

Peer acceptance of obese preschool children

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Summary

The study investigated the peer acceptance of obese preschool children compared to their average-weight peers within the school setting. Two groups of obese ($n = 28$) and average ($n = 63$) 5-year olds were compared. Children and their classmates provided ratings of peer acceptance (a sociometric status measure and a best-friend nomination task) and behavioural reputation. Compared to their average-weight peers, obese children received less best-friend nominations, had less reciprocal friendships and were rated as less cooperative, agreeable and attractive and more lonely and teased. The implications of the findings are discussed.

Introduction

There is evidence that obese children and adolescents experience problems in their social functioning such as marginalization, isolation, teasing and victimization (Puhl & Latner, 2007). Research utilizing figure drawings has shown that obese children are the least liked among children with physical disabilities (Latner & Stunkard, 2003) and are ascribed negative social and interpersonal attributes (lazy, mean, etc.) (Brylinsky & Moore, 1994). Research assessing the peer relations of children and adolescents in real life has yielded similar findings. Zeller, Reiter-Purtill, and Ramey (2008) found that clinically referred obese children and adolescents (8-16 years) received lower peer acceptance ratings and were less often nominated as best friends than their average size peers. A large scale study (Strauss & Pollack, 2003) investigating the social networks of average and obese adolescents found that obese adolescents, although not friendless, were more peripheral and isolated than their average-weight peers. Moreover, they were less likely to be chosen as friends, had less reciprocal nominations and those who did nominate them as friends tended to be less popular themselves.

Less though is known about the *actual* peer relationships of young obese children in their school setting. Most studies have utilized hypothetical measures - such as the 'playmate preference task' - and found that the obese figure is rarely picked as a friend (Cramer & Steinwert, 1998). The aim of this study is to examine the peer relationships of obese preschool children in their classroom and compare them with those of their average-size classmates. The measures of peer relationships included the child's social status, the number of best friend nominations and the number of reciprocal friendships. In addition, a child's reputation task was administered asking children to match behavioural and non-social attributes to their classmates. In that way, a more accurate picture of how obese children are perceived by their classmates could be formed.

Method

Participants. One-hundred and fourteen preschool children ($M = 5.5$ years, 59 girls) attending 8 nursery classes took part in the study. Children were classified as average ($n = 63$), overweight ($n = 23$) and obese ($n = 28$) according to their Body Mass Index. However, the target/comparison groups of this study were that of the average and obese.

Measures and Procedure

- a. *Sociometric task.* Following Coie and Dodge's (1983) sociometric procedure, each child was asked to nominate three children that (s)he wanted to invite to his/her party and three children that (s)he did not want to be at the party from a class-photo placed in front of them. This way each child's social status was derived: popular, average, rejected, neglected and controversial.
- b. *Best friends and reciprocal friendships.* Each child named three classmates that (s)he regarded as his/her best friends. For each child two scores were computed: a) one indicating the number of times (s)he was nominated as best friend, and b) one showing the number of reciprocal friendships. Scores were normalized to class size.
- c. *Behavioural Reputation Task.* Each child was asked to name up to three of his/her classmates that fitted the following: a) behavioural characteristics: cooperative, agreeable, prosocial, aggressive, rejected, victim, teased, lonely, and b) non-social qualities: school achievement and physical attractiveness. Each child received a score by adding the number of times (s)he was chosen for each characteristic. Scores were normalized to class size.

Children were tested individually in their school setting. Parental consent was obtained by the majority of children (94%).

Results

Social Status. Although the distribution of social status did not differ between the average and the obese children (*Fisher's Exact Test* = 3.22, $p = .21$) none of the obese was classified as popular vs. 14% of the average.

Best Friends & Reciprocal Friendships: A *t*-test showed that the obese were significantly less often nominated as best friends compared to their average-size peers ($M = .19$ vs. $M = .30$, $p = .01$). Obese children had significantly less mutual friendships ($M = .09$ vs. $M = .14$, $p = .02$). Twenty two percent had no reciprocal friends vs. 8% of their comparisons.

Behavioural characteristics and non-social qualities. Independent samples *t*-tests showed that, compared to the average-weights, obese children were rated as being less agreeable ($t = 2.79$, $p = .006$), less cooperative ($t = 2.49$, $p = .01$), more teased ($t = -2.16$, $p = .03$), more lonely ($t = -2.06$, $p = .04$) and less attractive ($t = 2.94$, $p = .004$) (Figure 1).

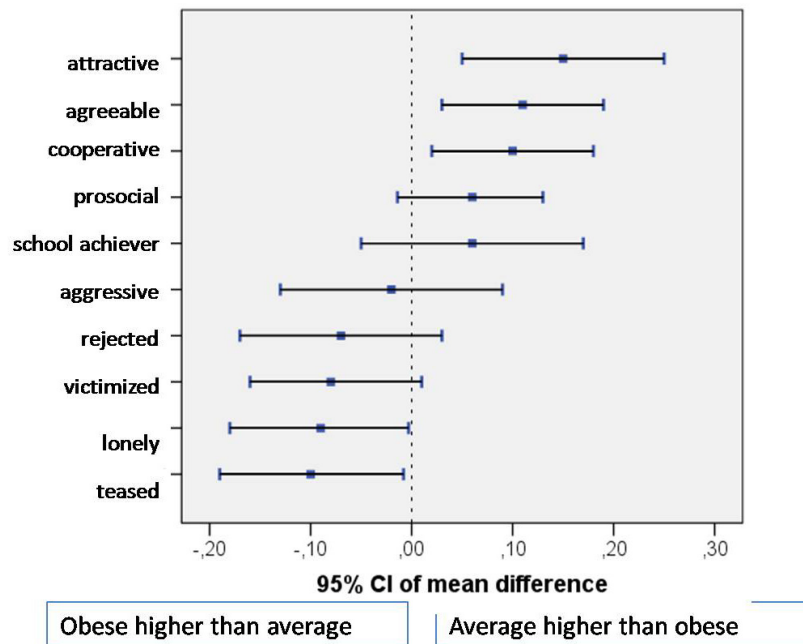


Figure 1. 95% CI of difference (average-obese)

To examine whether the association between the number of best friends and weight status was mediated by behavioural and non-social qualities a hierarchical regression analysis was performed. The qualities included in the model were those that differed significantly between the comparison groups. Weight status was entered in the first step (change in $R^2 = .07$, $p = .012$) and the univariately significant qualities were entered in step 2 (change in $R^2 = .73$, $p < .001$). The coefficient of weight status lost its significance in the presence of agreeableness and attractiveness (Figure 2).

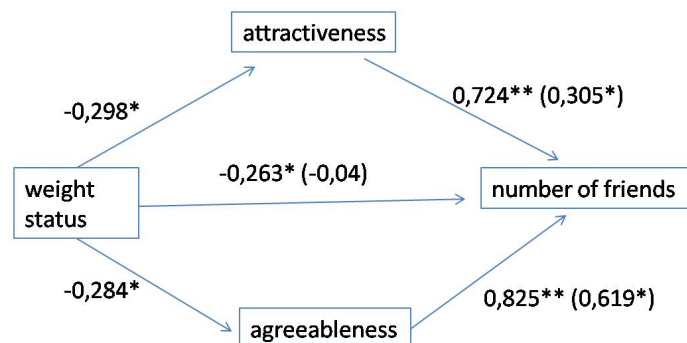


Figure 2. Path diagram showing how attractiveness and agreeableness mediate the association between body type and number of friends

Discussion

The findings of this study extend the findings of earlier research with older children and adolescents and reveal that obese children begin to face difficulties in their peer relationships from a young age. It was shown that obese preschool children were less often picked as best friends and had less mutual friendships compared to their normal-weight peers. Though the obese children were nominated as best friend at least once, nearly a fifth did not have a reciprocal friendship. Moreover, none of the obese studied was popular in his/her class. Although the study did not assess the quality of young children's friendships, the fewer friendship nominations and the lower rates of reciprocal friendships might suggest that the obese are at risk to be deprived from social experiences. Obese children were rated by their peers as possessing some qualities that do not promote social life. They were considered to be less agreeable and cooperative, lonely, teased and less attractive. Physical attractiveness and agreeableness explained most of the variance observed regarding the number of best friend nominations. On the positive side, the obese did not differ in their prosocial skills and were doing equally well at school. Contrary to studies with obese youth (Griffiths, Wolke, Page, & Horwood, 2006), obese preschool children did not exhibit aggressive or disruptive behaviours.

This small scale study was, to our knowledge, the first to explore the peer relationships of obese preschool children. However, a limited number of behavioural and non-social qualities were explored. Future studies should include more characteristics, such as physical activity, athletic competence, etc. that play a central role in children's life. Longitudinal studies should examine the developmental trajectories of obese children's peer relationships and their effect on a number of factors such as their weight control efforts, self-esteem and so forth. In this study children's qualities were rated by only one rater, the child itself. Future studies need to also include ratings of teachers who also observe children's behaviour.

The findings call for early interventions targeting the development of social skills and the promotion of peer interactions among all the children. Interventions aiming to eliminate the obesity stigma, should be embedded within a broader framework that aims to promote acceptance, respect and equality among children.

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