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Individuation or Identification? Self-Objectification and the Mother-Adolescent Relationship

Sabra L. Katz-Wise,

Department of Psychology, University of Wisconsin – Madison

Stephanie L. Budge,

Department of Educational and Counseling Psychology, Counseling, and College Student Personnel, University of Louisville

Sara M. Lindberg, and

Center for Women's Health and Health Disparities Research, University of Wisconsin – Madison

Janet S. Hyde

Department of Psychology, University of Wisconsin – Madison

Abstract

Do adolescents model their mothers' self-objectification? We measured self-objectification (body surveillance and body shame), body mass index (BMI), body esteem, and quality of the mother-adolescent relationship in 179 female and 162 male adolescents at age 15, as well as self-objectification in their mothers. Initial analyses indicated no improvement in model fit if paths were allowed to differ for females and males; therefore a single model was tested for the combined sample. Findings revealed that mothers' body surveillance negatively predicted adolescents' body surveillance. Mothers' body shame was unrelated to adolescents' body shame, but positively predicted adolescents' body surveillance. Results for the relationship between mothers' and adolescents' self-objectification suggest that adolescents engaged in more individuation than modeling. A more positive mother-adolescent relationship predicted lower body shame and higher body esteem in adolescents, suggesting that the quality of the relationship with the mother may be a protective factor for adolescents' body image. Mother-adolescent relationship quality did not moderate the association between mothers' and adolescents' self-objectification. These findings contribute to our understanding about the sociocultural role of parents in adolescents' body image and inform interventions addressing negative body image in this age group. The quality of the mother-adolescent relationship is a clear point of entry for such interventions. Therapists should work with adolescents and their mothers toward a more positive relationship quality, which could then positively impact adolescents' body image.

Keywords

body image; adolescent development; mothers; parental attitudes; socialization; social learning

Body image concerns are prevalent among adolescents and can lead to problematic mental health outcomes such as body dissatisfaction (Stice & Whitenton, 2002), depression (Stice & Bearman, 2001), and eating disorders (Stice, Presnell, & Spangler, 2002). Body image is influenced by numerous sociocultural factors, including parents. Mothers, in particular, play an important role in transmitting body image attitudes and ideals to their adolescent

offspring (Ricciardelli, McCabe, & Banfield, 2000; Wertheim, Martin, Prior, Sanson, & Smart, 2002). It is crucial for potential interventions aimed at improving body image in adolescents that we investigate the role of mothers in modeling body image attitudes and ideals for their adolescent children, as well as how adolescents respond to this modeling through either identification or individuation. In the current study, we examined self-objectification in mothers and their adolescent daughters and sons, as well as associations among self-objectification, body esteem, and the quality of the mother-adolescent relationship.

Body image has been defined as a multidimensional attitude toward the appearance of one's own body (Cash & Pruzinsky, 1990). Body image includes such dimensions as body esteem; positive or negative feelings about one's body (Petersen, Schulenberg, Abramowitz, Offer, & Jarcho, 1984); and self-objectification, the tendency to view oneself as an object to be looked at and evaluated by others (Fredrickson & Roberts, 1997). In the body image literature, terminology is inconsistent, and the term *body image* is frequently conflated with body dissatisfaction, body esteem, attitudes toward the body, and even disordered eating behaviors. In our paper, specific dimensions of body image are enumerated, whenever possible. Otherwise, body image is defined as a larger multidimensional construct, encompassing the specific aspects of body esteem and self-objectification.

Theoretical Frameworks

The current study is based on objectification theory, which proposes that women's bodies are sexually objectified by others (Fredrickson & Roberts, 1997; McKinley & Hyde, 1996). When sexually objectified, a woman may feel as though her value is solely derived from her body, which exists exclusively for consumption by others. Objectification theory proposes that women are not sexually objectified because they represent themselves sexually, but rather because of larger power differences on a societal level that place women under the gaze of men and give men power to objectify women (Fredrickson & Roberts, 1997). Recent research suggests that men's bodies are also becoming objectified within Western cultures, particularly through the development of a muscular ideal for men (Thompson & Cafri, 2007). It is clear that objectification is increasingly affecting both women and men. The experience of objectification leads to self-objectification, the tendency to view one's body as an object to be looked at and evaluated (McKinley & Hyde, 1996). Self-objectification may be detrimental to a person's self-concept and has been linked to negative psychological effects such as body shame and depression, especially for females (Grabe, Hyde, & Lindberg, 2007; McKinley, 1999).

In addition to objectification theory, our current study draws on the social cognitive theory of gender development, which proposes that gender develops in the context of multiple social influences, including parents, and involves processes such as reinforcement, imitation, and identification (Bussey & Bandura, 1999). One aspect of gender development that may be influenced by parents is body image. In a study of sociocultural influences on body image and body change strategies in adolescent females and males, one of the most important influences shaping body image and behavior was feedback from the mother (McCabe & Ricciardelli, 2003). The influence of parents—in the form of perceived pressure for a thin body or encouragement to lose weight—was also found to increase body dissatisfaction and dieting in adolescents (Dunkley, Wertheim, & Paxton, 2001; Vincent & McCabe, 2000).

Adolescence is a time of both identification and individuation (Newman, 1989). Identification with the parent may be seen during adolescence in the form of modeling parent behavior, such as dieting. The social cognitive theory of gender development proposes that attitudes and behaviors are transmitted from parents to children through

modeling (Bussey & Bandura, 1999). Mothers, specifically, transmit—by modeling and/or encouraging—cultural values regarding weight, shape, and appearance to their children through their own attitudes and behaviors (Benedikt, Wertheim, & Love, 1998; Hill & Franklin, 1998). Adolescents' perceptions of their mothers' eating and weight-related behaviors can predict their own weight-related behaviors and concerns, as adolescents model either healthy or unhealthy weight control behaviors (Keery, Eisenberg, Boutelle, Neumark-Sztainer, & Story, 2006). A review of studies on parental attitudes related to body image disturbance and disordered eating in adolescents suggested that adolescents and young adults tended to model parents' attitudes regarding eating and body shape (Rodgers & Chabrol, 2009). These studies suggest that identification may lead to adolescents modeling their mothers' attitudes and behavior, hereafter referred to as the *identification/modeling hypothesis*.

In contrast, individuation may lead adolescents to behave independently from their parents. The process of individuation in the context of identity formation involves developing an autonomous self in the context of close relationships (Grotevant & Cooper, 1998). Most adolescents report having individuated relationships from their mothers and fathers (Delaney, 1996), in which adolescents achieve a degree of independence from their parents in attitudes, feelings, and behaviors (Newman, 1989). Developing an autonomous self within the process of individuation involves feelings of assertion and distinction from others (Grotevant & Cooper, 1998).

Individuation may be related to body image and eating disorders. In a study examining individuation and eating disorders in college-aged women, Barth (2003) suggested that eating disorders might represent a college student's attempt to negotiate the process of individuation. Adolescents might individuate from mothers who engage in disordered eating behaviors or display cognitions related to negative body image, rather than modeling these attitudes and behaviors. In the current study, this reasoning suggests an alternative to the identification/modeling hypothesis in which adolescents individuate from their mothers by *not* modeling her attitudes and behaviors related to body image, hereafter labeled the *individuation hypothesis*. Individuation could be manifested by either (a) no correlation between mothers' and adolescents' self-objectification or (b) a negative correlation in which the youth actually reacts against the mother's attitudes and behaviors. To our knowledge, no study has examined individuation in relation to body image constructs in adolescents; in the current study, we aim to do this.

Body Image in Adolescence

Previous research has demonstrated that body image is a salient issue for adolescents and that body dissatisfaction increases with age during this developmental period (McCabe & Ricciardelli, 2001). Adolescent females of all ages are significantly more dissatisfied with their bodies compared to adolescent males (Barker & Galambos, 2003; Paxton et al., 1991), and this gender difference continues into early adulthood (Frederick, Forbes, Grigorian, & Jarcho, 2007; Mellor, Fuller-Tyszkiewicz, McCabe, & Ricciardelli, 2001; Muth & Cash, 1997; Ostovich & Rozin, 2004). Other research suggests that both genders have difficulties with body image, although the direction of dissatisfaction is different (Stanford & McCabe, 2002): young adult women indicate an ideal body that is smaller than their current size, whereas young adult men indicate a greater range of ideal body sizes. Furthermore, adolescent males and females adopt different body change strategies: males try to become more muscular whereas females try to lose weight (McCabe & Ricciardelli, 2001; Muris, Meesters, van de Blom, & Mayer, 2005).

Not all adolescents have a negative body image. In a study of body satisfaction, 27% of adolescent females endorsed high body satisfaction (Kelly, Wall, Eisenberg, Story, & Neumark-Sztainer, 2005). Whereas underweight females were most likely to have high body satisfaction and obese females were least likely, 16% of overweight females and 12% of obese females had high body satisfaction. Thus, in the current study, we took body size into account by including a measure of adolescents' body mass index (BMI).

Self-Objectification

Our study included two measures related to self-objectification—body surveillance and body shame—which are measurable cognitive and affective manifestations of self-objectification (McKinley & Hyde, 1996). *Body surveillance* is the primary cognitive and behavioral manifestation of self-objectification that involves viewing the body as an outside observer. Body surveillance is marked by recurrent thoughts about appearance and habitual self-checking to see if the body is aligned with cultural standards. *Body shame* is a secondary affective component of self-objectification that consists of feeling shame that the body does not conform to cultural standards of beauty (Lindberg, Grabe, & Hyde, 2007; McKinley & Hyde, 1996). Self-objectification is distinct from body esteem, which refers to global positive or negative feelings about one's body.

Studies of self-objectification have demonstrated that females are more likely than males to engage in self-objectification. Gender differences in levels of body surveillance, with females having higher levels than males, are present in early adolescent (ages 10-12) samples (Lindberg et al., 2007; Lindberg, Hyde, & McKinley, 2006). Additionally, gender differences in both body surveillance and body shame have been demonstrated in research with adolescents, undergraduates, and adults—with females having higher levels of both components compared to males (Frederick et al., 2007; Grabe et al., 2007; McKinley, 1998; McKinley, 2006b).

Self-objectification has been linked to other mental health constructs. A recent review concluded that self-objectification plays a significant role in women's mental health and has been linked to serious mental health disorders (such as disordered eating and depressed mood), as well as other negative experiences (such as appearance anxiety and low self-esteem; Tiggemann, 2011). A longitudinal study of self-objectification, self-esteem, and depressive symptoms in adolescent females found that those who experienced decreases in self-objectification over time experienced increased self-esteem and decreased depressive symptoms, suggesting that these constructs are related (Impett, Henson, Breines, Schooler, & Tolman, 2011).

Although fewer conclusions can be drawn about the implications of self-objectification for men because of a paucity of research, a few studies have compared the correlates of self-objectification in women and men. A study of self-objectification in U.S. adolescents showed a positive relationship between body surveillance and body shame with depression in both females and males, and it further demonstrated that self-objectification contributed to gender differences in depression, with females being more depressed than males (Grabe et al., 2007). In a study of college students, body surveillance and body shame were found to be negatively related to body esteem in both females and males (McKinley, 1998). Another study of self-objectification and self-esteem in undergraduate women and men in Canada failed to find a gender difference in predicted paths linking body surveillance, body shame, appearance anxiety, and self-esteem (Choma, Visser, Pozzebon, Bogaert, Busseri, & Sadava, 2010). We can conclude from these studies that self-objectification can negatively predict the mental health of both women and men.

Parent-Adolescent Relationship

The parent-adolescent relationship may affect body image and self-objectification in adolescents, particularly in cultures such as the United States in which appearance is emphasized. For example, in a study of teen perceptions of parent-child relationships, adolescent females who had perceptions of minimal parental caring also had greater body dissatisfaction (Ackard, Neumark-Sztainer, Story, & Perry, 2006). For many cultures, the mother-adolescent relationship may be described as closer than the father-adolescent relationship, with more mother involvement in children's daily lives (Crockett, Brown, Iturbide, Russell, & Wilkinson-Lee, 2009). Therefore, the mother-adolescent relationship may be especially important to consider in terms of its effects on other adolescent outcomes, such as body image and eating problems. More disagreement between mothers and their adolescent daughters has been associated with higher levels of dieting in daughters (Paikoff, Carlton-Ford, & Brooks-Gunn, 1993). Mothers have a greater influence over body image in adolescent males than other sociocultural factors, such as siblings, friends, and the media (Ricciardelli et al., 2000; Stanford & McCabe, 2005). Additionally, mothers are more influential than fathers in transmitting eating behaviors to both sons and daughters (Wertheim et al., 2002).

Mothers may also transmit aspects of self-objectification to their children. In a study comparing self-objectification and related constructs such as body esteem and BMI in college-aged women and their mothers, body surveillance scores between mothers and daughters were significantly correlated—although body shame was not (McKinley, 1999), suggesting that daughters may be modeling aspects of their mothers' self-objectification. To date, no known studies have examined whether adolescent males model their mothers' self-objectification. In the current study, we examined the links between mother and adolescent self-objectification and between the mother-adolescent relationship and adolescent body image in both females and males.

Quality of the mother-adolescent relationship may also affect whether adolescents model their mother's self-objectification. Specifically, the process of individuation during adolescence may result in adolescents not modeling their mothers' self-objectification. In a study of adolescent modeling of parent substance abuse, adolescents modeled parents' substance use if they had a relatively good or moderate relationship with the parent, but not if they had a poor relationship (Andrews, Hops, & Duncan, 1997). Their study suggests that the quality of the parent-adolescent relationship may moderate modeling of parental behavior by the adolescent, such that a more positive mother-adolescent relationship produces modeling, whereas a negative relationship leads to individuation. Thus in the current study we explored quality of the mother-adolescent relationship as a moderator between mother and adolescent self-objectification.

The parent-adolescent relationship may also act as a protective factor against developing body dissatisfaction or eating disorder problems. More positive parental relationships and more perceived acceptance are associated with more positive body image, less body dissatisfaction, and healthier eating in adolescent females (Archibald, Graber, & Brooks-Gunn, 1999; Barker & Galambos, 2003; Swarr & Richards, 1996). In adolescent males, positive messages from mothers are related to satisfaction with body shape (Ricciardelli et al., 2000).

The Current Study

Although studies of body dissatisfaction and eating disorders have examined parental influence and relationships, no known previous study has examined the association between self-objectification and the quality of the mother-child relationship for middle adolescents.

In the current study, we investigated the mother-adolescent relationship both as a predictor of adolescents' self-objectification and body esteem and as a moderator of the association between adolescents' and mothers' self-objectification. This allowed us to examine whether mother-adolescent relationship quality contributes to adolescents' modeling of their mother's self-objectification (identification) or behaving independently from their mothers (individuation).

We hypothesized that greater body surveillance and body shame in mothers would predict greater body surveillance and body shame, as well as lower body esteem in adolescents, demonstrating a modeling effect. Therefore, a negative or non-significant relationship between mothers' and adolescents' self-objectification would indicate individuation, or lack of modeling. A positive mother-adolescent relationship was expected to predict lower self-objectification and higher body esteem in adolescents. Mother-adolescent relationship quality was expected to moderate the association between mothers' and adolescents' self-objectification, such that a positive mother-adolescent relationship would lead to modeling, whereas a negative relationship would lead to individuation. Additionally, we hypothesized that adolescent self-objectification would mediate the association between mother-adolescent relationship quality and adolescent body esteem, such that a negative mother-adolescent relationship would lead to greater body shame in adolescents, which would then produce poor body esteem. In other words, the mechanism by which relationship quality affects body esteem is adolescent self-objectification. Adolescents' BMI was included as a control.

Method

Participants

Participants were 179 female and 162 male adolescents and their mothers who are part of the ongoing longitudinal Wisconsin Study of Families and Work (WSFW), originally called the Wisconsin Maternity Leave and Health Project (Hyde, Klein, Essex, & Clark, 1995). Families were originally recruited from the Milwaukee and Madison areas of Wisconsin. Data for the current study were collected for mothers when the children had just completed fifth grade (2002-2003) and for adolescents when they had just completed ninth grade (2007-2008). Mothers' mean age at the time of assessment was 41.67 years (range 32–53), and adolescents' mean age at the time of assessment was 15.5 years (range 14–16). The majority of mothers were White (94%, $n = 374$); with 3% ($n = 10$) African American; 3% (10) American Indian; and less than 1% (3) Asian/Pacific Islander, Hispanic, or biracial or multiracial. The majority of adolescents were White (89%; 282), with 9% (29) biracial or multiracial, 1% African American (4), and 1% American Indian (2).

Design and Procedure

In-home visits took place during the summer after the youth completed fifth and ninth grade. All adolescent participants gave assent and their parents gave consent prior to data collection. Adolescents completed the measures on a laptop computer during an in-home visit, which lasted approximately 1.5 hrs. Researchers also measured the adolescents' height and weight. Mothers completed a paper questionnaire that they received prior to the in-home visit. Both adolescents and parents also completed a number of measures unrelated to the current study. Coefficient alphas for each measure are reported in Table 1; participants completed measures in the order presented below.

Adolescents' Measures

Body esteem—Adolescents' body esteem was measured using the body image subscale of the Self-Image Questionnaire for Young Adolescents (SIQYA; Petersen et al., 1984). The

scale consists of nine items, measured on a 6-point Likert scale from 1 (*does not describe me at all*) to 6 (*describes me very well*). A composite score was created by computing the mean of the items, allowing for one missing item. High scores indicated greater body esteem and agreement with statements such as “I am proud of my body” and “My body is growing about as quickly as I’d like it to.” The SIQYA was validated in a sample of early adolescent females and males, and the measure demonstrated high internal consistency and good construct validity with related measures (Petersen et al., 1984).

Body surveillance—Adolescents’ body surveillance was measured using the surveillance subscale of the Objectified Body Consciousness Scale for Youth (OBC-Y; Lindberg et al., 2006). The subscale consists of four items, measured on a 7-point Likert scale from 1 (*strongly disagree*) to 7 (*strongly agree*), with an option to answer that the item was not applicable. Items for which “not applicable” was answered were coded as missing. A composite score was created by computing the mean of the items, allowing for one missing value. High scores indicated higher surveillance and agreement with statements such as “During the day, I think about how I look many times” and “I often worry about how I look to other people.” The OBC-Y was validated in a sample of girls and boys ages 10-12; and the body surveillance and body shame subscales demonstrated strong internal consistencies, 2-week test-retest reliabilities, and good construct validity with related measures (Lindberg et al., 2006).

Body shame—Adolescents’ body shame was measured using the body shame subscale of the OBC-Y (Lindberg et al., 2006). The subscale consists of five items, measured on a 7-point Likert scale from 1 (*strongly disagree*) to 7 (*strongly agree*), with an option to answer that the item was not applicable. Items for which “not applicable” was answered were coded as missing. A composite score was created by computing the mean of the items, allowing for one missing value. High scores indicated greater body shame and agreement with statements such as “I would be ashamed for people to know what I really weigh” and “I feel ashamed of myself when I have not made an effort to look my best.”

Mother-adolescent relationship—The quality of the adolescent’s relationship with the mother was measured using the Network of Relationships Inventory (NRI; Furman & Buhrmester, 1985; Gavin & Furman, 1996). The scale consists of six aspects of the relationship (support, criticism, satisfaction, companionship, conflict, and reliable alliance), each measured by three items for a total of 18 items. Examples of the items are “How often do you turn to this person for support with personal problems” (support subscale) and “How much do you and this person argue with each other” (conflict subscale). Items were measured on a 5-point Likert scale from 1 (*little or none*) to 5 (*the most*). The criticism and conflict items were reverse-coded, and a composite score was created for the total scale by computing the mean of the 18 items, allowing for one missing item. Higher scores indicated a more positive relationship. The NRI was validated in a sample of girls and boys ages 11-13, and the subscales demonstrated satisfactory internal consistency reliabilities (Furman & Buhrmester, 1985).

BMI—The adolescents’ BMI was calculated using the formula (height in inches) / (weight in lbs.)² × 703 (Centers for Disease Control, 2011). At age 15, average BMI was 22.11 (*SD* = 4.04, range 13.08–40.25) for females and 22.52 (*SD* = 4.28, range 14.15–32.28) for males.

Mothers’ Measures

Body surveillance—Mothers’ body surveillance was measured using the body surveillance subscale of the OBC-Classic (OBC-C; McKinley & Hyde, 1996). The subscale consists of eight items, measured on a 7-point Likert scale from 1 (*strongly agree*) to 7

(*strongly disagree*). A composite score was created using the same methods used for the OBC-Y scale. High scores indicated higher surveillance and agreement with statements such as “I think more about how my body feels than how my body looks” (reverse-coded) and “I rarely think about how I look” (reverse-coded). The OBC-C was validated in both young and middle-aged women, and the subscales demonstrated good internal consistency and good construct validity (McKinley & Hyde, 1996).

Body shame—Mothers’ body shame was measured using the body shame subscale of the OBC-C (McKinley & Hyde, 1996). The subscale consists of eight items, measured on a 7-point Likert scale from 1 (*strongly agree*) to 7 (*strongly disagree*). A composite score was created using the same methods as used for the OBC-Y scale. High scores indicated greater body shame and agreement with statements such as “When I can’t control my weight, I feel like something must be wrong with me” and “Even when I can’t control my weight, I think I’m an okay person” (reverse-coded).

Analytic Methodology

The models examined in our study were analyzed in Mplus 5.2 (Muthén & Muthén, 2008) using path modeling. Path modeling is an advantageous analytical technique because it allows for a theoretical framework to be portrayed statistically in an entire path rather than examining direct effects separately (Kaplan, 2008). Additionally, path modeling provides a specified model estimation of how closely the data fit within the theoretical model, also known as goodness-of-fit statistics, whereas other types of statistical analyses do not allow for an understanding of how well the hypothesized models fit to the actual statistical models. Prior to conducting the analysis, variable raw scale scores were centered in order to reduce multicollinearity between the interaction terms and the main effect (Cronbach, 1987). Interaction terms were computed by multiplying the mother-adolescent relationship variable with each of the mother’s self-objectification variables (i.e. relationship X mother’s body shame and relationship X mother’s body surveillance). Path analyses were deemed appropriate for the sample size as well; sample sizes of 100 are typically satisfactory for convergence and sample sizes of 150 are ample for a convergent and proper solution (Anderson & Gerbing, 1984).

In addition to the advantages of the path modeling method, the statistical program Mplus also has other advantages. First, it allows for several different types of maximum-likelihood estimators. For the current analysis, we used maximum-likelihood robust (MLR) as an estimator of the observed log-likelihood; it also produces the correct asymptotic covariance matrix of the estimates that is not dependent on assumptions of normality. The MLR estimator provides a more conservative estimate of the data and yields a more robust chi-square test of model fit (Kaplan, 2008). In addition, MLR is typically used when the variables are continuous, as well as with Likert scales that have more than five options, which can be treated as continuous variables. Also, Mplus allows for specific procedures to adjust for missing data. Full information maximum likelihood (FIML) was used to handle missing data, in which separate covariances and means are calculated for each group of participants who have similar patterns of data completion and are then pooled together to estimate the log-likelihood for the entire sample. Percentages of missing data for each of the variables in the study were adolescent body esteem: 0%; adolescent relationship with mother: 0.6% ($n = 2$); adolescent body surveillance: 3.2% ($n = 11$); adolescent body shame: 9.1% ($n = 31$); mothers’ body surveillance: 22.9% ($n = 78$); mothers’ body shame: 22.9% ($n = 78$); and adolescent BMI: 28% ($n = 96$).

Several fit indices were used to determine the goodness-of-fit for the models tested in the analysis. For the current analyses, the chi-square goodness-of-fit statistic was used, along

with the degrees of freedom. Adequate fit of the model is indicated by a non-significant chi-square. In addition, the Comparative Fit Index (CFI), Tucker-Lewis Index (TLI), the root mean square error of approximation (RMSEA), and the standardized root mean square residual (SRMR) were used. Typically, a CFI value that is larger than .95 and an RMSEA value that is less than .06 are deemed acceptable for goodness-of-fit (Hu & Bentler, 1999). To identify potential misfit in the hypothesized measurement model, we examined modification indexes combined with theoretical rationale.

Results

Preliminary Analyses

Table 1 contains pairwise correlations, alphas, and descriptive statistics for the variables analyzed in our study. Initially, two multigroup models were run: one with path coefficients unconstrained across females and males and the other with path coefficients constrained to be equal for both gender groups. The chi-square difference test between the models was not significant, χ^2 difference (2) = 1.751, $p = .30$. In addition, we examined the constrained versus unconstrained multigroup model parameters to determine whether there were any differences between specific path coefficients for females and males. The paths for all associations were not significantly different between females and males, with one exception: BMI positively predicted body surveillance for males, but the path was not significant for females. Thus, one inclusive model was estimated for the entire sample, which included both genders together. The results from this path model are shown in Table 2 and Figure 1. As the hypothesized model indicated poor fit, χ^2 (3, $N = 341$) = 124.43, $p > .001$, CFI = .52, TLI = -2.34, RMSEA = .35, SRMR = .08, we ran a model with an additional path (adolescents' body surveillance predicting adolescents' body shame; see Figure 1), recognizing that these variables are typically correlated.

Final Path Model

Goodness of fit results for the final model were as follows: χ^2 (2, $N = 341$) = 1.005, $p = .61$, CFI = 1.00, TLI = 1.05, RMSEA = .00, SRMR = .01. The final model accounted for 34% of the variance in adolescents' body surveillance, 5% of the variance in adolescents' body shame, and 37% of the variance in adolescents' body esteem. We hypothesized that, for adolescents, greater body surveillance would predict greater body shame, and greater body surveillance and body shame would predict lower body esteem. As expected, greater body surveillance significantly predicted greater body shame in adolescents ($\beta = .54$, $p < .001$). Also as expected, greater body shame and body surveillance significantly predicted lower body esteem in adolescents (body shame: $\beta = -.43$, $p < .001$; body surveillance: $\beta = -.17$, $p = .01$).

To test the identification/modeling vs. individuation hypotheses, we tested whether body surveillance and body shame in mothers would predict body surveillance and body shame in adolescents. Mothers' body surveillance negatively predicted adolescents' body surveillance ($\beta = -.12$, $p = .02$), such that greater body surveillance in mothers predicted less body surveillance in adolescents. Mothers' body shame positively predicted adolescents' body surveillance ($\beta = .13$, $p = .01$), such that greater body shame in mothers predicted greater body surveillance in adolescents. Mothers' body surveillance and body shame did not significantly predict adolescents' body shame. In addition, there was a significant indirect effect from mothers' body shame to adolescents' body surveillance to adolescents' body esteem, indicating a mediated effect ($\beta = -.02$, $p = .05$). Greater body shame in mothers predicted greater body esteem in adolescents, with the effect mediated by adolescents' body surveillance.

We also hypothesized that the quality of the mother-adolescent relationship would positively predict adolescents' body esteem, with adolescents' body surveillance and body shame mediating that association. Results indicated that a more positive mother-adolescent relationship significantly predicted lower body shame ($\beta = -.17, p = .01$) and higher body esteem ($\beta = .20, p < .001$) in adolescents. The indirect effect of the quality of the mother-adolescent relationship to adolescents' body shame to adolescents' body esteem was significant, indicating a mediated effect for this relationship ($\beta = .07, p = .01$). Additionally, there was a significant indirect effect of the mother-adolescent relationship quality to adolescents' body surveillance to adolescents' body shame to adolescents' body esteem, indicating a mediated effect for this relationship ($\beta = .02, p = .05$). Thus, a more positive mother-adolescent relationship was related to higher body esteem in adolescents, with the effect mediated by adolescent body surveillance and body shame. BMI did not significantly predict any of the variables in the model.

In addition, we hypothesized that the quality of the mother-adolescent relationship would moderate the relationship between mothers' and adolescents' self-objectification, such that adolescents would be more likely to model mothers' self-objectification if they had a more positive relationship. To test this hypothesis, we examined the interaction of mothers' body surveillance and the quality of the mother-adolescent relationship on the adolescents' body surveillance, as well as the interaction of mothers' body-shame and the quality of the mother-adolescent relationship on adolescents' body-shame. None of the interactions was significant in the model.

Discussion

The aims of our study were to examine the associations between mothers' self-objectification with adolescents' self-objectification and body esteem and to explore whether these associations were related to the quality of the mother-adolescent relationship. The relationship between mothers' and adolescents' self-objectification revealed a number of interesting patterns. In the path model, mothers' body surveillance was negatively related to adolescents' body surveillance, and mothers' body shame was positively related to adolescents' body surveillance. Neither body surveillance nor body shame in mothers was related to adolescents' body shame. The pairwise correlations revealed a different pattern. For females, the only significant correlation between mothers' and adolescents' self-objectification was a negative correlation between mothers' body shame and adolescent females' body shame. For males, the only significant correlation between the mothers' and adolescents' self-objectification was a negative correlation between mothers' body surveillance and adolescent males' body surveillance. In the path model, although the quality of the mother-adolescent relationship was negatively related to adolescents' body shame and positively related to adolescents' body esteem, the quality of the mother-adolescent relationship did not moderate the association between mothers' and adolescents' self-objectification.

Individuation or Identification?

The social cognitive theory of gender development proposes that attitudes and behaviors are learned from parents through modeling (Bussey & Bandura, 1999), and previous research demonstrated that adolescents learn from and model their mothers' values, attitudes, and behaviors about weight and body image (Benedikt et al., 1998; Hill & Franklin, 1998; Keery et al., 2006). Thus, we would expect that mothers with more negative body image or higher self-objectification would transmit these attitudes to their adolescent children. In the current study, results from both the pairwise correlations and the path model indicated that adolescents did *not* model mothers' body surveillance and body shame. Specifically, the

relationships between the variables in both analyses were either negative or not significant. Overall, these results suggest a process primarily of individuation over identification.

Our findings support previous research on individuation in adolescents in which they report having individuated relationships from their mothers (and fathers; Delaney, 1996), specifically in terms of independent attitudes, feelings, and behaviors (Newman, 1989). Furthermore, the negative relationship between mothers' and adolescents' body surveillance indicates not only that mothers who have high body surveillance do not pass this cognitive aspect of self-objectification on to their adolescents, but also the reverse pattern. Adolescents may not see their mothers engaging in body surveillance but develop high body surveillance regardless. Previous research has suggested that the normative process of individuation might be linked to body image and eating disorders. For example, one study of eating disorders in college-aged women found that this behavior might represent a college student's attempt to negotiate individuation (Barth, 2003). It is possible that a similar process is happening with the adolescents in the current study.

Previous research on individuation indicates that connectedness and autonomy predict positive changes in self-esteem and ego-development (Allen, Hauser, Bell, & O'Connor, 1994; Grotevant & Cooper, 1985). For adolescent males, individuation is related to psychological well-being and connectedness (McLean, Breen, & Fournier, 2010). Given the negative association between adolescents' self-objectification and body esteem, individuation from mothers' self-objectification may indirectly have a positive effect on adolescents' body esteem. Perhaps adolescents individuate from their mothers in order to experience more well-being and self-esteem, including body esteem. In other words, the process of individuating may result in less self-objectification and higher body esteem in adolescents. Of course, the reverse pattern may also be true: adolescents might individuate in the direction of higher self-objectification in response to mothers' lower self-objectification.

Mother-Adolescent Relationship Quality

An important aspect of our study was the inclusion of the quality of the mother-adolescent relationship as a predictor of adolescent self-objectification and body esteem. A more positive relationship with the mother was related to lower body shame and higher body esteem in adolescents. These findings are consistent with previous research demonstrating that more positive parental relationships and more perceived acceptance are associated with more positive body image, less body dissatisfaction, and healthier eating in adolescent females (Archibald et al., 1999; Barker & Galambos, 2003; Swarr & Richards, 1996) and that positive messages from mothers are related to satisfaction with body shape in adolescent males (Ricciardelli et al., 2000). Barker and Galambos (2003) framed perceived acceptance from mothers and fathers as a significant resource factor, predicting less body dissatisfaction in adolescent females. The concept of resource factors, such as a positive parent-child relationship, originated from the body of research on resiliency in children and has been applied to body dissatisfaction in adolescents (Crago, Shisslak, & Ruble, 2001). Similarly, a positive mother-adolescent relationship in the current study was a significant resource factor in predicting greater body esteem in adolescents.

We hypothesized that the quality of the mother-adolescent relationship would moderate the effect of mothers' self-objectification on adolescents' self-objectification, in the sense that adolescents would be more likely to model their mother's attitudes and behavior when relationship quality was positive and individuate from the mother when relationship quality was negative. This interaction, however, was not significant. This suggests that relationship quality has a positive effect on adolescents' body image, regardless of the level of the mothers' self-objectification.

Gender, Self-Objectification, and Body Esteem

We found the typical gender differences in mean scores for body surveillance, body shame, and body esteem. Perhaps more noteworthy are the findings of gender similarities in correlations, and presumably, underlying processes. For example, body surveillance and body shame are positively correlated for females and males, and maternal relationship quality positively correlated with body esteem for both females and males. Moreover, there was no evidence that the path model shown in Figure 1 differed for females and males. Therefore, although females and males may differ substantially in average scores for body surveillance and body shame, the relationships among the variables are similar for both genders, pointing to gender similarities in the underlying psychological processes that link these variables.

Limitations and Future Directions

The finding that adolescents individuated from mothers in terms of self-objectification may be limited by the fact that the study was conducted in the United States. Previous research in the field of cultural psychology has demonstrated that U.S. culture emphasizes independence in a person's self-construal, whereas other cultures are more interdependent, emphasizing community (Markus & Kitayama, 1991). Although the distinction between independence and interdependence is typically made more generally in terms of self-construal, it could also apply to the developmental process of adolescents modeling parents' behavior. It is possible that adolescents in the current study are not modeling their mothers' self-objectification because their experience is situated within a larger cultural context that emphasizes independence. This would suggest that a similar study conducted with an adolescent sample drawn from a more collectivist culture might reveal a different pattern.

Other results in our study could reflect and thus be restricted to our primarily White sample. Previous research has suggested that body image might operate differently in racial and ethnic minority populations. In a study of body dissatisfaction in a diverse sample of urban children in grades 4-6, results indicated that Asian children had significantly greater body dissatisfaction than African American and other children (Xanthopoulos et al., 2011). Mean body dissatisfaction for White children was similar to that for Hispanic children, slightly higher than for African American and other children, and slightly lower than for Asian children. A meta-analysis of body dissatisfaction and ethnicity among women in the United States demonstrated that White women had greater body dissatisfaction than Black women, although the effect size was small ($d = .29$; Grabe & Hyde, 2006). A small difference in means was also found between Black and Hispanic women ($d = .18$), with Hispanic women having greater body dissatisfaction. Perhaps self-objectification also operates differently in ethnic minority populations.

Furthermore, ethnicity may interact with other factors such as socioeconomic status (SES) to produce differences in body dissatisfaction. In a study measuring body dissatisfaction and self-esteem in a diverse group of adolescents 11-18 years-old, the relationship between the two variables differed by SES and ethnicity for females, but not for males (van den Berg, Mond, Eisenberg, Ackard, & Neumark-Sztainer, 2010). Results from their study indicated that the relationship between body dissatisfaction and self-esteem was non-significant in underweight females; significant among Black, Asian, and low SES females; and weaker in comparison to White and high SES females. An in-depth investigation of ethnicity and SES was beyond the scope of the current study, but it is important to consider how such factors might affect body image constructs in adolescents. Future research could investigate self-objectification and the mother-adolescent relationship in a more diverse population to examine differences related to ethnicity and SES.

The current study included the role of mothers in self-objectification and body esteem in adolescents, but not other sociocultural influences such as fathers, peers, or media images. The tripartite influence model suggests that peers, parents, and the media all influence body image (van den Berg, Thompson, Obremski-Brandon, & Covert, 2002) and that these factors may interact with individual and other sociocultural factors to predict body dissatisfaction (Barker & Galambos, 2003). Future research on adolescent self-objectification could include multiple factors to gain a more complete picture of sociocultural influences on body image constructs. However, the use of mothers only in the current study allowed a more fine-grained look at this particular sociocultural influence.

Our study focused on mothers' self-objectification and the quality of the mother-adolescent relationship rather than the father-adolescent relationship. Although past research has demonstrated the importance of the mothers' role in adolescents' body image (Benedikt et al., 1998; Hill & Franklin, 1998; Keery et al., 2006; Ricciardelli et al., 2000; Stanford & McCabe, 2005), it would be important in future research to include fathers to gain a more complete picture of the sociocultural influence of parents. Additionally, some interesting gender differences might arise regarding identification/modeling and individuation with mothers' versus fathers' self-objectification and how the quality of the mother-adolescent and father-adolescent relationships play a role in the transmission of values and attitudes regarding body image.

Self-objectification was measured for both adolescents and mothers in our study, but body esteem and BMI were measured only in adolescents. Future studies should examine whether adolescents model their mothers' body esteem and how this may be related to the mothers' BMI and the quality of the mother-adolescent relationship. For example, it is possible that having a mother with a BMI that is significantly under or over the normal range might be related to more self-objectification or lower body esteem in adolescents. Perhaps adolescents would become more preoccupied with their own bodies as a result of observing their mother's body as being outside the norm.

Additionally, self-objectification was measured for mothers at an earlier time point than for adolescents. It is possible that self-objectification changes for mothers over time, as it does for adolescents related to pubertal development (Grabe et al., 2007). However, a 10-year follow-up study of self-objectification in two cohorts of women found that whereas self-objectification decreased for young adult women over time, it did not change for middle-aged women (McKinley, 2006a). Thus, it is unlikely that mothers' self-objectification changed significantly from when it was measured after adolescents' fifth grade year to when adolescents' self-objectification was measured after ninth grade. It is also possible that having an adolescent daughter or son with negative body image or high self-objectification could affect a mother's self-objectification. This would be an interesting topic to explore in future research.

Although mothers' self-objectification might not change dramatically over time, change in adolescent self-objectification and body esteem is likely as adolescents move through this period of cognitive, physical, and social development. The cross-sectional nature of the current study did not allow for examination of change over time. Measurement of the mothers' self-objectification at an earlier time point does allow us to conclude that mothers' self-objectification predicts adolescents' self-objectification, although we cannot draw causal conclusions because the relationship is correlational. More longitudinal studies of self-objectification, body esteem, and the mother-adolescent relationship would be a fruitful area for future research.

Practice Implications

As we have discussed, body image concerns—specifically self-objectification—are prevalent among adolescents and are related to problematic physical and mental health outcomes such as body dissatisfaction, depression, and eating disorders. Our research has demonstrated that adolescents' body image may be influenced by their mothers' own body image attitudes and behaviors, as well as by the quality of the mother-adolescent relationship. In particular, a positive mother-adolescent relationship predicted less body shame and greater body esteem in adolescents, for both girls and boys. The quality of the mother-adolescent relationship is a clear point of entry for interventions addressing negative body image in adolescents. Structural family therapy (SFT; Minuchin, Lee, & Simon, 2006) focuses specifically on disrupting dysfunctional family relationships between specific family members by addressing issues such as rigidity, support, nurturance, and power. This therapeutic approach can be particularly powerful when addressing parent-child relationships that are indicative of poor boundaries and ineffective communication (Vetere, 2001). Therapists should work with adolescents and their mothers toward a more positive relationship quality, which could then positively impact adolescents' body image.

It would also be useful to educate mothers about the potential effects of the quality of the relationship with their adolescent on the adolescent's body image. Although it is important not to blame mothers for their adolescents' poor body image, knowing that relationship quality can affect adolescent body image could encourage mothers to foster more positive relationships with their adolescent children. It is important to note that a positive parent-adolescent relationship effect may not be exclusive to mothers. Positive father-adolescent relationships might have a similar effect, but this area of research remains to be studied.

Conclusions

The current study examined associations among self-objectification, body esteem, and BMI in middle adolescents and self-objectification in mothers and whether these associations were related to the quality of the mother-adolescent relationship. Whereas some results supported previous research regarding adolescent self-objectification and body esteem, other results were surprising. Mothers' self-objectification was unrelated, and in some cases negatively related, to adolescents' self-objectification—suggesting that adolescents displayed individuation rather than identification. A more positive relationship between mothers and adolescents predicted less self-objectification and greater body esteem in adolescents, suggesting that the quality of the mother-adolescent relationship may be a protective factor for adolescents' body image. This is an important consideration for interventions for negative body image in adolescents. The quality of the mother-adolescent relationship did not, however, moderate the association between the mothers' and adolescents' self-objectification. These findings contribute to our understanding about the specific sociocultural influence of mothers, as well as the importance of considering the quality of the mother-adolescent relationship when examining adolescent self-objectification and body esteem.

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Figure 1. Final path model in which solid lines indicate significant paths; dotted lines, non-significant paths.

Table 1
Descriptive Statistics and Correlations among Study Variables for Adolescents and Mothers

Measure	1	2	3	4	5	6	7
1. Adolescents' body surveillance	(.88)	.52**	-.43*	.05	.06	.06	-.25**
2. Adolescents' body shame	.55**	(.83)	-.64**	.28**	-.11	-.27**	-.30**
3. Adolescents' body esteem	-.34**	-.52**	(.83)	-.23*	.04	.19*	.41**
4. Adolescents' BMI	.17	.23*	-.15	--	-.09	-.17	.11
5. Mothers' body surveillance	-.21*	.04	-.06	-.08	(.79)	.43**	-.01
6. Mothers' body shame	-.05	.04	-.03	-.17	.48**	(.85)	.13
7. Relationship	-.17*	-.15	.22**	.08	-.04	.10	(.92)
Mean (SD) for females	4.74 (1.39)	2.58 (1.38)	4.37 (.91)	22.11 (4.04)			3.76 (.73)
Mean (SD) for males	3.58 (1.48)	1.96 (1.11)	4.82 (.69)	22.52 (4.28)			3.68 (.66)
Females vs. males	$t(328) = 7.29^{***}$	$t(308) = 4.33^{***}$	$t(339) = 5.03^{***}$	$t(243) = .775$			$t(337) = 1.16$
Mean (SD) for mothers					3.82 (.95)	4.81 (1.20)	

Note. Higher scores represent greater self-objectification, body esteem, BMI, and a more positive mother-adolescent relationship. Female correlations are presented above; male correlations, below the diagonal. The coefficient alpha for each measure appears along the diagonal in parentheses.

* $p < .05$.

** $p < .01$.

*** $p < .001$.

Table 2
Results of Path Models Examining Predictors of Adolescents' Body Surveillance, Shame, and Esteem

	<i>SD</i>	<i>USD</i>	<i>p</i>
Direct Paths			
Mothers' Body Surveillance (BSu) →			
Adolescents' Body Surveillance	-.12	-.24	.02
Adolescents' Body Shame (BSh)	-.02	-.03	.80
Adolescents' Body Esteem (BE)	-.05	-.05	.31
Mothers' Body Shame →			
Adolescents' Body Surveillance	.13	.21	.01
Adolescents' Body Shame	-.09	-.12	.14
Adolescents' Body Esteem	.03	.03	.50
Adolescents' Relationship with Mother →			
Adolescents' Body Surveillance	-.09	-.21	.07
Adolescents' Body Shame	-.17	-.34	.01
Adolescents' Body Esteem	.20	.24	<.001
Adolescents' BMI →			
Adolescents' Body Surveillance	.08	.01	.08
Adolescents' Body Shame	.04	.01	.43
Adolescents' Body Esteem	-.02	-.001	.71
Adolescents' Body Surveillance → Body Shame	.54	.65	<.001
Adolescents' Body Shame → Body Esteem	-.43	-.26	<.001
Adolescents' Body Surveillance → Body Esteem	-.17	-.08	.01
Interaction: Relationship with Mothers' BSu and Adolescents' BSu	-.01	-.02	.89
Interaction: Relationship with Mothers' BSu and Adolescents' BSh	-.01	-.03	.90
Interaction: Relationship with Mothers' BSh and Adolescents' BSu	.07	.16	.12
Interaction: Relationship with Mothers' BSh and Adolescents' BSh	.04	.08	.56
Indirect Paths			
TE from Mothers' Body Surveillance → Body Esteem	-.02	-.02	.71
TIE from Mothers' Body Surveillance → Body Esteem	.03	.03	.40
SIE from Mothers' BSu and Adolescents' BSu → BE	.02	.02	.07
SIE from Mothers' BSu and Adolescents' BSh → BE	.01	.01	.80
SIE from Mothers' BSu, Adolescents' BSu, and Adolescents' BSh → BE	.001	.001	.80
TE from Mothers' BSh → Body Esteem	.06	.05	.34
TIE from Mothers' BSh → Body Esteem	.02	.02	.47
SIE from Mothers' BSh and Adolescents' BSu → BE	-.02	-.02	.05
SIE from Mothers' BSh and Adolescents' BSh → BE	.04	.03	.14
SIE from Mothers' BSh, Adolescents' BSu, and Adolescents' BSh → BE	.01	.01	.21

	<i>SD</i>	<i>USD</i>	<i>p</i>
BSh → BE			
TE from BMI → Body Esteem	-.05	-.004	.33
TIE from BMI → Body Esteem	-.04	-.003	.24
SIE from BMI and Adolescents' BSu → BE	-.01	-.001	.15
SIE from BMI and Adolescents' BSh → BE	-.02	-.001	.44
SIE from BMI, Adolescents' BSu, and Adolescents' BSh → BE	-.004	.000	.46
TE from the Relationship → Body Esteem	.30	.36	<.001
TIE from the Relationship → Body Esteem	.10	.12	.002
SIE from Relationship and Adolescents' BSu → BE	.01	.02	.10
SIE from Relationship and Adolescents' BSh → BE	.07	.09	.01
SIE from Relationship, Adolescents' BSu, and Adolescents' BSh → BE	.02	.02	.05
<i>R</i> ²			
Adolescents' Body Surveillance		.34	<.001
Adolescents' Body Shame		.05	.06
Adolescents' Body Esteem		.37	<.001

Notes: TE=Total Effect, TIE= Total Indirect Effect, SIE= Specific Indirect Effect, SD= Standardized Coefficient, USD=Unstandardized Coefficient, reported *p*-values are SD.