Sex Roles (2010) 63:609–620
DOI 10.1007/s11199-010-9868-1

ORIGINAL ARTICLE

Body Size Stereotyping and Internalization of the Thin Ideal in Preschool Girls

Jennifer A. Harriger · Rachel M. Calogero · David. C. Witherington · Jane Ellen Smith

Published online: 15 October 2010

Abstract Despite the multitude of negative outcomes associated with thin-ideal internalization for girls and women living in westernized societies, we know very little about how early in development thin-ideal internalization occurs or how it might manifest in very young children. This cross-sectional investigation assessed body size stereotyping and thin-ideal internalization in 55 preschool girls (ages 3–5 years) from the Southwestern U.S. using a new method of assessment that is more sensitive to the cognitive developmental stage of this age group. Results suggest that girls as young as 3 years old are already emotionally invested in the thin ideal. Discussion considers moving beyond the demonstration of fat stigmatization per se to measure how personally invested preschool children may be in beauty ideals.

Keywords Preschool children · Body image · Anti-fat beliefs · Body size stereotypes · Thin-ideal internalization

Introduction

The central purpose of the present research was to examine body size stereotyping and thin-ideal internalization among a sample of preschool girls. Despite the multitude of negative outcomes associated with thin-ideal internalization for girls and women living in westernized societies such as the U.S. (Calogero et al. 2007; Greenfield et al. 1987; Stice 2002; Thompson and Stice 2001), we know very little about how early in development the internalization of the thin ideal occurs or how it might manifest in very young children. This limited knowledge is due, in part, to the lack of appropriate assessment tools for this age group. Extending prior research on fat stigmatization in young children (Cramer and Steinwert 1998; Musher-Eizenman et al. 2004), this cross-sectional investigation sought to assess body size stereotyping and thin-ideal internalization in American preschool girls (ages 3–5 years) using a method of assessment that is more sensitive to the cognitive developmental stage of very young children.

It is well-established in westernized societies that physically attractive people are more often socially rewarded and less likely to be stigmatized compared to less attractive people (Cash 1990; Dion et al. 1972; Eagly et al. 1991; Swami and Furnham 2007). Yet, plenty of evidence has demonstrated that physical appearance is more important for women's social success than for men's (Davis 1990; Dellinger and Williams 1997; Eagly et al. 1991; Engeln-Maddox 2006; Evans 2003; Fiske et al. 1991; Seid 1989)—and girls and women are defined and treated more often as bodies than boys and men (Calogero and Thompson 2010; Fredrickson and Roberts 1997; Unger 1979), even preschool age girls (Ambrosi-Randic 2000; Davison et al. 2000; Martin 1998; Wood et al. 1996). A recent qualitative report indicated that while mothers of 4-year-old children communicate weight concerns to both sons and daughters, it is primarily with their daughters that they instill a fear of becoming "fat" and the importance of weight control (McCabe et al. 2007). Researchers have

J. A. Harriger (✉)
Pepperdine University,
Malibu, CA, USA
e-mail: jennifer.harriger@pepperdine.edu

R. M. Calogero
Virginia Wesleyan College,
Norfolk, VA, USA

D. C. Witherington · J. E. Smith
University of New Mexico,
Albuquerque, NM, USA

demonstrated that 5 and 6-year-old girls are already reporting a desire for a thinner body (Flannery-Schroeder and Chrisler 1996; Gardner et al. 1997; Lowes and Tiggemann 2003).

Accordingly, girls and women come to place more importance on appearance than boys and men, and they engage in more appearance management to conform to feminine beauty ideals (Dion et al. 1990). For girls and women living in westernized societies, the most prominent feature of ideal feminine beauty and attractiveness is thinness (Calogero et al. 2007; Hesse-Biber 1996; Owen and Laurel-Seller 2000; Thompson et al. 1999). Researchers have further documented that the current ideal body type for women is not only thin, but a 'curvaceously thin' body shape (Harrison 2003; Overstreet et al. 2010)—which is not simply a matter of attaining a low body weight but also having the necessary fat distribution in certain areas (e.g., breasts, buttocks) to achieve the desired body proportions.

Although boys and men also experience body dissatisfaction (Jones 2004; McCabe and Ricciardelli 2004; Thompson and Cafri 2007), the nature of sociocultural ideals for a masculine appearance feature muscularity, muscle size, and leanness more prominently than thinness (Smolak et al. 2001; Thompson et al. 1999)—and boys are not as dissatisfied with their bodies as girls (McCabe and Ricciardelli 2004). For example, Williamson and Delin (2001) found that girls between the ages of 5 and 10 years chose an ideal body size that was smaller than their actual body, whereas no difference between actual and ideal body size was demonstrated for boys. For these reasons, we narrowed the scope of this paper to focus on preschool girls.

Of particular concern is the accumulation of experimental and longitudinal evidence demonstrating that personal internalization of these beauty ideals, especially of the thin ideal, is a risk factor for body image disturbance and eating pathology in girls and women (Greenfield et al. 1987; Stice 2002; Stice and Shaw 2002; Thompson and Stice 2001). Researchers have demonstrated that a negative attitude toward fatness has implications for girls' self-perceptions as well (Cramer and Steinwert 1998; Mendelson et al. 1996; Musher-Eizenman et al. 2004; Neumark-Stzainer et al. 1998; Pierce and Wardle 1993). If we consider that the average weight of girls and adult women in the United States is increasing (Ogden et al. 2004), internalization of the thin ideal may become even more detrimental to girls and women. Despite the multitude of negative outcomes associated with thin-ideal internalization, we know very little about how early in development it occurs and how it might manifest in preschool girls (for review of children's body image concerns, see Ricciardelli and McCabe 2001). In the service of prevention and early intervention of negative body image and eating-related pathology in young girls, the purpose of this study was to examine body size stereotyping and thin-ideal internalization in preschool girls using age-appropriate tasks for the assessment of these constructs.

Body Size Stereotyping in Preschool Children

In westernized societies, fatness is highly stigmatized whereas thinness is generally glorified (Crandall 1994; Puhl and Heuer 2009). Fatness is associated with negative stereotypes such as lazy, stupid, unattractive, and undisciplined and, perhaps consequently, fat people experience more social exclusion, isolation, and criticism compared to thin people (Allon 1982; Cash 1995; Chen and Brown 2005; Fikkan and Rothblum 2005; Tiggemann and Rothblum 1988). The stigmatization of fatness is apparent early in childhood (Goldfield and Chrisler 1995; Latner and Stunkard 2003; Tiggemann and Anesbury 2000) and communicated in children's media (Baker-Sperry and Grauerholz 2003; Herbozo et al. 2004; Latner et al. 2007). Researchers have demonstrated that both female and male preschool children are aware of the body-size stereotypes that exist in their culture (Musher-Eizenman et al. 2004). For example, American and Australian boys and girls demonstrate a preference for thin and average-sized targets as early as 3 years old (Frankova 2000; Lowes and Tiggemann 2003) and an aversion to fat-sized targets (Brylinsky and Moore 1994; Cramer and Steinwert 1998; Wright and Bradbard 1980). Other research has demonstrated that 3-year-old boys and girls attribute negative characteristics to fat-sized targets, and prefer thin and average-sized targets as playmates compared to fat-sized targets (Cramer and Steinwert 1998; Frankova 2000).

Although these studies have established that preschool children engage in body size stereotyping, they do not demonstrate whether children at this age have adopted these views as their own. It has proven difficult to examine personal internalization of these views in children younger than 6 years old. Most studies require children to point to the figure that they like best, like least, or that they think looks most similar to a given characteristic (e.g., mean/nice, cute/ugly) that is read to them (Musher-Eizenman et al. 2004). However, preschool children are unable to accurately select figures that represent their own body type (Collins 1991; Gardner et al. 1997) or their feelings about their own body size (Eder and Magelsdorf 1997; Marsh et al. 2002).

While there is controversy in the literature as to when children are metacognitively able to accurately express their own feelings, most researchers agree that 3-year-olds are not capable of doing so (Kuhn 2000; Perner 2000)—and that self-report indices are inappropriate for 3-year-olds, and also for some 4-year-olds (Kuhn 2000; Perner 2000). Researchers also agree that 4 and 5-year-olds are relatively capable of reflecting on aspects of self and identity; however, this ability does not seem to emerge before the

age of 4 (Eder and Magelsdorf 1997; Marsh et al. 2002). Yet, when asking 4 and 5-year-olds to self-report, many biases still enter into their responses that are not evident in older children, who by 7 or 8 years of age can articulate coherent and construct-oriented self-narratives (von Baeyer et al. 2009). Because self-report measures are not appropriate for children younger than 5, the present study developed and utilized an alternative method for measuring the internalization of body size ideals that is sensitive to the cognitive developmental stage of very young children.

Thin-Ideal Internalization in Preschool Girls

Thin-ideal internalization refers to the extent to which girls and women cognitively accept the cultural beauty ideal of thinness and a slender body shape as their own personal standard and engage in behaviors designed to help them meet that standard (Thompson et al. 1999; Thompson and Stice 2001)—and is typically measured via self-report questionnaires. The thin ideal represents the particular body shape and weight that girls and women would like to have or wish to be. Thin-ideal internalization has been primarily studied in adult and adolescent populations (for review, see Stice 2002), but some research has reported thin-ideal internalization in girls as young as 8-years-old (Blowers et al. 2003; Eddy et al. 2007). As described above, very young children are not yet capable of providing accurate self-reports of their thin-ideal internalization. It is possible that evidence for thin-ideal internalization might be found even earlier by using a method more appropriate for preschool-aged girls.

One way to assess this phenomenon in girls could be via the degree of emotional investment in particular body sizes. Emotional investment tasks are designed to elicit emotion in the participant, and are used often in infant and toddler research where the participants are unable to express their feelings and thoughts. For example, instead of asking 2-year-olds how they would feel if they spilled a glass of water (which would likely elicit a blank stare), researchers set up a situation in which the glass the children are holding starts to dribble uncontrollably and then measure or code the children's responses (Cole et al. 1992). In other words, emotional investment tasks allow the researcher to obtain information that children may not be able to accurately verbalize.

Previous studies have asked preschool children to indicate which characteristics they associate with different body sizes (e.g., via an adjective attribution task) or to select potential playmates from a range of figures with different body shapes in a friend selection task (Cramer and Steinwert 1998; Musher-Eizenman et al. 2004). To our knowledge, no research to date has examined children's emotional investment in these selections. The degree to which preschool girls are emotionally invested in particular body ideals reflects a key distinction between the mere awareness of cultural body size ideals and the internalization of these ideals as their own personal standards (Thompson et al. 1999; Thompson and Stice 2001). While it is important to measure children's awareness of body size stereotypes, we know that awareness is a precursor to the internalization of these beliefs (Thompson et al. 1999), and thus it seems critical to begin investigating the actual internalization of the thin ideal in preschool children. Indeed, awareness of body size stereotypes is not a risk factor for eating pathology and body dissatisfaction, whereas internalization of these body ideals is a known risk factor (Blowers et al. 2003; Thompson et al. 1999; Thompson and Stice 2001).

Emotional investment in thinness may indicate that preschool girls have attributed significance to westernized ideals of thinness and fat stigmatization and that these ideals have become central to their own belief system. In particular, a measure of emotional investment in thinness could overcome certain demand characteristics in children, such as merely repeating what they have heard in the media or at home, or providing the answers that they think the researcher wants to hear (Huon et al. 1997). As described below, the present study attempts to overcome these biases and limitations of past self-report research by including an emotional investment task to measure thin-ideal internalization in very young girls.

Studying Thin-Ideal Internalization in Preschool Girls

Since our primary interest was in studying thin-ideal internalization in preschool girls, we developed a new method of assessment of this construct that would be more appropriate for this age group. This method relied on the use of two popular board games for children between the ages of 3 and 5-years-old. Specifically, preschool girls were invited to play either Candy Land or Chutes and Ladders with the first author. Children were asked which game piece they would like to be when playing the game. Three different game pieces were specially designed for this task such that they varied only in body type: one was thin, one was average, and one was fat. After they chose a game piece, the researcher offered to switch game pieces with the children. The main purpose of the task was to assess the emotional investment of each girl in the specific game piece that she selected to play the game based on how willing she was to switch her game piece for a different one. Since the only difference between the three game pieces was body type, if the girls selected the thin body type as the character *they want to be* to play the game, we inferred that they want to have that body type more than the other types. In the context of preparing to play the game, preschool girls were asked to switch their thin body game piece for the fat body game piece to play the game, and their responses to this request were coded for willingness to change pieces—thus, willingness to switch game pieces

served as an additional index of thin-ideal internalization. The current study explores the utility of using this game piece selection task for studying the internalization of body size ideals in preschool girls.

Overview of Research

The present study examined body size stereotyping and thin-ideal internalization in 3 to 5-year-old girls. The first purpose of this study was to replicate previous findings by demonstrating body size stereotyping in children as young as 3-years-old. The second purpose of this study was to explore the utility of a game piece selection task to assess the degree of emotional investment in different body size ideals in preschool girls, thus serving as a proxy for thin-ideal internalization in this age group. The specific hypotheses for the tests of body size stereotyping were as follows:

H1: We expected that preschool girls would attribute more negative adjectives (i.e., mean, ugly, has no friends, stupid, sloppy, and loud) to fat targets than to thin or average size targets, and more positive adjectives (i.e., nice, cute, has friends, smart, neat, and quiet) to thin and average size targets than to fat targets.

H2: We expected that preschool girls would select thin or average size targets more frequently than fat targets as their desired playmates.

The specific hypotheses for the tests of thin-ideal internalization were as follows:

H3: We expected that preschool girls would be more likely to select a figure with a thin body type compared to a fat or average size body type as their personal character to play a popular board game.

H4: We expected that preschool girls who selected a character with a thin body type to play the board game would be more likely to refuse than agree to switch their game piece for a character with a fat body type.

Method

Participants

A total of 55 girls between the ages of 3 and 5 years old participated in the study. The sample included 19 3-year-olds (M=3.59, SD=.28), 20 4-year-olds (M=4.60, SD=.25), and 16 5-year-olds (M=5.55, SD=.31). Half of the sample was Caucasian (51%), 35% was Hispanic, and 14% was comprised of other ethnicities. Participants were recruited from a database of families who had previously participated in research at the University of New Mexico. A trained research assistant called those families with children who met the gender and age requirements of the study, and scheduled appointments with the families to attend a session at the University of New Mexico. Of the families who were contacted, 63% scheduled an appointment to participate.

Materials

Body Size Stereotyping

Two tasks were employed to assess body size stereotyping. The first task was an *adjective attribution task*. Each child was presented with a sheet of paper that displayed three female figures taken from Collins' (1991) original figure array for children that differed in body size. Collins' original figure array displays seven figures identical in every way except for body size, ranging from very thin to very fat. For the purpose of the current study, only the thinnest, fattest, and most average figure were selected to represent the thin, fat, and average size same-gender targets for the adjective attribution task. These body types correspond to figures A, D and G from Collins' (1991) original study, respectively, and each figure was 2 in. tall. Adequate reliability and validity for the use of these figures with samples of young children has been demonstrated and reported elsewhere (Collins 1991; Ricciardelli & McCabe 2001; Vander Wal and Thelan 2000).

To complete the adjective attribution task, the preschool girls were instructed to point to one of the three figures placed in front of them that they thought matched one of 12 given descriptors: "Point to the girl that you think is/has _____." Six of the adjectives were positive descriptors: nice, smart, friends, neat, cute, and quiet. Six of the adjectives were negative descriptors: mean, stupid, no friends, sloppy, ugly, and loud. The 12 adjectives were read to the children in randomized order. For data analysis, when an adjective was read aloud, the selection of the thin target was coded "1," the average size target was coded "2," and the fat target was coded "3." This differed slightly from the task used by Musher-Eizenman et al. (2004) where they asked 4 to 6-year-olds to place each sized figure in one of seven boxes along a scale between the two polar adjectives. It was decided that for the current study, the task should be modified to facilitate comprehension of the task for 3-year-olds. This task initially yielded 12 responses for each girl—the girls' figure selection for each adjective that was read to them. The adjectives were then categorized as positive or negative attributes. Mean scores for number of positive adjectives and negative adjectives attributed to each body type were calculated. Scores ranged from 1 to 6, with higher scores indicating that more adjectives were attributed to that body type. Prior research has demonstrated the reliability and validity of the adjective attribution task for the assessment of body size stigmatization in young children (Brylinsky and Moore

1994; Cramer and Steinwert 1998; Musher-Eizenman, et al. 2004; Tiggemann and Wilson-Barrett 1998).

The second task was a *friend selection task*. Preschool girls were presented with the same three body types as described above, but for this task there were three identical figures presented for each body type for a total of nine figures randomly arranged on the page. Preschool girls were asked to circle the three targets with whom they would most like to play, and then circle the target that they would want to have for a best friend. For each girl, the body type of the target selected was recorded for Friend 1, Friend 2, Friend 3, and Best Friend. Past research has reported adequate reliability and validity for the friend selection task as a measure of fat stigmatization in young children (Cramer and Steinwert 1998; Goldfield and Chrisler 1995; Musher-Eizenman et al. 2004; Strauss et al. 1985).

Thin-Ideal Internalization

A *game piece selection task* was created specifically for this study to assess thin-ideal internalization in preschool children. Children had the opportunity to play either Candy Land or Chutes and Ladders. Game pieces were specially designed for this task such that they varied only in body type. The figures were identical to the figures used in the previous two tasks except for their clothing, which was colored differently from the figures used in the previous tasks in order to prevent the child from becoming habituated to the figures. The figures were laminated colored drawings of identical girls wearing identical clothing that were approximately the same size as the original game pieces. The only difference between the three game pieces was the body type of the character: one was thin, one was average size, and one was fat. Children were asked which game piece they would like to be when playing the game. For each girl, the selection of the game piece was recorded as thin, average, or fat.

Preschool girls' emotional investment in the game piece was inferred from their *willingness to switch* their game piece. After preschool girls chose their game piece, the researcher offered to switch game pieces with them. Specifically, the researcher said, "Wait, I wanted to be that one! How about you be this one?" If the child selected the thin body or average body game piece, then the researcher asked to switch it with the fat body game piece. If the child selected the fat body game piece, then the researcher offered the average body game piece. The emotional reactions of the preschool girls when asked to switch their selected game piece with the fat body or average body game piece were videotaped and coded by independent judges for the degree of emotional investment in the selected game piece.

A coding scheme was created to classify the girls' responses to being asked to switch their game piece: willing to switch (e.g., the child immediately said "yes" and expressed no discomfort or unhappiness when asked to switch), reluctant to switch (e.g., the child hesitated for more than 5 sec, refused to make eye contact with the researcher, or the child looked at parent for guidance as to what to do in the situation), and not willing to switch (e.g., the child said "no" or shook their head no upon being asked to switch). Responses were coded by a White, female, undergraduate research assistant blind to the hypotheses of the study who was trained by the first author to code the responses of preschool girls using five videotapes from pilot participants tested earlier for the study. When a 90% proficiency rate was attained (the research assistant and the first author agreed on 90% of the participants), the assistant was allowed to code the actual data. The same trained observer coded all of the videotapes. To confirm reliability, 20% of the videotapes were randomly selected and coded by the first author. Inter-rater reliability between the two coders was 100%, indicating perfect agreement.

Procedure

Participants were recruited through a database of families who had previously expressed interest in participating in infant and child research at the University of New Mexico. Additionally, fliers were posted detailing the study in an effort to recruit additional participants. Interested parents and their daughters visited the university laboratory for one session lasting approximately 60 min. Preschool girls were videotaped throughout the session. For all tasks, the child was seated on a little chair at a small table. The parent(s) were seated off to the side in the same room and were asked to read a newspaper or magazine. Parents were instructed to not provide any help to their child, as the researcher was interested in the child's personal preferences. Parents were informed that if their child became upset and required emotional support for any reason during the session, the task would be discontinued immediately and the parent could provide the support needed by their child. They were also informed that appropriate measures would be taken to ensure confidentiality of the information obtained during the session and that they could withdraw their child from the study at anytime without penalty.

Although the researcher played the game with the girls, the focus of the research was on their selection of the game piece. Because the girls' behavior during the game was not relevant to the present study, the game was manipulated so that the girls would win and thus finish the study in a positive mood. To avoid antagonizing any of the girls, if they expressed distress over switching the game piece, the researcher quickly allowed them to keep the originally selected game piece and continue with the game. Even if the girls did switch their game piece with

the researcher, they were all given the opportunity to play the game with the piece that they originally selected. Upon completion of the study, parents were asked to provide additional demographic information about their child, including age and ethnicity. Parents were debriefed concerning the nature of the study and given the opportunity to ask questions. All parents were assured that their children had performed adequately. Finally, they received a $10 gift card as compensation for their participation in the study.

Analytic Strategy

Power analyses indicated that there were enough participants to conduct each planned analysis. To test the first hypothesis (H1), preschool girls' attributions of adjectives to body types were analyzed using a two-way, mixed-level repeated measure ANOVA with Target (thin vs. average vs. fat) as the between-subjects variable and Adjective Valence (positive vs. negative) as the within-subjects variable. Follow-up *t*-tests were used to determine group differences. Effect sizes for the omnibus F-tests are indexed by eta-squared (η^2). Effect sizes for the follow-up dependent t-tests are indexed by *r* (Rosnow and Rosenthal 1996). To test the remaining hypotheses (H2–H4), we conducted overall chi-square goodness-of-fit tests to determine if the body types were equally distributed across each figure selection. Follow-up Marascuilo contrasts were used to make the relevant pairwise comparisons between body types where appropriate (Glass and Hopkins 1996).

Results

Body Size Stereotyping

Hypothesis 1: Adjective Attribution Task

Table 1 presents the means and standard deviations for the number of positive and negative adjectives attributed to the three body types. A 3 (Target: Thin vs. Average vs. Fat) × 2 (Adjective Valence: Positive vs. Negative) repeated measures ANOVA indicated a significant main effect of Target, $F(2,52)=3.14$, $p<.05$, $\eta^2=.06$, but not Valence, $F(1,52)=.63$, $p=.44$, $\eta^2=.01$, on the attributions of adjectives. However, of greatest interest was the significant Valence x Target interaction, $F(2,52)=31.81$, $p<.001$, $\eta^2=.38$. As expected, follow up tests indicated that preschool girls attributed significantly more positive adjectives to the thin target than to the fat target, $t(54)=16.85$, $p<.001$, $r=.54$, or the average body target, $t(54)=13.09$, $p<.001$, $r=.27$. In addition, more positive adjectives were attributed to the average body target compared to the fat target, $t(54)=8.43$, $p<.001$, $r=.34$. Also as expected, the preschool girls attributed significantly more negative adjectives to the fat target compared to the thin target, $t(54)=20.35$, $p<.001$, $r=.67$, or to the average body target, $t(54)=14.05$, $p<.001$, $r=.58$. In addition, more negative adjectives were attributed to the average body target compared to the thin target, $t(54)=10.17$, $p<.001$, $r=.23$. Overall, these findings provide support for the first hypothesis that preschool girls attribute more negative characteristics to fat body types and more positive characteristics to thin body types.

Table 1 Mean number of adjectives attributed to each body type

	Thin Body	Average Body	Fat Body
Negative Adjectives	1.24 (.90)$_a$	1.67 (.88)$_b$	3.09 (1.12)$_c$
Positive Adjectives	2.69 (1.18)$_a$	2.04 (1.15)$_b$	1.24 (1.09)$_c$

$N=55$. Standard deviations included in parentheses. Scale range=1–6. Means with different subscripts within rows differ significantly at $p<.001$

Hypothesis 2: Friend Selection Task

Table 2 presents the frequency of body types selected for the three friends and best friend. A one-way chi-square goodness-of-fit test indicated that the proportions for the body types selected for Best Friend were not equally distributed, $\chi 2$ (2, $N=55$)=36.69, $p<.001$. Follow-up tests revealed that preschool girls were significantly more likely to select the target with a thin body type compared to a fat body type, $\chi 2(1, N=55)=28.49$, $p<.001$, or an average body type, $\chi 2$ (1, $N=55$)=4.00, $p<.05$, when asked who they would want as a best friend. In addition, targets with an average body type were more likely to be preferred as a best friend than those with a fat body type, $\chi 2$ (1, $N=55$)=14.29, $p<.001$.

A series of one-way chi-square tests demonstrated similar patterns for the selection of other playmates, indicating that the selection of targets was not equally distributed across body types for Friend 1, $\chi 2$ (2, $N=55$)=28.62, $p<.001$, or Friend 2, $\chi 2$ (2, $N=55$)=9. 42, $p<.01$; however, body types were more evenly distributed in the selection of Friend 3, $\chi 2$ (2, $N=55$)=2.22, $p=.330$. Follow-up tests revealed that Friend 1 was more likely to have a thin body type than a fat body type, $\chi 2$ (1, $N=47$)=15.51, $p<.001$, or an average body type, $\chi 2$ (1, $N=45$)=18.69, $p<.001$. For the selection of Friend 2, preschool girls were significantly more likely to choose a target with a thin body type than a fat body type, $\chi 2$ (1, $N=34$)=9.53, $p<.01$, but there was no difference with an average body type, $\chi 2$ (1, $N=47$)=.53, $p=.46$. Overall, these findings support the second hypothesis that preschool girls are more likely to

Table 2 Frequency count of preschool girls preferred body type for each playmate

	Best Friend	Friend 1	Friend 2	Friend 3
Thin Body	39 (70.9%)	37 (67.3%)	26 (47.3%)	18 (32.7%)
Average Body	12 (21.8%)	8 (14.5%)	21 (38.2%)	23 (41.8%)
Fat Body	4 (7.3%)	10 (18.2%)	8 (14.5%)	14 (25.5%)

N=55

want as a best friend and playmate those targets depicted as having a thin body type compared to a fat body type, and in some instances even to those depicted with an average body type.

Thin-Ideal Internalization

Hypothesis 3: Game Piece Selection

An overall significant one-way chi-square test indicated that the proportion of thin body, average body, and fat body game pieces selected were not equally distributed, $\chi 2$ (2, N=55)=32.33, p<.001. A total of 38 (69.1%) participants chose the thin body game piece, 11 (20%) chose the average body game piece, and 6 (10.9%) chose the fat body game piece. Follow-up comparisons revealed that preschool girls were significantly more likely to select the thin body game piece compared to the fat body game piece, $\chi 2$ (1, N=44)=23.27, p<.001, or the average body game piece, $\chi 2$ (1, N=49)=14.88, p<.001. Thus, in support of the third hypothesis, preschool girls were more likely to choose a thin body type than a fat body type or an average body type as the character they wanted to be to play the board game.

Hypothesis 4: Willingness To Switch Game Piece

As an indicator of emotional investment in body size ideals, we examined preschool girls' willingness switch their game piece for a different piece. Table 3 displays the number of girls willing to switch their game pieces as a function of their initial game piece selection. For girls who initially chose the thin body game piece, 20 participants (52.6%) were completely unwilling to switch for the fat game piece (said "no" or shook their heads to indicate refusal to switch); 4 (10.5%) switched their game piece but appeared reluctant (expressed discomfort or hesitancy but did switch); and 14 (36.8%) were willing to switch pieces. It is also notable that among those girls who initially selected the average body game piece—and were then asked to switch this piece for the fat body game piece—only one girl was willing to make this switch, whereas 8 girls refused to switch. As evident from Table 3, the low variability within some rows and low frequency within some cells precluded us from testing the distribution of proportions for the entire 3×3 table. However, the critical test here was how readily the thin body game piece (when initially selected) would be switched for the fat body game piece. To achieve sufficient power to perform the critical hypothesis test, we collapsed across the two groups who had expressed any reluctance to switch the thin body game piece (N=24) and compared them to those girls who were willing to switch the thin body game piece (N=14). This comparison demonstrated a marginally significant difference between the proportions, $\chi 2$(1, N=38)=2.63, p=.10.

Discussion

The present study examined body size stereotyping and thin-ideal internalization in 3 to 5-year-old girls. Although consistent evidence has demonstrated fat stigmatization among preschool girls (Cramer and Steinwert 1998; Musher-Eizenman et al. 2004), we know very little about when in development these sociocultural beliefs and standards for appearance become internalized as preschool girls' personal preferences for appearance. Indeed, given that most research does not focus on children this young, it was necessary to develop and test a method of assessment that was developmentally sensitive to the cognitive stage of young children. Therefore, in addition to replicating previous findings for body size stereotyping in preschool girls, we explored the utility of a game piece selection task to assess the degree of emotional investment in different body size ideals in preschool girls, which could serve as a proxy for thin-ideal internalization in this age group.

The first set of findings confirmed earlier studies demonstrating that preschool girls between the ages of 3 and 5 attribute more negative adjectives to fat targets and more positive adjectives to thin targets. In addition, preschool girls were less likely to select a fat target as

Table 3 Frequency count of preschool girls willing to switch their game piece based on body type of game piece initially selected

Initial selection	Willing to switch	Hesitant to switch	Unwilling to switch
Thin body (n=38)	14 (36.8%)	4 (10.5%)	20 (52.6%)
Average body (n=11)	1 (9.1%)	2 (18.2%)	8 (72.7%)
Fat body (n=6)	4 (66.7%)	0 (0%)	2 (33.3%)

N=55

their playmate or best friend and more likely to select a thin target as a playmate or best friend, also consistent with past research. However, departing from earlier research, we found that preschool girls were also more likely to attribute positive characteristics to thin targets compared to average size targets—and more likely to choose a thin playmate and best friend compared to an average size playmate.

Although consistent with our predictions, prior research has not demonstrated significant differences between thin and average size targets (Cramer and Steinwert 1998; Musher-Eizenman, et al. 2004), and one study found that preschool children may endorse more negative attitudes towards thinner targets while preferring average size targets (Brylinsky and Moore 1994). We suspect that these results reflect young girls' increasing awareness of the anti-fat attitudes that are so pervasive in American culture (Daniels 2006; Schwartz and Henderson 2009). That is, children receive messages that being fat or "overweight" are unhealthy and undesirable physical states (Neumark-Stzainer et al. 2006; Schwartz and Henderson 2009). Additionally, it has been established that young children display an awareness of dieting messages (Holub et al. 2005; Schur et al. 2000) and cultural standards for feminine beauty prior to puberty (Feldman et al. 1988). Preschool girls may not be immune to these influences, and it is quite plausible that a combination of anti-fat messages and pressure to achieve unrealistic beauty standards is related to the development of body-size stereotypes and thin-ideal internalization in girls at a very early age.

To further explore thin-ideal internalization in preschool girls, this study tested the utility of a game piece selection task to assess this construct that was designed in such a way as to be sensitive to the cognitive developmental stage of this age group. The second set of findings provides preliminary evidence for the use of game piece selection tasks in the assessment of thin-ideal internalization in preschool girls. When asked who they wanted "to be" to play a popular board game, the majority of preschool girls selected the thin body game piece compared to the average body or fat body game piece. Again, the difference between the selection of the thin body type and the average body type is striking in that the thin body type was significantly preferred to the average body type in the context of playing a board game.

In addition, those girls who initially selected the thin body game piece appeared to be more resistant to switching their game piece for the fat body game piece when asked to exchange pieces with the researcher. Although this result did not reach conventional levels of statistical significance, it is likely that a larger sample would have been more powerful in detecting a difference. It is also noteworthy that we could not perform the reverse analysis to test the willingness of preschool girls to switch the fat body game piece for the thin body game piece, as so few girls initially selected the fat body game piece as their character to play the game (n=6). Some anecdotal responses offer further support for the emotional investment of preschool girls in their selection of the game piece, displaying a clear preference for the thin body and an aversion toward the fat body. For example, when asked to switch the thin body game piece for the fat body game piece, girls stated that, "I don't want to be her. She is fat and ugly" or "I hate her because she has a fat stomach."

There are several limitations as well as future directions to acknowledge from this research. As noted above, a primary limitation of the current research was the small sample size, which restricted the number of meaningful tests that we could conduct. For example, we were not able to test for age differences in body size stereotyping or thin-ideal internalization, but this is important because the preschool years constitute a critical period for the development of self-concept and an autobiographical sense of self. Although the age at which this sense of self develops differs depending on each child, researchers seem to agree that a developmental shift occurs between the ages of 3 and 5 (Nelson and Fivush 2004). This sense of self involves the development of an explicit, temporally extended self-concept in which the child begins to understand the individual uniqueness of his/her own past and develops an enduring, personal sense of self (Nelson and Fivush 2004; Povinelli 2001; Povinelli and Simon 1998). The development of an autobiographical self is a key acquisition in the process of internalization, whereby sociocultural messages are accepted as personally meaningful to the self. Therefore, we would expect thin-ideal internalization to increase with age as the autobiographical self develops, thereby demonstrating greater thin-ideal internalization in 5-year-olds as compared to 3-year-olds. It would be important to measure this in future studies with larger sample sizes.

In addition, a larger sample is necessary to test for ethnic differences in a diverse sample similar to that of the current study. Although prior research has not demonstrated consistent or clear ethnic differences in body image investment among adult women (Cash et al. 2004; Grabe and Hyde 2006; Shaw et al. 2004), it would be important to examine ethnic differences in preschool girls, especially among those whose family environments represent differences in generational status. It would also be important to extend the research to include girls from non-westernized societies, as research indicates that westernized values for appearance are increasingly influential in the beauty ideals embraced by other cultures (Becker 2004; Dunkel et al. 2010). It is important to note the response rate of the study as another limitation related to sample size. It is possible that the beliefs and attitudes of the parents about thinness and fatness influenced their willingness to allow their children to participate in this study. Since we did not measure parents'

fat stigmatization or thin-ideal internalization, we cannot rule out parental bias in the selection of our sample.

We limited our design to focus on the internalization of thinness as the most desirable body ideal relative to an average or fat body shape. Although thinness is the most highly valued appearance attribute among young girls (McCabe and Ricciardelli 2003; McCabe et al. 2002), feminine beauty ideals also include having particular body proportions to portray the right amount of curvaceousness in conjunction with low body fat (Calogero et al. 2007; Harrison 2003; Overstreet et al. 2010). Moreover, feminist and other scholars have documented the increased sexualization of very young girls—such as the dressing of preschool girls in t-shirts that read "Porn Star," in high-heeled shoes, or in make-up (American Psychological Association Task Force on the Sexualization of Girls 2007; Levin and Kilbourne 2008; Smolak and Murnen 2010). Thus, it may be more than thinness that becomes internalized by preschool girls. In future investigations, it would be worthwhile to broaden our portrayals of body types, or beauty types, to further our understanding of what attributes and qualities of feminine appearance may be influencing the self-development of very young girls. The versatility of the game piece selection task easily allows for the design of any range of appearance types to explore girls' personal investment in sociocultural appearance ideals.

Moreover, although we focused exclusively on girls in this study, it would clearly be beneficial to include preschool boys in future studies, as boys also exhibit fat stigmatization at early ages (Cramer and Steinwert 1998; Musher-Eizenman et al. 2004), and boys and men are also susceptible to societal pressures to obtain specific body types. The masculine body ideal entails a lean and muscular body shape as opposed to thinness (Jones 2004; McCabe and Ricciardelli 2003; McCreary et al. 2005; Ricciardelli and McCabe 2004; Ridgeway and Tylka 2005; Smolak et al. 2001). In this case, game pieces could be designed to represent body types that vary in muscularity instead of thinness, to assess how early in development boys may internalize the muscular ideal. Indeed, the versatility of the game piece selection task is a particular strength of this methodology. In addition, while the attribution of adjectives to fat or thin targets maps onto sociocultural pressures to be thin, it does not map onto sociocultural pressures to be muscular. Therefore, this task could also be modified to account for these gender differences in body type ideals.

It is important to acknowledge that even if we establish the reliability and validity of this methodology for the assessment of thin-ideal internalization, we do not know the source of transmission of these ideals. Researchers would do well to investigate how anti-fat attitudes and body ideals are communicated to girls as young as 3-years-old. What are the explicit and implicit messages they are exposed to—and from where do these messages originate? Although school environments and peers may reinforce these stereotyped beliefs, they appear to be in place well before children begin formal schooling. A related point for further investigation is to include a measure of body mass index (BMI) in tests of preschool girls' body size stereotyping and thin-ideal internalization. We cannot yet determine how preschool girls' own weight may factor into their preferences for thin vs. fat body types across the tasks administered. In general, more longitudinal and prospective research is needed to investigate the development of body size stereotyping and thin-ideal internalization in this age group.

In conclusion, across several different tasks, we found that preschool girls display body size stereotyping and thin-ideal internalization as early as the age of 3, insofar as they express a preference for thin body types but not fat body types. This study is novel in the use of an age-appropriate method for the assessment of thin-ideal internalization in preschool girls. Overall, these findings suggest that asking preschool girls to select a game piece to play a popular board game, and then asking them to switch their preferred piece for a less preferred piece, is a potentially effective method for assessing the degree of emotional investment in particular body shape ideals. This method allows us to move beyond the demonstration of fat stigmatization per se to measure how personally invested preschool girls may be in these ideals. The versatility of this method for examining the internalization of a range of beauty ideals within and between groups is a particular strength of this approach. Clearly, this methodology must be subjected to more extensive construct validation among larger samples of preschool girls before we can draw any conclusions from these data. We extend a call to researchers in the area of children's body image to further investigate the utility of this method for measuring the internalization of body ideals in preschool children.

References

Allon, N. (1982). The stigma of overweight in everyday life. In B. Wartman (Ed.), *Psychological aspects of obesity* (pp. 130–174). New York: Van Norstrand Reinhold.

Ambrosi-Randic, N. (2000). Perception of current and ideal body size in preschool age children. *Perceptual and Motor Skills, 90*, 885–889. doi:10.2466/PMS.90.3.885-889.

American Psychological Association Task Force on the Sexualization of Girls. (2007). *Report of the APA Task Force on the sexualization of girls*. Washington, DC: American Psychological Association. Retrieved from http://www.apa.org/pi/wpo/sexualization_report_summary.pdf.

Baker-Sperry, L., & Grauerholz, L. (2003). The pervasiveness and persistence of the feminine beauty ideal in children's fairy tales. *Gender & Society, 15*, 711–726. doi:10.1177/0891243203255605.

Becker, A. (2004). Television, disordered eating, and young women in Fiji: Negotiating body image identity during rapid social change.

Culture, Medicine and Psychiatry, 28, 533–559. doi:10.1007/s11013-004-1067-5.

Blowers, L. C., Lozton, N. J., Grady-Flesser, 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.

Brylinsky, J. A., & Moore, J. C. (1994). The identification of body build stereotypes in young children. *Journal of Research in Personality, 28*, 170–181. doi:10.1006/jrpe.1994.1014.

Calogero, R. M., & Thompson, J. K. (2010). Gender and body image. In J. C. Chrisler & D. M. McCreary (Eds.), *Handbook of gender research in psychology* (Vol. 2, pp. 153–184). New York: Springer.

Calogero, R. M., Boroughs, M., & Thompson, J. K. (2007). The impact of Western beauty ideals on the lives of women and men: A sociocultural perspective. In V. Swami & A. Furnham (Eds.), *Body beautiful: Evolutionary and sociocultural perspectives* (pp. 259–298). New York: Palgrave Macmillan.

Cash, T. F. (1990). The psychology of physical appearance: Aesthetics, attributes, and images. In T. Cash & T. Pruzinsky (Eds.), *Body images: Development, deviance, and change* (pp. 51–79). New York: Guilford.

Cash, T. F. (1995). Developmental teasing about physical appearance: Retrospective descriptions and relationships with body image. *Social Behavior and Personality, 23*, 123–130. doi:10.2224/sbp.1995.23.2.123.

Cash, T. F., Melnyk, S. E., & Hrabosky, J. I. (2004). The assessment of body image investment: An extensive revision of the Appearance Schemas Inventory. *The International Journal of Eating Disorders, 35*, 305–316. doi:10.1002/eat.10264.

Chen, E. Y., & Brown, M. (2005). Obesity stigma in sexual relationships. *Obesity Research, 13*, 1393–1397. doi:10.1038/oby.2005.168.

Cole, P. M., Barrett, K. C., & Zahn-Waxler, C. (1992). Emotion displays in two-year-olds during mishaps. *Child Development, 63*, 314–324. doi:10.2307/1131481.

Collins, M. E. (1991). Body figure perceptions and preferences among preadolescent children. *The International Journal of Eating Disorders, 10*, 199–208. doi:10.1002/1098108X(199103)10:2<199::AID-EAT2260100209>3.0.CO;2-D.

Cramer, P., & Steinwert, T. (1998). Thin is good, fat is bad: How early does it begin? *Journal of Applied Developmental Psychology, 19*, 429–51. doi:10.1016/S0193-3973(99)80049-5.

Crandall, C. S. (1994). Prejudice against fat people: Ideology and self-interest. *Journal of Personality and Social Psychology, 66*, 882–894. doi:10.1037/0022-3514.66.5.882.

Daniels, S. R. (2006). The consequences of childhood overweight and obesity. *The Future of Children, 16*, 47–67. doi:10.1353/foc.2006.0004.

Davis, S. (1990). Men as success objects and women as sex objects: A study of personal advertisements. *Sex Roles, 23*, 43–50. doi:10.1007/BF00289878.

Davison, K. K., Markey, C. N., & Birch, L. L. (2000). Etiology of body dissatisfaction and weight concerns among 5-year-old girls. *Appetite, 35*, 143–151. doi:10.1006/appe.2000.0349.

Dellinger, K., & Williams, C. L. (1997). Makeup at work: Negotiating appearance rules in the workplace. *Gender & Society, 11*, 151–177. doi:10.1177/089124397011002002.

Dion, K. K., Berscheid, E., & Walster, E. (1972). What is beautiful is good. *Journal of Personality and Social Psychology, 34*, 285–290. doi:10.1037/h0033731.

Dion, K. L., Dion, K. K., & Keelan, P. (1990). Appearance anxiety as a dimension of social- evaluative anxiety: Exploring the ugly duckling syndrome. *Contemporary Social Psychology, 14*, 220–224.

Dunkel, T. M., Davidson, D., & Qurashi, S. (2010). Body satisfaction and pressure to be thin in younger and older Muslim and non-Muslim women: The role of Western and non-Western dress preferences. *Body Image, 7*, 56–65. doi:10.1016/j.bodyim.2009.10.003.

Eagly, A. H., Ashmore, R. D., Makhijani, M. G., & Longo, L. C. (1991). What is beautiful is good, but… A meta-analytic review of research on the physical attractiveness stereotype. *Psychological Bulletin, 110*, 109–128. doi:10.1037/0033-2909.110.1.109.

Eddy, K. T., Tanofsky-Kraff, M., Thompson-Brenner, H., Herzog, D. B., Brown, T. A., & Ludwig, D. S. (2007). Eating disorder pathology among overweight treatment-seeking youth: Clinical correlates and cross-sectional risk modeling. *Behavior Research and Therapy, 45*, 2360–2371. doi:10.1016/j.brat.2007.03.017.

Eder, R. A., & Magelsdorf, S. C. (1997). The emotional basis of early personality development: Implications for the emergence self-concept. In R. Hogan, J. Johnson, & S. Briggs (Eds.), *Handbook of personality psychology* (pp. 209–240). San Diego: Academic.

Engeln-Maddox, R. (2006). Buying a beauty standard or dreaming of a new life? Expectations associated with media ideals. *Psychology of Women Quarterly, 30*, 258–266. doi:10.1111/j.1471-6402.2006.00294.x.

Evans, P. C. (2003). 'If only I were thin like her, maybe I could be happy like her': The self-implications of associating a thin female ideal with life success. *Psychology of Women Quarterly, 27*, 209–214. doi:10.1111/1471-6402.00100.

Feldman, W., Feldman, E., & Goodman, J. T. (1988). Culture versus biology: Children's attitudes toward thinness and fatness. *Pediatrics, 81*, 190–194.

Fikkan, J., & Rothblum, E. (2005). Weight bias in employment. In K. D. Brownell, R. M. Puhl, M. B. Schwartz, & L. Rudd (Eds.), *Weight bias: Nature, consequences, and remedies* (pp. 15–28). New York: Guilford.

Fiske, S. T., Bersoff, D. N., Borgida, E., Deaux, K., & Heilman, M. E. (1991). Social science research on trial: use of sex stereotyping research in Price Waterhouse v. Hopkins. *American Psychologist, 46*, 1049–1060.

Flannery-Schroeder, E., & Chrisler, J. C. (1996). Body esteem, eating attitudes, and gender-role orientation in three age groups of children. *Current Psychology: Developmental, Learning, Personality, Social, 15*, 235–248. doi:10.1007/BF02686880.

Frankova, S. (2000). Development of body image in preschool girls. *Homeostasis in Health and Disease, 40*, 161–169.

Fredrickson, B. L., & Roberts, T. (1997). Objectification theory: Toward understanding women's lived experiences and mental health risks. *Psychology of Women Quarterly, 21*, 173–206.

Gardner, R. M., Sorter, R., & Friedman, B. N. (1997). Developmental changes in children's body images. *Journal of Social Behavior and Personality, 12*, 1019–1036.

Glass, G. V., & Hopkins, K. D. (1996). *Statistical methods in education and psychology* (3rd ed.). Englewood Cliffs: Prentice-Hall.

Goldfield, A., & Chrisler, J. C. (1995). Body stereotyping and stigmatization of obese persons by first graders. *Perceptual and Motor Skills, 81*, 909–910.

Grabe, S., & Hyde, J. S. (2006). Ethnicity and body dissatisfaction among women in the United States: A meta-analysis. *Psychological Bulletin, 132*, 622–640. doi:10.1037/00332909.132.4.622.

Greenfield, D., Quinlan, D. M., Harding, P., Glass, E., & Bliss, A. (1987). Eating behavior in an adolescent population. *The International Journal of Eating Disorders, 6*, 99–111. doi:10.1002/1098-108X(198701)6:1<99::AID-EAT2260060112>3.0.CO;2-Q.

Harrison, K. (2003). Television viewers' ideal body proportions: The case of the curvaceously thin woman. *Sex Roles, 48*, 255–264. doi:10.1023/A:1022825421647.

Herbozo, S., Tantleff-Dunn, S., Gokee-Larose, J., & Thompson, J. K. (2004). Beauty and thinness messages in children's media: A content analysis. *Eating Disorders, 12*, 21–34. doi:10.1080/10640260490267742.

Hesse-Biber, S. J. (1996). *Am I thin enough yet? The cult of thinness and the commercialization of identity*. New York: Oxford University Press.

Holub, S. C., Musher-Eizenman, D. R., Persson, A. V., Edwards-Leeper, L. A., Goldstein, S. E., & Miller, A. B. (2005). Do preschool children understand what it means to "diet", and do they do it? *The International Journal of Eating Disorders, 38*, 91–93. doi:10.1002/eat.20143.

Huon, G. F., Godden, V. M., & Brown, L. B. (1997). Reports of dieting among children: Effects of interview style and approach to information collection. *The British Journal of Clinical Psychology, 36*, 33–40.

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.

Kuhn, D. (2000). Metacognitive development. *Current Directions in Psychological Science, 9*, 178–181. doi:10.1111/1467-8721.00088.

Latner, J. D., & Stunkard, A. J. (2003). Getting worse: The stigmatization of obese children. *Obesity Research, 11*, 452–456. doi:10.1038/oby.2003.61.

Latner, J. D., Rosewall, J. K., & Simmonds, M. B. (2007). Childhood obesity stigma: Association with television, videogame, and magazine exposure. *Body Image, 4*, 147–155. doi:10.1016/j.bodyim.2007.03.002.

Levin, D., & Kilbourne, J. (2008). *So sexy, so soon: The new sexualized childhood and what parents can do to protect their kids*. New York: Ballantine.

Lowes, J., & Tiggemann, M. (2003). Body dissatisfaction, dieting awareness and the impact of parental influence in young children. *British Journal of Health Psychology, 8*, 135–147. doi:10.1348/135910703321649123.

Marsh, H. W., Ellis, L. A., & Craven, R. G. (2002). How do preschool children feel about themselves? Unraveling measurement and mulitdimensional self-concept structure. *Developmental Psychology, 38*, 376–393. doi:10.1037/0012-1649.38.3.376.

Martin, K. A. (1998). Becoming a gendered body: Practices of preschools. *American Sociological Review, 63*, 494–511.

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:10.1038/oby.2003.61.

McCabe, M. P., & Ricciardelli, L. A. (2004). Body image dissatisfaction among males across the lifespan: A review of past literature. *Journal of Psychosomatic Research, 56*, 675–685. doi:10.1016/S0022-3999(03)00129-6.

McCabe, M., Ricciardelli, L., & Finemore, J. (2002). The role of puberty, media and popularity with peers on strategies to increase weight, decrease weight and increase muscle tone among adolescent boys and girls. *Journal of Psychosomatic Research, 52*, 145–153. doi:10.1016/S0022-3999(01)00272-0.

McCabe, M. P., Ricciardelli, L. A., Stanford, J., Holt, K., Keegan, S., & Miller, L. (2007). Where is all the pressure coming from? Messages from mothers and teachers about preschool children's appearance, diet, and exercise. *European Eating Disorders Review, 15*, 221–230. doi:10.1002/erv.717.

McCreary, D. R., Saucier, D. M., & Courtenay, W. (2005). The drive for muscularity and masculinity: Testing the associations among gender-role traits, behaviors, attitudes, and conflict. *Psychology of Men & Masculinity, 6*, 83–94. doi:10.1037/1524-9220.6.2.83.

Mendelson, B. K., White, D. R., & Mendelson, M. J. (1996). Self-esteem and body esteem: Effects of gender, age, and weight. *Journal of Applied Developmental Psychology, 17*, 321–346. doi:10.1016/S0193-3973(96)90030-1.

Musher-Eizenman, D., Holub, S., Miller, A., Goldstein, S. L., & Edwards-Leeper, L. (2004). Body size stigmatization in preschool children: The role of control attributions. *Journal of Pediatric Psychology, 29*, 613–620. doi:10.1093/jpepsy/jsh063.

Nelson, K., & Fivush, R. (2004). The emergence of autobiographical memory: A social cultural developmental theory. *Psychological Review, 111*, 486–511. doi:10.1037/0033295X.111.2.486.

Neumark-Stzainer, D., Story, M., & Faibisch, L. (1998). Perceived stigmatization among overweight African-American and Caucasian adolescent girls. *The Journal of Adolescent Health, 23*, 264–70. doi:10.1016/S1054-139X(98)00044-5.

Neumark-Stzainer, D., Levine, M. P., Paxton, S. J., Smolak, L., Piran, N., & Wertheim, E. H. (2006). Prevention of body dissatisfaction and disordered eating: What next? *Eating Disorders, 14*, 265–285. doi:10.1080/10640260600796184.

Ogden, C. L., Fryar, C. D., Carroll, M. D., & Flegal, K. M. (2004). Mean body weight, height, and body mass index, United States 1960-2002. *Advance data from vital and health statistics: No. 347*. Hyattsville: National Center for Health Statistics.

Overstreet, N. M., Quinn, D. M., & Agovha, V. B. (2010). Beyond thinness: The influence of a curvaceous body ideal on body dissatisfaction in Black and White women. *Sex Roles, 63*, 91–103. doi:10.1007/s11199-010-9792-4.

Owen, P. R., & Laurel-Seller, E. (2000). Weight and shape ideals: Thin is dangerously in. *Journal of Applied Social Psychology, 30*, 979–990. doi:10.1111/j.15591816.2000.tb02506.x.

Perner, J. (2000). Memory and theory of mind. In E. Tulving & F. I. M. Craik (Eds.), *Oxford handbook of memory* (pp. 297–312). New York: Oxford University Press.

Pierce, J. W., & Wardle, J. (1993). Self-esteem, parental appraisal and body size in children. *Journal of Child Psychology and Psychiatry, 34*, 1125–1136. doi:10.1111/j.14697610.1993.tb01778.x.

Povinelli, D. J. (2001). The self: Elevated in consciousness and extended in time. In C. Moore & K. Lemmon (Eds.), *The self in time: Developmental perspectives* (pp. 75–95). Mahwah: Erlbaum.

Povinelli, D. J., & Simon, B. B. (1998). Young children's understanding of briefly versus extremely delayed images of the self: emergence of the autobiographical stance. *Developmental Psychology, 24*, 188–194. doi:10.1037/0012-1649.34.1.188.

Puhl, R. M., & Heuer, C. A. (2009). The stigma of obesity: A review and update. *Obesity, 17*, 941–964. doi:10.1038/oby.2008.636.

Ricciardelli, L. A., & McCabe, M. P. (2001). Children's body image concerns and eating disturbance: A review of the literature. *Clinical Psychology Review, 21*, 325–344. doi:10.1016/S0272-7358(99)00051-3.

Ricciardelli, L. A., & McCabe, M. P. (2004). A biopsychosocial model of disordered eating and the pursuit of muscularity in adolescent boys. *Psychological Bulletin, 130*, 179–205. doi:10.1037/0033-2909.130.2.179.

Ridgeway, R. T., & Tylka, T. L. (2005). College men's perceptions of ideal body composition and shape. *Psychology of Men & Masculinity, 6*, 209–220. doi:10.1037/1524-9220.6.3.209.

Rosnow, R. L., & Rosenthal, R. (1996). Computing contrasts, effect sizes, and counternulls on other people's published data: General procedures for research consumers. *Psychological Methods, 1*, 331–340.

Schur, E. A., Sanders, M., & Steiner, H. (2000). Body dissatisfaction and dieting in young children. *The International Journal of Eating Disorders, 27*, 74–82. doi:10.1002/(SICI)1098108X(200001)27:1<74::AID-EAT8>3.0.CO;2-K.

Schwartz, M. B., & Henderson, K. E. (2009). Does obesity prevention cause eating disorders? *Journal of the American Academy of Child and Adolescent Psychiatry, 48*, 784–786. doi:10.1097/CHI.0b013e3181acfb88.

Seid, R. P. (1989). *Never too thin: Why women are at war with their bodies*. Toronto: Prentice-Hall.

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.

Smolak, L., & Murnen, S. K. (2010). The sexualization of girls and women as antecedents of self-objectification. In R. Calogero, S. Tantleff-Dunn, & J. K. Thompson (Eds.), *Self-objectification in women: Causes, consequences, and counteractions*. Washington, D.C.: American Psychological Association.

Smolak, L., Levine, M. P., & Thompson, J. K. (2001). The use of the sociocultural attitudes towards appearance questionnaire with middle school boys and girls. *The International Journal of Eating Disorders, 29*, 216–223. doi:10.1002/1098-108X(200103)29:2<216::AID-EAT1011>3.0.CO;2-V.

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., & Shaw, H. E. (2002). Role of body dissatisfaction in the onset and maintenance of eating pathology: A synthesis of research findings. *Journal of Psychosomatic Research, 53*, 985–993. doi:10.1016/S0022-3999(02)00488-9.

Strauss, C. C., Smith, K., Frame, C., & Forehand, R. (1985). Personality and interpersonal characteristics associated with childhood obesity. *Journal of Pediatric Psychology, 10*, 337–343.

Swami, V., & Furnham, A. (2007). *Body beautiful: Evolutionary and sociocultural perspectives*. New York: Palgrave Macmillan.

Thompson, J. K., & Cafri, G. (2007). *The muscular ideal: Psychological, social, and medical perspectives*. Washington, DC: American Psychological Association.

Thompson, J. K., & Stice, E. (2001). Thin-ideal internalization: Mounting evidence for a new risk factor for body image disturbance and eating pathology. *Current Directions in Psychological Research, 10*, 181–183.

Thompson, J. K., Heinberg, L. J., Altabe, M., & Tantleff-Dunn, S. (1999). *Exacting beauty: Theory, assessment, and treatment of body image disturbance*. Washington, DC: American Psychological Association.

Tiggemann, M., & Anesbury, T. (2000). Negative stereotyping of obesity in children: The role of controllability beliefs. *Journal of Applied Social Psychology, 30*, 1977–1993. doi:10.1111/j.1559-1816.2000.tb02477.x.

Tiggemann, M., & Rothblum, E. D. (1988). Gender differences in social consequences of perceived overweight in the United States and Australia. *Sex Roles, 18*, 21–36. doi:10.1007/BF00288018.

Tiggemann, M., & Wilson-Barrett, E. (1998). Children's figure ratings: Relationship to self-esteem and negative stereotyping. *The International Journal of Eating Disorders, 23*, 83–88. doi:10.1002/(SICI)1098-108X(199801)23:1<83::AID-EAT10> 3.0.CO;2-O.

Unger, R. K. (1979). Toward a redefinition of sex and gender. *The American Psychologist, 34*, 1085–1094.

Vander Wal, J. S., & Thelan, 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.

von Baeyer, C. L., Forsyth, S. J., Stanford, E. A., Watson, M., & Chambers, C. J. (2009). Response bias in preschool children's ratings of pain in hypothetical situations. *European Journal of Pain, 13*, 209–213. doi:10.1016/j.ejpain.2008.03.017.

Williamson, S., & Delin, C. (2001). Young children's figural selections: Accuracy of reporting and body size dissatisfaction. *The International Journal of Eating Disorders, 29*, 80–84. doi:10.1002/1098-108X(200101)29:1<80::AID-EAT13>3.0.CO;2-O.

Wood, K. C., Becker, J. A., & Thompson, J. K. (1996). Body image dissatisfaction in preadolescent children. *Journal of Applied Developmental Psychology, 17*, 85–100. doi:10.1016/S0193-3973(96)90007-6.

Wright, D., & Bradbard, M. (1980). Body build behavioral stereotypes, self-identification, preference and aversion in black preschool children. *Perceptual and Motor Skills, 51*, 1047–1050.