Body Size Stigmatization in Preschool Children: The Role of Control Attributions

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Objective The current study assessed preschool-age children’s control attributions for weight and the relationship of these attributions to attitudes and behavioral intentions toward children of different body sizes. Methods Forty-two children (mean age = 5.2 years) were interviewed about the adjectives they attributed to figures of different sizes, their preference for size in playmates, and their beliefs about children’s ability to control their own weight. Results Adjective ratings for obese figures were the most negative, with no differences found for thin and average figures; the heaviest figure was also chosen less often than other figures to be a playmate. Internal attributions of control for weight were related to less positive adjective ratings for the heavier figure but not to children’s friendship selections. Conclusion Results suggest that the relationship between body size stigmatization and control attributions are consistent with attribution theory for young children. Practical implications of these results and possible interventions are discussed.

Key words obesity (attitudes toward); attribution theory; body size; preschoolers.

There is a great deal of evidence that our society holds a negative attitude toward overweight individuals (e.g., Neumark-Sztainer, Story, & Faibisch, 1998; Rothblum, 1992; Yuker & Allison, 1994). Although there are legitimate health concerns associated with obesity, body size stigmatization has clear negative consequences for the social interactions of overweight people (Cossrow, Jeffery, & McGuire, 2001). Also, these attitudes have implications for the self-perceptions of many individuals. For example, individuals who believe that a thin body is ideal are more dissatisfied with their own bodies (Sands & Wardle, 2003), which may lead to more disordered eating (Stice, 1994).

It is important to understand the factors that lead to individual differences in anti-fat beliefs. A possible source of individual differences in body size stigmatization is suggested by attribution theory (Weiner, 1995). This theory posits that when negative attributes of a person are seen as controllable, the individual will be more stigmatized than when the attribute is viewed as uncontrollable. Therefore, the current study had several goals. First, this study replicated prior work demonstrating that very young children held negative attitudes toward overweight children (Cramer & Steinwert, 1998). Second, because little is known about how these attitudes in children might manifest behaviorally, we explored the degree to which children used body size to make friendship selections. Finally, we extended this work by examining how children’s perceptions of the controllability of weight might be related to body size stigmatization and friendship selections based on body size.

Anti-Fat Attitudes in Young Children

Negative attitudes about obesity are present in children as young as 3 years of age (Cramer & Steinwert, 1998).

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Preschool children believe that children who are overweight possess more negative personality and behavioral characteristics than do other children (e.g., Sigelman, Miller, & Whitworth, 1986). Even children who are overweight themselves hold negative attitudes toward overweight individuals (Lerner & Korn, 1972; Staffieri, 1967).

A standard technique for assessing anti-fat attitudes is to elicit reactions to figures of various body sizes (from very thin to very fat). Some research has found that children hold negative attitudes toward the thinnest figures, who may be seen as socially submissive or less healthy (Brylinsky & Moore, 1994; Staffieri, 1967)—but by far children hold the most negative attitudes toward overweight figures, and these attitudes become more extreme as children get older (Brylinsky & Moore, 1994; Cramer & Steinwert, 1998).

Furthermore, children's attitudes toward overweight individuals are more negative than those toward individuals with other types of stigma. Sigelman, Miller, and Whitworth (1986) showed preschoolers through second graders pictures of children with various stigmatizing attributes. The obese target was the least liked. Also, those targets with other types of stigma (e.g., a child with glasses or a physical handicap) were evaluated more positively with increasing age, whereas this was not true for overweight targets.

Friendship Selection

One way in which children's anti-fat attitudes manifest behaviorally is in peer interactions. Research shows that overweight children are at risk for peer rejection (Strauss, Smith, Frame, & Forehand, 1985), victimization (Lagerspetz, Bjorkqvist, Berts, & King, 1982), and teasing (Neumark-Sztainer et al., 2002). Moreover, children like overweight peers less and wish to interact with them less compared with average-weight peers (Bell & Morgan, 2000; Sigelman, 1991; Young & Avdzej, 1979).

However, it is not completely clear at what age children begin to demonstrate these peer-directed behaviors. In the Cramer and Steinwert (1998) study, preschool children chose a figure (thin, average, or chubby) as a potential playmate. Participants most often chose the thin or average figure. However, for this task children could select only one friend from two choices and could not choose to play with all the figures. In addition, the dimensions of the figures in this study may have affected the results. The difference in width between the thin and average figures was only 1 cm, whereas the difference between the average and chubby figures was over 3 cm. Thus, a goal of the current study was to clarify whether preschoolers considered body size as a salient attribute in peer selection.

Attribution Theory

It is possible that one reason children characterize overweight individuals more negatively than those with other physical attributes is that they see this condition as the fault of the overweight person. Attribution theory posits that individuals search for a causal understanding of events (Heider, 1944, 1958), especially when those events are negative (Clary & Tesser, 1983). According to Weiner (1995), individuals make a distinction between controllable and noncontrollable causes of events. If a controllable attribution (e.g., lack of willpower) is made, anger and social distancing may result. If the condition is attributed to an uncontrollable source (e.g., biology), sympathy and help may follow. Thus, Weiner (1995) proposes that “others are judged as responsible or as not responsible for their plights, that is, they are sinners or sick” (141).

Empirical evidence supports the predictions of attribution theory for adults' attitudes about overweight individuals. Adults who hold controllable attributions for weight are more likely to hold anti-fat attitudes. For example, in contrast to individuals presented with a biogenetic explanation, those presented with a behavioral explanation for overweight (e.g., overeating, lack of exercise) show greater blame, implicit bias, and negative stereotyping of individuals who are fat (Dejong, 1980, 1993; Lewis, Cash, Jacobi, & Bubb-Lewis, 1997; Teachman, Gapinski, Brownell, Rawlins, & Jayaram, 2003).

Furthermore, there is evidence that attribution theory applies to school-age children's beliefs about overweight individuals. For example, Tiggesmann and Anesbury (2000) found that 8–12-year-old children on average believed that obesity was controllable. The more strongly children held this belief, the more strongly they held negative stereotypes about overweight individuals. Moreover, Sigelman and Begley (1987) found that when kindergarten and first-grade children heard an obese target described as being responsible for his condition (i.e., ate too much without dieting), they liked the target child less than when he was deemed not responsible (i.e., had a glandular disorder) or when no cause was given. Still, there has been very little attribution-theory research with younger children. Some researchers suggest that preschool children are biased toward using external attributions (Perry & Bussey, 1984). Other research, however, indicates that young children may discriminate...
external from internal causes and that this distinction may be made for some target conditions earlier than others (Miller & Aloise, 1989).

Thus, the current study explored whether attribution theory applied to preschool children's evaluation of overweight individuals. We predicted that children who believed that overweight was controllable, as compared with those who made external attributions for weight, would hold stronger anti-fat prejudices and select fewer overweight children as friends.

**Methods**

**Participants**

Letters were sent home to parents of all 4- to 6-year-old children at seven local preschools and day-care centers (N = 168) describing the study and asking for consent for their child to participate. The centers were comparable in the types of families that attended and in the program that they provided. Consent forms were returned for 42 children—18 girls and 24 boys. The mean age of the children was 5.2 years (range, 4.0–6.2). All of the children were white and primarily from middle-class homes. Children's body mass index (BMI), measured at the time of testing, ranged from 12.8 to 18.4 (M = 15.4, SD = 1.3), suggesting that the sample's weight was consistent with national norms for this age group (Centers for Disease Control and Prevention, 2003) (bivariate correlations indicated no relationship between child's BMI and any of the attitude variables of interest in this study [all p > .10]. Thus, child's BMI is not included in the present analyses).

**Materials**

**Anti-Fat Prejudice**

Children's anti-fat prejudice was measured using an adjective rating scale similar to the semantic differential technique used by Stager and Burke (1982). Children saw a scale with a positive adjective on one end and a negative adjective on the other. These adjective pairs were read to the children, who then placed each figure (thin, average, and chubby, matched to the participant's gender) at the point on the scale between the two polar adjectives where they thought it belonged. The figures were the first, last, and middle figures from the Collins (1991) figure array for children. The figures were 2 inches tall with the same-colored clothing. An arrow pointing down was used to help the children place the figures on the scale. The figures were presented one at a time in random order, giving the children the option to rate each figure the same way. The children repeated this task for six adjective pairs presented in random order: nice/mean, smart/stupid, has friends/has no friends, neat/sloppy, cute/ugly, and quiet/loud.

The children placed the figure in one of seven boxes along the top of the scale. Two of these boxes were above the adjectives themselves, and the rest were at equal intervals representing different points along the scale. After the children placed the figure, trained coders recorded the box closest to the center of the figure, for a possible score of 1 (above the negative adjective) to 7 (above the positive adjective). This was completed using each figure for each adjective pair. A score of 4 indicated that the child placed the figure exactly halfway between the two adjectives in the pair.

Children began with a practice item using the adjective pair of hard/soft and pictures of a rock, a ball, and a teddy bear. If a child did not complete the practice item successfully, the instructions were clarified and the item was repeated by that child. After a child completed the practice item, the experimenter positioned the rock, ball, and teddy bear back on the scale where the child had placed them. The experimenter then asked questions about the position of the items (e.g., “So, you think that the rock is harder than the teddy bear, is that right?”). Similar questions were also asked on the child's first trial using the figures to ensure that the child understood the task.

This task yielded three scores. The first was the average rating of the chubby figure, with lower scores indicating more negative attitudes toward overweight individuals. The second score was the average rating of the thin figure, with higher scores indicating a more positive perception of thinness. The third score was the difference between ratings of the average figure and the chubby figure, with greater discrepancies suggesting greater prejudice. If the child described the chubby figure more positively than the average figure, this score was a negative number. The alpha across the six adjectives for the chubby figure was .63.

**Friendship Selection**

This measure was developed for the current study to assess the degree to which children use body size to select friends. Children saw an 8.5" × 11" sheet of beige paper with 18 randomly arranged figures. The figures were those used in the adjective task. There were 3 chubby, 3 average-size, and 3 thin girls, and 3 chubby, 3 average-size, and 3 thin boys. Children circled the 3 children with whom they would most like to play. Thus, they could select 3 friends of the same gender and same body size. They then selected from all 18 figures the 1 figure they would want to have for a best friend.
Attributions of Control
This scale (based on Anesbury and Tiggemann, 2000) measures perceived causes of and solutions to overweight and included five items appropriate for preschool-age children. The items were: (1) Do children have control over their weight? (2) If a child is fat, is that his or her fault? (3) Are children fat because they eat too much? (4) Are children fat because they don’t exercise? and (5) Can fat children become thin if they really try?

Children first responded yes or no to an item. A child who answered yes was prompted to follow up with definitely or maybe, completing a 3-point scale (0 = no, 1 = maybe, and 2 = definitely). Regardless of the child’s reading ability, the experimenter first pointed to two boxes labeled yes and no, and then, if the child responded yes, the experimenter pointed to a large and small circle to represent definitely and maybe, respectively. Children were allowed to respond verbally or by pointing to their response. For the first item, the experimenter checked the child’s understanding (e.g., “So, you think that children definitely have control over their weight?”). If the child agreed, the experimenter continued with the remaining questions; otherwise, she explained the procedure again. If at any point the child was confused by a question, the experimenter repeated the item slowly for the child (this occurred for less than 5% of the questions across all children). An average score was derived across all five items, with higher scores indicating a more internal attribution of control for weight (α = .56) (although this internal consistency is somewhat lower than ideal, it is consistent with that found in some past research (although this internal consistency is somewhat lower than ideal, it is consistent with that found in some past research (although this internal consistency is somewhat lower than ideal, it is consistent with that found in some past research (although this internal consistency is somewhat lower than ideal, it is consistent with that found in some past research (although this internal consistency is somewhat lower than ideal, it is consistent with that found in some past research (although this internal consistency is somewhat lower than ideal, it is consistent with that found in some past research (although this internal consistency is somewhat lower than ideal, it is consistent with that found in some past research (although this internal consistency is somewhat lower than ideal, it is consistent with that found in some past research (although this internal consistency is somewhat lower than ideal, it is consistent with that found in some past research (although this internal consistency is somewhat lower than ideal, it is consistent with that found in some past research (although this internal consistency is somewhat lower than ideal, it is consistent with that found in some past research (although this internal consistency is somewhat lower than ideal, it is consistent with that found in some past research (although this internal consistency is somewhat lower than ideal, it is consistent with that found in some past research). Children with consent to participate were tested individually in a separate room at the child care center. Trained female experimenters conducted all testing. In most cases, a second experimenter observed the testing session to ensure that the protocol was followed closely. The child measures included here were embedded within a longer testing protocol. The order of the attitudes and friendship selection tasks was randomized, and the controllability scale was done last, to avoid affecting the other tasks. Means for the attitudes and friendship selection tasks did not differ depending on order of presentation (p > .10).

Results
Child Anti-Fat Prejudice
On a scale from 1 to 7 (with 7 being the most positive rating), children’s adjective ratings averaged 5.3 (SD = 1.1) for the thin figure, 5.2 (SD = 1.3) for the average figure, and 2.9 (SD = 1.5) for the chubby figure. In a repeated-measures analysis of variance, these were significantly different from one another, F(2, 82) = 41.5, p < .05. The adjective ratings for the chubby figure were significantly lower than those for both the thin figure, t(41) = 8.1 (p < .01), and the average figure, t(41) = 7.3 (p < .01) (see Table I).

Table I. Mean (SD) Ratings for Thin, Average, and Chubby Figures for Each Adjective Pair

<table>
<thead>
<tr>
<th>Adjective Pair</th>
<th>Thin Figure</th>
<th>Average Figure</th>
<th>Chubby Figure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nice/mean</td>
<td>5.2 (2.4)</td>
<td>5.3 (2.6)</td>
<td>3.0 (2.6)</td>
</tr>
<tr>
<td>Smart/stupid</td>
<td>5.2 (2.4)</td>
<td>5.5 (2.2)</td>
<td>2.9 (2.6)</td>
</tr>
<tr>
<td>Has friends/has no friends</td>
<td>5.1 (2.4)</td>
<td>5.1 (2.6)</td>
<td>3.2 (2.7)</td>
</tr>
<tr>
<td>Neat/sloppy</td>
<td>5.6 (2.1)</td>
<td>5.6 (2.3)</td>
<td>2.3 (2.2)</td>
</tr>
<tr>
<td>Cute/ugly</td>
<td>5.5 (2.5)</td>
<td>5.4 (2.1)</td>
<td>2.6 (2.3)</td>
</tr>
<tr>
<td>Quiet/loud</td>
<td>5.0 (2.5)</td>
<td>4.8 (2.7)</td>
<td>3.4 (2.8)</td>
</tr>
</tbody>
</table>

Child Friendship Selection
Across three trials, children chose thin figures as friends 39% of the time. Average figures were chosen as friends 45% of the time. Chubby figures were chosen as friends 16% of the time. Children selected significantly fewer chubby figures as friends than either thin figures, t(41) = 3.7 (p < .01), or average figures, t(41) = 4.1 (p < .01). In the selection of a best friend, a thin figure was chosen by 55% of the children, an average figure was chosen by 38% of the children, and a chubby figure was chosen by 7% of the children.

Attributions of Control
With higher scores indicating a more internal attribution of control for overweight, attribution of control scores averaged 0.7 out of a possible 2.0 (actual range, 0–1.8; SD = 0.49). This suggests that the children, on average, attributed a low-to-moderate amount of control to overweight children. Bivariate correlations were examined between attribution scores and adjective rating and friendship selection scores for the chubby figure. Attribution scores were negatively correlated with the total adjective rating score for the chubby figure (r = −.34, p < .05) such that more internal attributions of control were related to less positive adjective ratings for the chubby figure. Attribution scores were not correlated with the number of chubby friends selected (r = .17, p > .10) or the figure selected as a best friend (r = −.18, p > .10).

Discussion
Although some concern about overweight is appropriate for physical and psychological health reasons, the
consequences of negative stereotyping for obese individuals can also be detrimental. The current study suggests that not only do preschool children hold anti-fat attitudes, but the strength of these attitudes is related to children's beliefs that overweight is a controllable attribute. By contrast, attributions of internal control were not related to preschoolers' selection of overweight friends.

Consistent with previous research, preschoolers in this study assigned more negative characteristics to chubby figures than to thin or average figures. Although some research (Brylinsky & Moore, 1994; Cramer & Steinwert, 1989; Staffieri, 1967) has found that preschoolers prefer average-size figures to both overweight and thin figures, the participants in this study rated thin and average figures similarly to one another and discriminated against only chubby figures.

The negative attitudes that preschoolers had toward children who were overweight were further demonstrated in their selections of potential friends. Chubby figures were chosen as desirable playmates less often than thin figures or average-size figures, and this was true even though children were not forced to choose one friend from a selection of two, as in previous research, but were given the more open-ended, and perhaps more realistic, option of choosing several friends from a larger sample. Chubby figures were almost never (n = 3) chosen as the best friend. It is possible that the current study underestimated the bias that preschool children demonstrate with regard to overweight peers. Juvonen (1991) found that children reported more positive reactions (e.g., sympathy, liking) to hypothetical deviant peers (including overweight peers) than they did to actual classmates. Thus, in addition to the medical risks associated with being overweight, overweight children are also potentially subject to the psychological risks associated with peer rejection. However, based on a review of research, Harper (1999) suggests that how a child chooses playmates depends on several factors. For example, Harper suggests that children's preferences will depend on whether they believe that the child being judged will be able to perform the desired activity. Perhaps in some play contexts this discrimination against overweight peers would be less apparent. However, it should be noted that despite strong face validity, prior research has not provided evidence about the reliability and validity of this friendship selection measure. Future research should examine the consistency with which children respond to this scale over repeated testing occasions or compare children's responses on this scale with their actual friendship selections.

In considering these results, it is important to note that the present sample was entirely White. Because different attitudes about weight have been documented in individuals from different cultural and racial backgrounds (e.g., Lawrence & Thelen, 1995; Thompson, Corwin, & Sargent, 1997), additional research with larger and more diverse samples is needed to determine the generalizability of these findings.

Of great interest in this study was the novel finding that preschoolers' attributions for individuals' weight were related to their negative stereotyping of overweight individuals. Children who believed that weight was within an individual's control showed stronger prejudice toward overweight figures. This is the first time that the predictions of attribution theory for anti-fat attitudes have been demonstrated with preschool children.

In contrast, control attributions did not relate to the number of chubby friends that children selected or to the friend that each child chose as his or her best friend. Some previous research from an attribution-theory perspective suggests that adults do show consistency between attributions and behavioral intentions. For example, Crandall and Moriarty (1995) found that participants in their study reported more social distancing for illnesses presented as behaviorally caused than those presented as outside of behavioral control.

On the other hand, there is an empirical precedent for a lack of correspondence between the attitudes and behavioral intentions measured here. For example, Fishbein and Ajzen (1974) found in 26 out of 27 studies that general attitudes did not correlate with specific behaviors; however, situation-specific attitudes did match behaviors. Therefore, asking children about their attitudes toward obese and nonobese friends might have been more predictive of their behavioral intentions for friendship selection.

Similarly, the lack of relation between the children's attributions and friendship selections is consistent with findings from interventions designed to improve peers' treatment of overweight children. These efforts appear to be effective in changing attitudes, but improvements in behavior toward overweight children do not follow (Bell & Morgan, 2000; Sigelman, 1991). It might be that such interventions impact only the reporting of attitudes and do not change deeply held beliefs. Consistent with this, Bessenoff and Sherman (2000) found with college students that automatic (i.e., implicit) attitudes about overweight individuals predicted behavior (i.e., how far they sat from an overweight woman), whereas controlled (i.e., explicit) attitudes did not.

The relation of attributions about weight to anti-fat attitudes at such a young age has implications for the
messages that parents, teachers, and the media convey to children about the reasons for individuals being overweight. This is an extremely complex issue, as most agree that overweight in children is caused by a number of factors, some of which are controllable and others not (e.g., see Birch & Fisher, 1998, and Weinsier, 1999, for reviews). However, these findings argue that adults have a responsibility to educate children about openness to diversity of body size, just as we teach acceptance and encourage diversity of other kinds. Several programs already exist to meet this goal (e.g., Irving, 2000). Further, an effective intervention may be to emphasize an obese child’s positive attributes (e.g., he is good at an activity) rather than weight (La Greca & Bearman, 2000). Supplementing these existing programs with information about factors contributing to obesity that are not behaviorally controlled (e.g., genetic or hormonal) may lead to a change in attributions, which in turn may reduce stereotyping of overweight individuals. The results of the current study suggest that targeting such programs toward preschool children, before these attitudes become too firmly engrained, might be beneficial.

Despite these practical implications, encouraging body size acceptance in preschool children will be challenging. First, because no relationship was found between attributions and behavioral intentions, teaching that overweight individuals are not entirely responsible for this condition may not reduce poor treatment of overweight children. Second, internal attributions for weight may be very difficult to change (e.g., Teachman et al., 2003). Indeed, Lewis et al. (1997) reported that information on the controllability of weight led to stronger blame of overweight people, whereas information on uncontrollability of weight did not lead to less blame. Third, previous research suggests that it may be difficult for young children to understand and believe low-responsibility conditions (i.e., glandular and genetic disorders) (Sigelman & Begley, 1987). Future research should address the best way to present these explanations to preschool-age children. Fourth, the distinction that it is healthy to be of average size but acceptable to be otherwise is a very subtle concept to teach. Teaching children empathy for those who are overweight while at the same time teaching them about the risks associated with unhealthy eating and inactivity will take tremendous sensitivity on the part of parents and teachers.

Given the current state of this field and the growing awareness of the impact of being overweight, it seems that the messages conveyed to children should focus on health-promoting lifestyle choices while simultaneously educating them about the many factors that determine body size and acceptance of diversity in body size. Research is needed, however, to understand the sources and correlates of young children’s ideas about body size and to develop and evaluate programs that promote the most positive attitudes and behaviors.

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