higher body dissatisfaction	$r = .20, p < .01$
		Social bullying – peers	Higher body dissatisfaction	$r = .26, p < .01$
Griffiths & McCabe (2000) <i>Australia</i>	Early adol. girls (12.5 years)	Importance of own body to best girlfriend	Higher body dissatisfaction on two scales	$r = .39, p < .05$ $r = .42, p < .05$
		Importance of own body to best girlfriend	No association with body dissatisfaction when controlling for BMI, menarche, self esteem, locus of control, importance of appearance, and influence of society and parents	$\beta = .18, p = .07$
		Importance of own body to best boyfriend	Higher body dissatisfaction on two scales	$r = .40, p < .05$ $r = .48, p < .05$
		Importance of own body to best boyfriend	No association with body dissatisfaction when controlling for BMI, menarche, self esteem, locus of control, importance of appearance, and influence of society and parents	$\beta = -.05, p = .61$
Hayden-Wade et al. (2005) <i>United States</i>	Early adol. boys & girls (12.2 years)	Weight teasing – unspecified source	Higher weight concerns	$r = .59, p < .001$
		Weight teasing – unspecified source	Lower confidence in physical appearance	$r = -.31, p < .001$
Helfert & Warschburger <sup>a</sup> (2011) <i>Germany</i>	Mid adol. boys (14 years)	Appearance-related modeling – friends	No association with body dissatisfaction one year later when controlling for age, BMI, appearance teasing by parents and peers, parental appearance-related encouragement and modeling, and appearance-related social exclusion and class	$\beta = .09, p > .05$

		Appearance-related modeling – friends	Higher body dissatisfaction one year later, controlling for age, BMI, appearance teasing by parents and peers, parental appearance-related encouragement and modeling, and appearance-related social exclusion and class norms	$\beta = .24, p < .01$
		Appearance teasing – peers	No association with body dissatisfaction one year later when controlling for age, BMI, parental appearance-related encouragement, modeling by friends, and social exclusion	$\beta = .08, p > .05$
		Appearance teasing – peers	No association with body dissatisfaction one year later when controlling for age, BMI, parental appearance-related encouragement, modeling by friends, and social exclusion	$\beta = .04, p > .05$
		Social exclusion – peers	Higher body dissatisfaction one year later	$\beta = .34, p < .01$
		Social exclusion – peers	No association with body dissatisfaction one year later	$\beta = .10, p > .05$
Holsen et al. <sup>a</sup> (2012) <i>Norway</i>	Mid adol. boys (13.3 years)	Higher quality relationships – peers	Higher body dissatisfaction	$\beta = .39, p < .001$
	Mid adol. girls	Higher quality relationships – peers	Higher body dissatisfaction	$\beta = .26, p < .001$
Hutchinson & Rapee (2007) <i>Australia</i>	Early adol. girls (12.3 years)	Friends' similarity in body dissatisfaction	No similarity in body dissatisfaction within friendship groups, controlling for BMI, self-esteem and negative affect	$p > .05$
		Pressure to be thin – female friends	Higher body dissatisfaction, controlling for physical, psychological, behavioural and peer variables	$\beta = .48, p < .001$
		Weight teasing – peers	Higher body dissatisfaction	$r = .47, p < .001$
		Weight teasing – peers	No association with body dissatisfaction when controlling for physical, psychological, behavioural and peer variables	$\beta = .03, p > .01$
Jones (2001) <i>United States</i>	Early – mid boys & girls (14.3 years)	Appearance comparison sources	Comparisons more often made towards same-sex peers than people in the media	
	Early – mid adol. boys	Appearance comparison – same sex	Higher dissatisfaction with a range of physical attributes	$rs > .17, ps < .05$



Jones (2004) <sup>a</sup> <i>United States</i>	Early – mid adol. girls	Appearance comparison – same sex	Higher dissatisfaction with a range of physical attributes	$rs > .29, ps < .01$
	Early – mid adol. boys (13.9 years)	Appearance conversations – friends	Predicted positive change in body dissatisfaction over one year. Association not significant when controlling for BMI, peer appearance teasing, perceptions that acceptance is dependent on appearance, social comparison, and internalization of ideals	$\beta = .15, p < .05$ $\beta = .05, p > .05$
	Early – mid adol. girls	Appearance conversations – friends	Predicted positive change in body dissatisfaction over one year. Association not significant when controlling for BMI, peer appearance teasing, perceptions that acceptance is dependent on appearance, social comparison, and internalization of ideals	$\beta = .16, p < .01$ $\beta = .06, p > .05$
	Early – mid adol. boys	Appearance– conditional acceptance – female peers	No association with change in body dissatisfaction over one year	$\beta = .01, p > .05$
	Early – mid adol. girls	Appearance– conditional acceptance – peers	Predicted change in body dissatisfaction one year later. The association not significant when controlling for BMI, Time 1 body dissatisfaction, conversations, social comparison, internalization of appearance ideals, and appearance teasing	$\beta = .17, p < .05$ $\beta = .01, p > .05$
	Early – mid adol. boys	Appearance teasing – friends and peers	Higher body dissatisfaction concurrently, but did not predict change in body dissatisfaction over one year	$r = .25, p < .05$ $\beta = .14, p > .05$
	Early – mid adol. girls	Appearance teasing – friends and peers	Higher body dissatisfaction concurrently, but did not predict change in body dissatisfaction over one year	$r = .40, p < .05$ $\beta = .02, p > .05$
	Early – mid adol. boys	Social comparison – peers & models	Higher body dissatisfaction concurrently, and one year later	$r = .37, p < .05$ $r = .28, p < .05$
Jones & Crawford (2005) <i>United States</i>	Early – mid adol. girls	Social comparison – peers & models	Higher body dissatisfaction concurrently, and one year later	$r = .71, p < .05$ $r = .66, p < .05$
	Mid adol. boys (13.6 & 16.6)	Appearance conversations – friends	Higher weight concern	$\beta = .21, p < .05$
		Muscle building conversations – friends	Higher muscularity concern	$\beta = .31, p < .001$
		Own weight concern	Higher body dissatisfaction	$\beta = .48, p < .001$

		Own muscle concern	Higher body dissatisfaction	$\beta = .48, p < .001$
Jones et al. (2004) <i>United States</i>	Early – mid boys (13.5 years)	Appearance conversations – friends	Higher body dissatisfaction	$r = .16, p < .05$
	Early – mid girls	Appearance conversations – friends	Higher body dissatisfaction	$r = .34, p < .001$
	Early – mid boys & girls	Appearance criticism – peer	Higher body dissatisfaction, controlling for internalization of media ideals	$\beta = .31, p < .001$
	Early – mid adol. boys	Social comparison	No mediation of the longitudinal association between appearance conversations and body dissatisfaction	
	Early - mid adol. girls	Social comparison	Fully mediated the longitudinal association between appearance conversations and body dissatisfaction	
Keery et al. (2004) <i>United States</i>	Early adol. girls (12.6 years)	Social comparison	Partially mediated associations of body dissatisfaction with peer and media influences, and fully mediated the association with parent influence	
Kelly et al. (2005) <i>United States</i>	Early – late adol. girls	Friends diet to lose weight	Lower body satisfaction	$p < .001$
		Friends care about exercise & being fit	Higher body satisfaction	$p < .001$
Kichler & Crowther (2009) <i>United States</i>	Early adol. girls (10.3 years)	Appearance criticism & encouragement to lose weight – peers	Higher body dissatisfaction	$r = .54, p < .01$
Lawler & Nixon (2011) <i>Ireland</i>	Mid adol. boys (16 years)	Appearance conversations – friends	No association with body dissatisfaction	$r = .08, p > .05$
	Mid adol. girls	Appearance conversations – friends	Higher body dissatisfaction	$r = .25, p < .01$
	Mid adol. boys	Appearance criticism – peers	Higher body dissatisfaction	$r = .55, p < .01$
	Mid adol. girls	Appearance criticism – peers	Higher body dissatisfaction	$r = .47, p < .01$

Lieberman et al. (2001) <i>Canada</i>	Mid adol. girls (14.1 years)	Modeling of dieting & weight loss – friends	Lower body esteem, controlling for age, BMI, popularity, self-esteem, externalized self-perception, appearance attributions, teasing and social reinforcement	$B = -.13, p < .001$
		Self-reported weight teasing – peers	Lower body esteem	$r = -.43, p < .001$
		Self-reported shape teasing – peers	Lower body esteem	$r = -.44, p < .001$
		Self-report appearance teasing – peers	Lower body esteem	$r = -.40, p < .001$
		Classmate-reported appearance teasing	Lower body esteem	$r = -.22, p < .001$
		Perceived pressure to diet or lose weight – friends	Higher body esteem, controlling for BMI, age, popularity, relational self-esteem, externalized self-perception, social rejection, appearance teasing, and peer modeling	$\beta = .08, p < .01$
Lunde et al. (2006) <i>Sweden</i>	Early adol. boys (10.4 years)	General teasing – peers	Lower satisfaction with appearance and weight, controlling for BMI and victimization experiences	$\beta = -.20, p < .01$ $\beta = -.25, p < .01$
	Early adol. girls	Appearance teasing – peers	Lower satisfaction with general appearance, controlling for BMI and victimization experiences	$\beta = -.26, p < .01$
	Early adol. boys	Social exclusion	Lower satisfaction with appearance and weight	$\beta = -.23, p < .01$ $\beta = -.19, p < .01$
	Early adol. girls	Social exclusion	Lower satisfaction with appearance and weight	$\beta = -.18, p < .01$ $\beta = -.28, p < .01$
Lunner et al. (2000) <i>Sweden &amp; Australia</i>	Swedish mid adol. girls (14.3 years)	Appearance criticism – peers	Higher body dissatisfaction	$\beta = .33, p < .01$
	Australian mid adol. girls (13.3 years)	Appearance criticism – peers	Higher body dissatisfaction	$\beta s > .23, ps < .01$

McCabe & Ricciardelli <sup>a</sup> (2005) <i>Australia</i>	Early – mid adol. boys & girls (13 years)	Pressure to change body – same- & other-sex friends	No association with body dissatisfaction	$p > .05$
McCabe et al. <sup>b</sup> (2006) <i>Australia</i>	Mid adol. girls (15.9 years)	Appearance messages – friends	Majority of girls received positive appearance messages from friends. Half the girls perceived criticism from friends.	Qualitative study
	Mid adol. boys	Appearance messages – friends	Only a small number of boys reported receiving positive or negative appearance-related messages from friends	Qualitative study
Mooney et al. <sup>b</sup> (2009) <i>Ireland</i>	Mid adol. girls (range = 15-16)	Acceptance and approval	Thinness considered important because it is believed to influence acceptance by friends	Qualitative study
O’Koon (1997) <i>United States</i>	Mid adol. boys & girls (range = 16-18)	Trust, sensitivity and helpfulness from friends	More positive body image	$r = .24, p < .05$
Page et al. (2006) <i>Europe</i>	Mid adol. boys & girls (16.7 years)	Estimates of same-sex peers perceived to be dieting to lose weight	Higher perception of oneself as “too fat”	$p < .01$
Palmqvist & Santavirta (2006) <i>Finland</i>	Mid adol. boys & girls (14.1 years)	Friendship intimacy	No association with body dissatisfaction	$p > .05$
Paxton et al. <sup>a</sup> (2006) <i>United States</i>	Early adol. boys (12.7 years)	Modeling of dieting – friends	No association with body dissatisfaction five years later	$r = .07, p > .05$
	Mid adol. boys (15.8 years)	Modeling of dieting – friends	Higher body dissatisfaction five years later. Associations did not remain significant when controlling for BMI, SES, ethnicity, weight teasing and Time 1 body dissatisfaction	$r = .13, p < .001$ $\beta = .49, p > .05$
	Early adol. girls	Modeling of dieting – friends	Higher body dissatisfaction five years later. Associations remained when controlling for BMI, self-esteem and Time 1 body dissatisfaction	$r = .13, p < .001$ $\beta = 1.45, p < .05$
	Mid adol. girls	Modeling of dieting – friends	No association with body dissatisfaction five years later	$r = .05, p > .05$
	Early adol. boys	Appearance teasing – peers	Higher body dissatisfaction five years later. Associations did not remain significant when controlling for BMI, SES, depression, friend dieting, and Time 1 body dissatisfaction	$r = .16, p < .01$ $\beta = .49, p > .05$

	Mid adol. boys	Appearance teasing – peers	Higher body dissatisfaction five years later. Associations did not remain significant when controlling for BMI, SES, depression, friend dieting, and Time 1 body dissatisfaction	$r = .19, p < .001$ $\beta = .36, p > .05$
	Early adol. girls	Appearance teasing – peers	Higher body dissatisfaction five years later. Associations did not remain significant when controlling for BMI, SES, depression, friend dieting, and Time 1 body dissatisfaction	$r = .11, p < .05$ $\beta = -.54, p > .05$
	Mid adol. girls	Appearance teasing – peers	Higher body dissatisfaction five years later. Associations did not remain significant when controlling for BMI, SES, depression, friend dieting, and Time 1 body dissatisfaction	$r = .17, p < .001$ $\beta = .37, p > .05$
Paxton et al. <sup>a</sup> (2005) <i>Australia</i>	Mid adol. girls (15.5 years)	Belief that thinness is important for attracting boys	Higher body dissatisfaction, controlling for BMI, depression, self-esteem, and the importance the individual places on being popular with boys	$\beta = .32, p < .005$
Paxton et al. (1999) <i>Australia</i>	Mid adol. girls (15.5 years)	Friends' similarity in body dissatisfaction	Body dissatisfaction similar within friendship groups	$\eta^2 = .31$
		Body comparison – peers	Higher body dissatisfaction	$r = .59, p < .001$
		Friends' concern with thinness & dieting	Higher body dissatisfaction, controlling for a range of physical, psychological, family/media and friend influences	$\beta = .12, p < .01$
		Belief that thinness impacts friendships	Higher body dissatisfaction, controlling for a range of physical, psychological, family/media and friend influences	$\beta = .19, p < .001$
		Pressure to be thin – friends & peers	Higher body dissatisfaction, controlling for a range of physical, psychological, family/media and friend influences	$\beta = .15, p < .01$
		Appearance teasing – friends & peers	Higher body dissatisfaction, controlling for a range of physical, psychological, family/media and friend influences	$\beta = .14, p < .01$
		Social support – friends	No association with body dissatisfaction	$r = .02, p > .05$
Peterson et al. (2007) <i>United States</i>	Mid adol. boys (16.5 years)	Pressure to be thin – friends	Higher body dissatisfaction	$r = .34, p < .01$
	Mid adol. girls	Pressure to be thin – friends	Higher body dissatisfaction	$r = .42, p < .01$

Presnell et al. (2004) <i>United States</i>	Mid adol. boys & girls (17 years)	Pressure to be thin – friends	Higher body dissatisfaction nine months later	$r = .40, p < .05$
		Pressure to be thin – friends	Increased body dissatisfaction over nine months	$\beta = .08, p = .04$
Ricciardelli & McCabe (2001) <i>Australia</i>	Mid adol. boys & girls (13.2 years)	Pressure to lose weight or increase muscles – same/other-sex friends	No association with body dissatisfaction	$p > .05$
	Mid adol. boys	Pressure to increase muscles from same-sex best friend	Higher engagement in strategies to increase muscles, controlling for pressure from parents and media to lose weight and increase muscles, negative affect and self esteem	$\beta = .14, p < .01$
	Mid adol. girls	Pressure to increase muscles from same-sex best friend	Higher engagement in strategies to increase muscles, controlling for pressure from parents and media to lose weight and increase muscles, negative affect and self esteem	$\beta = .12, p < .05$
	Mid adol. boys	Pressure to lose weight from same-sex best friend	Higher engagement in strategies to lose weight, controlling for pressure from parents and media to lose weight and increase muscles, negative affect and self esteem	$\beta = .10, p < .05$
	Mid adol. girls	Pressure to lose weight from same-sex best friend	No association with engagement in strategies to lose weight, controlling for pressure from parents and media to lose weight and increase muscles, negative affect and self esteem	$p > .05$
Sands & Wardle (2003) <i>United Kingdom</i>	Early adol. girls (range = 9-12)	Perception of best same-sex friends’ weight concerns	Higher body dissatisfaction. Association did not remain when internalization of appearance ideals was controlled	$\beta = .20, p < .01$ $\beta = .07, p > .05$
Schutz & Paxton (2007) <i>Australia</i>	Mid adol. girls (15.9 years)	Perception of friends’ concerns with weight and shape	Higher body dissatisfaction	$r = .32, p < .001$
		Belief that thinness benefits relationships	Higher body dissatisfaction	$r = .53, p < .001$
		Communication quality - friends	No association with body dissatisfaction	$r = .01, p > .01$
		Friendship security	No association with body dissatisfaction	$r = -.10, p > .01$
		Conflict – friends	Higher body dissatisfaction	$r = .14, p < .001$

		Emotional detachment – friends	Higher body dissatisfaction	$r = .27, p < .001$
Schutz et al. (2002) <i>Australia</i>	Early – mid adol. girls (14.1 years)	Body comparison	Higher body dissatisfaction	$r = .69, p < .002$
Shisslak et al. (1998) <i>United States</i>	Early – mid adol. girls (range = 9-15)	Social support	No association with body dissatisfaction	$p > .05$
Shomaker & Furman (2009) <i>United States</i>	Late adol. boys & girls (18 years)	Pressure to be thin – friends	Reduced body satisfaction	$r = -.19, p < .05$
		Appearance criticism – friends	No association with body dissatisfaction	$r = -.07, p > .05$
		Appearance criticism – romantic partner	No association with body dissatisfaction	$r = -.14, p > .05$
Shroff & Thompson (2006) <i>United States</i>	Mid adol. girls (14.6 years)	Appearance conversations - friends	Higher body dissatisfaction	$r = .32, p < .001$
		Anti-dieting advice – friends	No association with body dissatisfaction	$r = -.04, p > .05$
		Anti-dieting advice – friends	Higher appearance conversations with friends	$r = .23, p < .001$
		Anti-dieting advice – friends	Higher perceptions that friends are preoccupied with weight/dieting	$r = .13, p < .05$
		Belief that friends' are preoccupied with weight & dieting	Higher body dissatisfaction	$r = .44, p < .001$
		Belief that friends influence own ideas of perfect body & weight-loss strategies	Higher body dissatisfaction	$r = .38, p < .001$
		Social comparison	Partially mediated the association of body dissatisfaction with peer influence	

Sinton & Birch (2006) <i>United States</i>	Early adol. girls (11.3 years)	Appearance-based interactions – same-sex peers	Higher body dissatisfaction	$r = .40, p < .001$
Stanford & McCabe (2005) <i>Australia</i>	Early adol. boys (12.6 years)	Pressure to be thin – best same-sex friend	No association with weight satisfaction, controlling for parent and media pressure to lose weight and increase muscles	$p > .05$
		Pressure to be thin – best other-sex friend	Lower weight satisfaction, controlling for parent and media pressure to lose weight and increase muscles	$t = -2.11, p < .05$
Stice et al. (2002) <i>United States</i>	Mid adol. girls (14.9 years)	Social support – peers	Lower body dissatisfaction	$r = -.29, p < .05$
Taylor et al. (1998) <i>United States</i>	Early adol. girls (12.3 years)	Weight teasing – peers	Higher body dissatisfaction, controlling for BMI, perceived importance of weight/eating to peers, self-confidence, trying to look like people in the media	$b = 4.58, p < .001$
Thompson et al. (2007) <i>United States</i>	Mid adol. girls (14.5 years)	Appearance conversations – friends	No association with body dissatisfaction, controlling for attributions about popularity and teasing, friend anti-dieting advice, friends as a source of influence and perceived friend preoccupation with weight and dieting	$p > .05$
	Mid adol. girls	Anti-dieting advice – friends	No association with body dissatisfaction, controlling for attributions about popularity and teasing, friend anti-dieting advice, friends as a source of influence and perceived friend preoccupation with weight and dieting	$p > .05$
	Mid adol. average-weight girls	Perceived friend preoccupation with weight and dieting	Higher body dissatisfaction, controlling for attributions about popularity and teasing, friend anti-dieting advice, friends as a source of influence and appearance conversations with peers	$\beta = .27, p < .01$
	Mid adol. over-weight girls	Perceived friend preoccupation with weight and dieting	Higher body dissatisfaction, controlling for attributions about popularity and teasing, friend anti-dieting advice, friends as a source of influence and appearance conversations with peers	$\beta = .25, p < .05$
	Mid adol. average-weight girls	Belief that friends influence own ideas of perfect body & weight loss strategies	No association with body dissatisfaction, controlling for attributions about popularity and teasing, friend anti-dieting advice, appearance conversations with peers, friend preoccupation with weight & dieting	$\beta = .13, p > .05$



	Mid adol. overweight girls	Belief that friends influence own ideas of perfect body & weight loss strategies	Higher body dissatisfaction, controlling for attributions about popularity and teasing, friend anti-dieting advice, appearance conversations with peers, friend preoccupation with weight/diet	$\beta = .31, p < .01$
Tiggemann et al. (2009) <sup>b</sup> <i>Australia</i>	Mid adol. girls (approx. 16 yrs)	Terms used to describe self	Girls use emphatically negative terminology to describe themselves. E.g., fat, thunder thighs, and heifers	Qualitative study
		Reasons for wanting to be thinner	The second most frequent reason for wanting to be thinner (following the influence of models and media) was to be attractive and receive more attention	Qualitative study
Tremblay & Lariviere (2009) <i>Canada</i>	Early – mid adol. girls (range = 9-16)	Pressure to be thin – friends	Lower body satisfaction	$r = -.12, p < .01$
Vander Wal & Thelen (2000) <i>United States</i>	Early adol. girls (10.3 years)	Teasing – peers	Higher body dissatisfaction (using two scales), controlling for friends' investment in dieting	$\beta = .53, p < .001$ $\beta = .60, p < .001$
		Appearance comparison – peers	Higher body dissatisfaction, controlling for social anxiety and BMI	$\beta = .34, p < .001$
Vincent & McCabe (2000) <i>Australia</i>	Early – late boys & girls (13.77 years)	Modeling of weight loss behaviour – peers	No association with body dissatisfaction, controlling for relationship quality, and appearance-related conversation, encouragement, and negative commentary from friends or family	$p > .01$
	Early – late adol. boys	Appearance conversation – peers	No association with body dissatisfaction, controlling for relationship quality, and appearance-related encouragement, modeling, and negative commentary from friends or family	$p > .01$
	Early – late adol. girls	Appearance conversation – peers	Higher body dissatisfaction, controlling for relationship quality, and appearance-related reinforcement, modeling, and negative commentary from friends or family	$sr^2 = .02, p < .01$
	Early – late adol. boys & girls	Perceived pressure to lose weight – peers	No association with body dissatisfaction, controlling for relationship quality, and appearance-related conversation, modeling, and negative commentary from friends or family	$p > .01$
	Early – late boys & girls	Appearance criticism – peers	No association with body dissatisfaction	$p > .01$
	Early – late adol. boys	Lower relationship quality – peers (higher score = lower quality)	Higher body dissatisfaction, controlling for BMI, familial and peer negative commentary, weight-related encouragement and modeling, and parental care and overprotection	$sr^2 = .04, p < .01$

	Early – late adol. girls	Lower relationship quality – peers	No association with body dissatisfaction	$p > .01$
Wertheim et al. <sup>b</sup> (1997) <i>Australia</i>	Mid adol. girls (approx. 15 yrs)	Modeling of dieting – friends Appearance conversation – friends	Dieting friends make girls feel concerned about their own weight and that they ought to be dieting Conversations involve complaining about weight, commenting on disliked body parts, and discussing weight loss/gain	Qualitative study Qualitative study
Woelders et al. <sup>a</sup> (2010) <i>Netherlands</i>	Mid adol. girls (13.8 years)	Self-reported body dissatisfaction friends Self-reported body dissatisfaction friends	Higher individual body dissatisfaction concurrently Higher individual body dissatisfaction one year later	$r = .19, p < .05$ $r = .12, p < .05$

<sup>a</sup>Longitudinal design.

<sup>b</sup>Qualitative design.

Table 2

*A Summary of Suggestions for Future Research Directions on Friend and Peer Relationships and Body Dissatisfaction*

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1. Further tests of longitudinal associations between appearance teasing and body dissatisfaction.
  2. Confirmation of the unique association between appearance teasing and body dissatisfaction, and/or identify the variables that may account for and/or further explain the processes involved.
  3. Consideration to multivariate pathways and processes than contribute to our understanding of direct and indirect associations of body dissatisfaction with friend and peer influences.
  4. Longitudinal research to better differentiate selection from socialization processes in relation to body image attitudes and behavior.
  5. Further examination of the association between friends' anti-dieting advice and body dissatisfaction.  
Identification of potential moderators and provision of explanations to account for the divergent associations found concerning perceived pressure from friends to be attractive. Conflicting findings were reported in terms of sources of perceived pressure to be attractive (i.e., same sex versus opposite sex friends) and the potential appearance-related correlate (i.e., body dissatisfaction or adoption of body changing techniques. Researchers might explore concepts such as locus of control, problem solving, or coping styles as potential moderators.
  6. Clarify how the role of friends or peers may differ for adolescents with different ethnic backgrounds.
  7. Greater use of longitudinal and experimental research across all areas.
  8. Development of and greater use of psychometrically sound measures.
  9. Consistent discussion of any differences in findings when comparing results using figure-rating and multiple item rating scales to assess body dissatisfaction.
  10. Development of measures suitable for males and females, and further testing of whether existing measures are equally reliable and valid with males and females.
  11. Greater focus on boys' body image concerns and related issues. In particular, exploration of friends' similarity in body dissatisfaction, and the association of body dissatisfaction with anti-dieting advice and perceptions of the importance of thinness (or muscularity) to friends.  
Additional focus on potential protective factors. Recommended targeting more specific and direct characteristics of social relationships as they relate to appearance, rather than broad, multifaceted variables (e.g., friendship quality). Alternatively, development of a theoretical framework for conceptualizing the role of the broader emotional context of friendships in body dissatisfaction to guide future research and provide a clearer understanding of the conflicting findings in this area.
  12. Additional focus on potential protective factors. Recommended targeting more specific and direct characteristics of social relationships as they relate to appearance, rather than broad, multifaceted variables (e.g., friendship quality). Alternatively, development of a theoretical framework for conceptualizing the role of the broader emotional context of friendships in body dissatisfaction to guide future research and provide a clearer understanding of the conflicting findings in this area.
  13. Additional focus on potential protective factors. Recommended targeting more specific and direct characteristics of social relationships as they relate to appearance, rather than broad, multifaceted variables (e.g., friendship quality). Alternatively, development of a theoretical framework for conceptualizing the role of the broader emotional context of friendships in body dissatisfaction to guide future research and provide a clearer understanding of the conflicting findings in this area.

14. Exploration of the role of the opposite sex and romantic relationships in adolescent body dissatisfaction.
  15. Examination of the role of relationships based in social media, in adolescent body dissatisfaction.
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