

Looking Fat or Being Bad? Effects of Body Size and Eating Style on Peer Evaluation in Adolescents

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The present study examined adolescents' peer evaluations when information about body size (normal vs. overweight) and eating style (healthy vs. unhealthy) was provided. A study was conducted with a sample of 90 adolescents. Adolescents judged their peers on information about body size, but also about their eating style. The effect of body size was qualified by gender: Male adolescents were more positive about normal body weight peers, whereas females did not distinguish between normal weight and overweight peers. The results imply that not only are the consequences of unhealthy eating important; the behavior itself is also important. This holds promise for addressing adolescents' eating behavior.

Adolescents increasingly engage in unhealthy eating behaviors (Schneider, 2000). Poor eating habits established during adolescence can have long-term costs for one's health, such as obesity, growth problems, bone disease, and increased risk of heart disease (Dietz, 1998; Williams, Holmbeck, & Greenley, 2002).

During adolescence, peers become an important source of social influence, since adolescents are concerned with their identity and the social implications of their behavior (e.g., social appearance, peer approval). Provided that eating often occurs in a social context, knowing how adolescents view healthy and unhealthy eating peers is important, particularly because such perceptions can guide adolescent behavior (Gerrard et al., 2002; Gibbons &

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Gerrard, 1995). For instance, when adolescents hold negative judgments about people their age who eat unhealthy foods, this may reduce their tendency to eat unhealthily because they expect to be perceived in a similar negative manner when engaging in unhealthy eating themselves. In a similar vein, holding positive judgements about people who eat healthy foods could promote healthy eating.

Most studies on prototypes assume that perceptions of peers are a result of the behavior that is portrayed (Blanton et al., 2001; Gerrard et al., 2002), whereas studies on perceptions of other people's weight suggest that not behavior per se but the consequences in terms of appearance contribute to the evaluations (Ouellette, Hessling, Gibbons, Reis-Bergan, & Gerrard, 2005). If we want to address adolescents' peer evaluations, it is important to know how these evaluations are constructed. Therefore, the present study questions whether adolescents' evaluations of healthy and unhealthy eating peers are based on their appearance, on their eating behavior, or both.

Various studies have shown that people have stereotypical perceptions about other people, based on their eating patterns or specific food intake. Stein and Nemeroff (1995), for example, found that participants rated targets who ate "good" food (e.g., fruit, salads) more positively than they rated targets who ate "bad" food (e.g., hamburgers, French fries) on a number of trait adjectives (e.g., *considerate/inconsiderate*, *attractive/unattractive*, *active/inactive*, *healthy/unhealthy*). Other studies have found a tendency whereby participants assigned more negative characteristics to people who were eating in an unhealthy manner, and more positive characteristics to people who were eating in a healthy manner (Barker, Tandy, & Stookey, 1999; Oakes & Slotterback, 2005; Stein & Nemeroff, 1995). In short, whether eating behavior is seen as healthful or not can influence judgments about people engaging in that behavior.

A recent study by Gerrits, De Ridder, De Wit, and Kuijer (2009) showed that adolescents hold distinctly negative (prototypical) images of unhealthy eaters and positive images of healthy eaters. *Healthy eaters* were described as being *responsible*, *slim*, and *sporty*; while *unhealthy eaters* were, above all, seen as rather *undisciplined*, *chubby*, and *lazy*.

Although adolescents were asked to evaluate peers in terms of their behavior, it is possible that appearance affected these evaluations, because body size is thought to be closely related to eating behavior. Furthermore, research on body size has shown similar evaluations. People with a round, fat figure (i.e., endomorphs) are perceived as sad, slow, lazy, and unattractive; while people with a muscular figure (i.e., mesomorphs) are described mostly in positive terms (Ryckman, Robbins, Kaczor, & Gold, 1989). A more recent study (Greenleaf, Chambliss, Rhea, Martin, & Morrow, 2006) showed that these stereotypes also exist among adolescents. Greenleaf et al. found that

overweight adolescents were considered unhealthy, lazy, and socially inept by their peers, while thin targets were associated with more positive stereotypes. On the whole, stereotypical ideas about body size tend to be powerful in judging other adolescents (Puhl & Latner, 2007).

Together, these studies suggest that both behavior and appearance may affect evaluations of healthy and unhealthy peers. Unfortunately, only one study to date has examined both influences simultaneously (Martins, Pliner, & Lee, 2004) and found that both body size and meal size affected individuals' impressions of males and females, although the effect was qualified by gender, showing that female ratings of physical attractiveness (but not social attractiveness) were unaffected by body size. However, this study was performed with adults and focused on attractiveness as the dependent measure.

The main question of the present study is whether body size and eating behavior affect adolescents' judgments of their peers in terms of a more general evaluation comprising a range of personal characteristics. To address this question, we asked adolescents to evaluate peers who were presented as either a typical healthy eater or a typical unhealthy eater, accompanied by a photograph of either a normal-weight or an overweight adolescent. In addition, we explored whether these evaluations were different for boys and girls, since many studies have asserted that (especially young) women are more concerned about body weight, food, and eating than are men (Croll, Neumark-Sztainer, Story, & Ireland, 2002; Martins et al., 2004; Paxton et al., 1991; Rozin, Bauer, & Catanese, 2003).

Method

Participants

Participants were 90 adolescents (48 boys, 42 girls). Their mean age was 16.4 years ($SD = 0.8$; range = 15–19). These adolescents were students from four different classes, who were recruited from a high school in a midsized city in The Netherlands. All participants were informed about the nature and procedures of the study, they understood that their participation was entirely voluntary and anonymous, and they provided their informed consent.

Design and Procedure

We employed a 2 (Body Size: normal weight vs. overweight) \times 2 (Eating Style: healthy vs. unhealthy) \times 2 (Gender) design. Participants were randomly assigned to one of four experimental conditions whereby information

about body size and eating style was manipulated (22 or 23 participants per condition, with males and females distributed evenly over conditions).

Each participant was seated individually behind a computer in a classroom. After answering demographic questions, participants were told that they would be asked to evaluate a typical healthy (or unhealthy) eater their age. Subsequently, a photograph was presented with the face of a normal-weight (or overweight) adolescent. Participants were asked to take a good look at this typical healthy (or unhealthy) eater “because next we will ask you to evaluate this (un)healthy eater on some characteristics.” The adolescents portrayed in the photograph were of the same gender as the participants.

Materials and Measures

Photographs and information about (un)healthy eating. The photograph showed the face of an adolescent. Photographs were carefully selected so that apart from their weight, the appearance of the adolescents was alike (i.e., facial expression, hairstyle, clothing style, complexion). Sample photographs are presented in Figure 1.

Evaluation of similar appearance of the adolescents was conducted by the four authors and demonstrated that adolescents of different weight status were regarded similarly in terms of the four criteria relating to appearance. To ensure that the adolescents portrayed in the photographs were evaluated differently in terms of their weight, these photographs were pilot-tested with a different sample of adolescents (27 males, 42 females). Those participants rated the weight of either the normal-weight or the overweight adolescent on a 7-point scale ranging from 1 (*very thin*) to 7 (*very fat*). The results showed that adolescents’ weights were assessed correctly. The normal-weight boy was perceived as having a normal weight ($M = 3.86$, $SD = 0.36$), while the



Figure 1. Sample of photographs used in the study.

overweight boy was perceived as being overweight ($M = 5.70$, $SD = 0.63$), $t(25) = -9.36$, $p < .001$. Similar results were found for the photograph portraying a normal-weight girl ($M = 3.45$, $SD = 1.22$) and an overweight girl ($M = 5.55$, $SD = 0.61$), $t(40) = -6.92$, $p < .001$.

Information about the typical healthy eater comprised the following statement: "This adolescent pays attention to what s/he eats. S/he frequently eats fruits, rarely consumes snacks in between meals, and always has a serving of vegetables at dinner. S/he very rarely eats take-away foods, such as pizza or fries." Information about the typical unhealthy eater comprised the same information but with reversed categories (i.e., rarely eats fruits; frequently consumes snacks; rarely has a serving of vegetables; very often eats take-away foods).

Demographics. Participants completed a request for demographic information. Specifically, they reported their age, gender, height, and weight.

Peer evaluation. The participants were asked to describe the adolescent in the picture using 12 bipolar items reflecting personal characteristics and attributes (e.g., *insecure/self-confident*, *irresponsible/responsible*, *focused on present/focused on future*, *sloppy/meticulous*, *foolish/wise*, *undisciplined/disciplined*, *dissatisfied/satisfied*, *unkempt/well-groomed*, *chubby/slim*, *thinks body is important/thinks body is unimportant*, *not sporty/sporty*, and *lazy/active*). These adjectives were obtained from a study on eater prototypes (see Gerrits et al., 2009; cf. Gibbons & Gerrard, 1995). Responses were rated on a 7-point scale, with higher scores reflecting more positive evaluations. The scale had good reliability (Cronbach's $\alpha = .80$), and the items were summed to generate an overall score of peer evaluation, ranging from 1 (*negative*) to 7 (*positive*).

Results

We conducted a 2 (Body Size) \times 2 (Eating Style) \times 2 (Gender) ANOVA to examine the impact on peer evaluation. We found a significant, large main effect for body size, $F(1, 82) = 19.40$, $p < .001$, $\eta^2 = .15$. Adolescents judged the normal-weight adolescent more positively ($M = 4.45$, $SD = 1.05$) than they did the overweight adolescent ($M = 3.63$, $SD = 0.64$). Furthermore, the main effect for eating behavior was significant and in the medium range, $F(1, 82) = 9.96$, $p < .01$, $\eta^2 = .08$. Adolescents made more positive judgments of healthy-eating adolescents ($M = 4.32$, $SD = 1.02$) than they did unhealthy-eating adolescents ($M = 3.73$, $SD = 0.78$).

There was no interaction effect between body size and eating behavior. Nor did we find a main effect for gender. However, the interaction effect between body size and gender was significant, $F(1, 82) = 10.12$, $p < .01$,

$\eta^2 = .08$. Simple main effects reveal that the difference in evaluation of the normal-weight and overweight adolescent was significant for boys, $F(1, 82) = 30.86, p < .01$. Boys evaluated the normal-weight adolescent more positively ($M = 4.75, SD = 0.16$) than they did the overweight adolescent ($M = 3.50, SD = 0.16$). Girls showed no difference in their evaluation of the normal-weight adolescent ($M = 3.97, SD = 0.18$) and the overweight adolescent ($M = 3.77, SD = 0.16$); $F(1, 82) = 0.70, ns$.

Discussion

The present findings show that adolescents judge their peers not only on information about body size, but also on information about their eating behavior. This implies that adolescents do not simply evaluate their peers in terms of what seem to be the negative consequences of their unhealthy eating patterns. They also evaluate their peers in terms of the uncontrolled behavior itself, before the consequences in terms of body weight are visible. We did not question adolescents in this study about the perceived association between eating patterns and body weight, making it impossible to draw any conclusions about the way adolescents think of this relation. Nevertheless, it is quite remarkable that adolescents hold negative judgments about unhealthy eating without being asked explicitly to consider the potential negative consequences in terms of weight gain in the long run.

Where Greenleaf et al. (2006) stated that the adolescents in their study seem to have internalized the dominant sociocultural message that "Thin is good" and "Fat is bad," the present study shows that adolescents also seem to make moral judgments about behavior; it is not just about looking fat, but also about being bad. It appears that adolescents hold clear views of what is appropriate and are less tolerant of unhealthy eating behavior in terms of type of foods and amount of intake. As most adolescents have good knowledge of the risks associated with unhealthy eating (Croll, Neumark-Sztainer, & Story, 2001), it is important to understand how they think of unhealthy eating itself. This holds promise for preventive interventions, as apparently one can communicate with adolescents about unhealthy food intake before it shows in terms of body size. Targeting eating behavior instead of the consequences of this behavior is also important because adolescents can feel invulnerable and have trouble seeing the future consequences of their behavior (Cohn, Macfarlane, Yanez, & Imai, 1995).

Interestingly, the effect of body size on peer evaluation was mostly qualified by boys. Girls made no distinction in their evaluation of normal-weight and overweight girls. Similar results have been found for adult females who evaluated normal-weight and overweight women as equally physically (but

not socially) attractive (Martins et al., 2004). Martins et al. interpreted these findings as an indication that women appear to be able to distinguish between attractiveness and body size, at least when they evaluate others.

A similar line of reasoning may apply to our findings. Because girls tend to be more dissatisfied with their own bodies than do boys (Paxton et al., 1991), this may have resulted in the more negative evaluations of peers with a “normal” weight, as compared to boys. Indeed, girls’ evaluations of normal-weight peers were far lower ($M = 3.97$) than were boys’ evaluations of their normal-weight peers ($M = 4.75$). In addition, it may be that girls only evaluate thin peers positively, as opposed to the normal-weight peer in this study because of media influences of the thin ideal (Brown & Dittmar, 2005). On the other hand, the effect of eating style on peer evaluation holds for both boys and girls, stressing the importance of the influence of actual behavior in evaluations of unhealthy and healthy eating peers. Regardless of this interesting pattern of gender-related findings, it should be noted that we cannot conclude from the present data whether these differences primarily relate to the gender of those who were evaluated or those who made the evaluations. In addition, it must be noted that even though great care was taken in selecting similar stimulus material, boys and girls rated different photographs, as we wanted them to evaluate peers of their own gender. Future research should examine the effect of evaluating both boys and girls.

The present study showed that a very simple manipulation of eating behavior influenced adolescents’ judgments. Despite the fact that the sample size was modest, our study showed moderate to large effect sizes. While adolescents show that they have good knowledge with regard to healthy and unhealthy eating (Croll et al., 2001; Gerrits et al., 2009), future research could provide adolescents with more detailed descriptions of healthy and unhealthy eating behavior or could focus on a specific type of eating behavior. Another important step is to relate these evaluations to actual eating behavior. In summary, the present study illustrates that although stereotypical ideas about body size are powerful, when it comes to adolescents’ evaluations of their unhealthy and healthy eating peers, the behavior itself should not be overlooked.

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