



## BRIEF COMMUNICATION

## Experimental investigation of parents and their children's social interaction intentions towards obese children

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**Aim:** The aim of this study was to determine if parent intentions to facilitate social interactions between their child and a peer, or parental perceptions of their child's peer social interaction intentions, differ according to the weight status of a child's peer.

**Methods:** During a telephone survey, 250 Australian parents of children 5–12 years were randomly assigned to listen to one of two descriptions of a hypothetical child differing by group in the description of child weight status ('quite overweight' or 'healthy weight'). Parents then completed the Social Interaction Intention Scale, which assessed how likely they or their child would engage in a number of behaviours that may facilitate social interaction with the child described in the profile.

**Results:** Means scores on the overall scale and the child sub-scale of the Child Social Interaction Intention Scale were significantly higher among participants allocated to the healthy weight child profile, indicating more positive social intentions.

**Conclusion:** The findings suggest that negative weight-based stereotypes hinder the development of peer friendships by obese children.

**Key words:** child; obesity; paediatric; stigma; weight bias.

### What is already known on this topic

- 1 Obese children are rated as less desirable friends by their peers, are more likely to be teased or bullied and are vulnerable to social isolation.
- 2 Obese children have smaller social networks than healthy weight children.
- 3 Parents can influence the development of friendships among their children through facilitating opportunities for social interaction.

### What this paper adds

- 1 Children afford their obese peers fewer opportunities for social interaction.
- 2 Parents do not appear to impede social interaction between their children and obese peers.
- 3 Interventions to reduce weight-based stereotypes are required to reduce the risk of adverse psychosocial consequences.

The elevated risk of chronic disease in adulthood posed by excessive weight gain has been well documented.<sup>1</sup> For children, however, the more immediate and acute impacts of obesity are psychosocial. Although peer acceptance and the creation and maintenance of friendships in childhood is an important part of social development and can protect against psychosocial morbidity,<sup>2</sup> weight-based teasing and victimisation by children

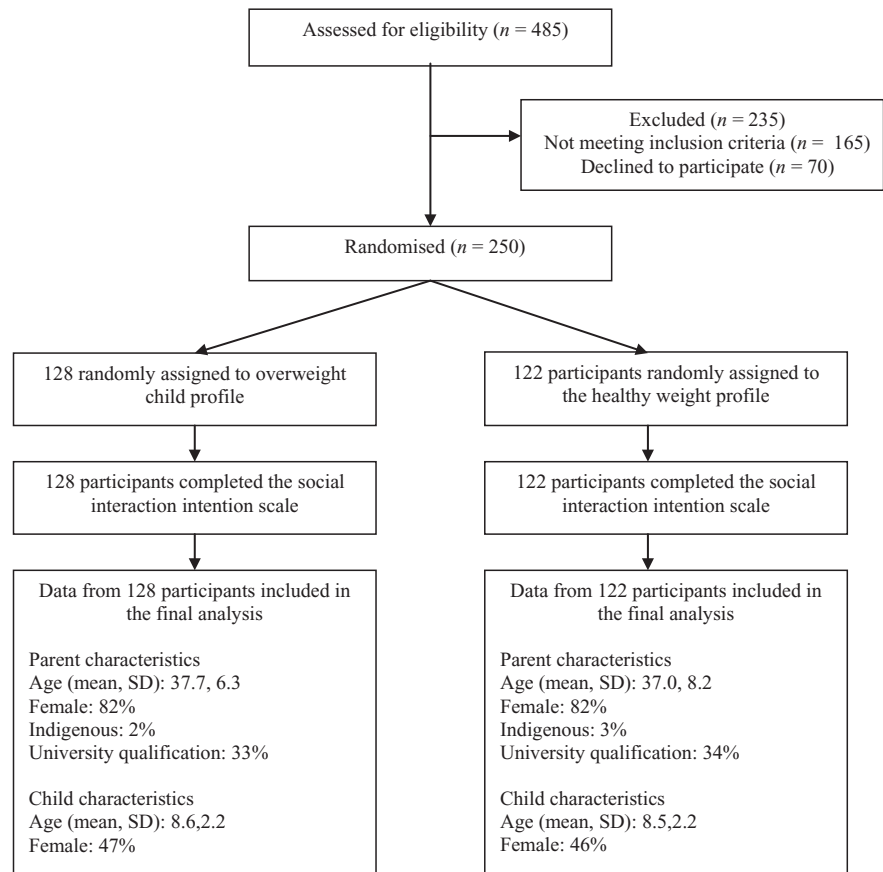
represents a considerable impediment to the formation of friendships.<sup>3–6</sup>

Parents can influence the development of friendships among their children through facilitating opportunities for social interaction.<sup>7</sup> Weight bias of parents,<sup>8,9</sup> however, may impede the development of friendships with overweight children *directly* through discouraging social interaction with an overweight peer, or *indirectly* through the transmission of negative weight-based stereotypes and attitudes to their children. The aim of this study was to determine if parent intentions to facilitate social interactions between their child and a peer, or parental perceptions of their child's peer social interaction intentions, differ according to the weight status of a child's peer. Relative to a healthy weight child peer, it was hypothesised that parents would be less inclined to facilitate social interaction with an obese child peer and that parents would perceive that their children would be less inclined to socially interact with an obese child peer.

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Conflict of interest: All listed authors of this manuscript do not have any conflicts of interest of a financial nature that, through their potential influence on behaviour or content, or from perception of such potential influences, could undermine the objectivity, integrity or perceived value of the manuscript.

Accepted for publication 1 April 2013.



**Fig. 1** Study design and participant throughput.

## Methods

### Sample

The study sampled from a database of parent participants in a random household child health telephone survey conducted in 2007 in New South Wales, Australia. Four hundred and eighty-five randomly selected parents from this database were telephoned and assessed for study eligibility. To be eligible, participants had to speak English and be a parent of a child 5–12 years (Fig. 1).

### Procedure

Trained research assistants conducted structured 15-min telephone interviews with participants. Consistent with research investigating bias through mental simulation procedures,<sup>10,11</sup> parents were read one of two randomly selected hypothetical child profiles. The description of the hypothetical child's weight status (of 'healthy weight' or 'quite overweight') was randomly assigned (Fig. 1). The interviewer also matched the age and gender of the hypothetical child to the age and gender of the target child of the participant. With the exception of child weight status, child profiles were identical.

Specifically, parents were read:

I want you to imagine that a 'boy/girl' (matched to target child) named Ashley, who is new to the neighborhood has

recently started school in the same class as (target child). Ashley has one sister who is 2 years older and his/her parents manage a small retail business. In his/her appearance, Ashley is quite 'overweight/of healthy weight' (randomly assigned), of average height, with dark hair. In terms of 'his/her' interests, Ashley's favorite activity is playing outdoors in the park and his/her favorite food is chocolate. Ashley's academic ability is slightly below average and 'he/she' is reasonably well behaved in school.

Parents, but not telephone interviewers, were blind to the experimental manipulation. Following the profile description, participants completed the Social Interactions Intentions Scale (SII Scale), a brief self-reported tool developed for the purpose of the study (see Table 1).

## Measures

### Social interaction intentions

The primary outcome measure of the study was the overall, and two sub-scale scores on the SII. The SII scale required participants to report on a scale from 1 to 10 how likely (1 = highly unlikely and 10 = highly likely) it would be that they or their child would be friends with, or engage in a number of behaviours that may facilitate social interactions with the child described in the profile (see Table 1 for sub-scale items and

**Table 1** Social Interactions Intentions Scale scores by group

	Overweight profile Mean (SD)	Healthy weight profile Mean (SD)	Mean Diff	95% confidence interval	P-value	R <sup>2</sup>
<b>Child scale</b>						
1. That your child would get on well with Ashley.	6.9 (2.0)	7.7 (1.7)				
2. That your child would ask Ashley to play with him/her at school.	7.0 (2.0)	7.6 (1.8)				
3. That your child would ask Ashley over to his/her house to play.	6.8 (2.4)	7.2 (2.1)				
4. That your child would like to go over to Ashley's house to play.	6.8 (2.4)	7.3 (2.2)				
5. That your child would select Ashley to sit next to in class.	6.4 (2.1)	6.7 (2.0)				
6. That your child would ask Ashley to his/her next birthday party.	7.1 (2.2)	7.7 (1.9)				
7. That your child and Ashley would become close friends.	6.3 (2.1)	7.0 (1.8)				
Mean child scale score	6.7 (1.9)	7.3 (1.6)	0.599	0.161, 1.035	0.007	0.028
<b>Parent scale</b>						
8. That you would encourage your child to be friends with Ashley.	7.4 (2.2)	7.7 (2.1)				
9. That you would invite Ashley over to play with your child	7.4 (2.1)	7.6 (2.2)				
10. That you would let your child go over to Ashley's house to play	7.7 (1.8)	7.7 (2.1)				
11. That you would invite Ashley to your child's birthday party.	7.6 (2.1)	7.9 (1.9)				
12. That your family would socialise with Ashley's family.	5.5 (2.2)	5.8 (2.2)				
13. That you would become close friends with Ashley's family.	5.5 (2.2)	5.7 (2.1)				
Mean parent scale score	6.8 (1.6)	7.1 (1.5)	0.229	-0.159, 0.617	0.246	0.005
Mean total scale score	6.8 (1.6)	7.2 (1.4)	0.428	0.050, 0.807	0.027	0.020

Note. All scores ranged between 1 and 10 (1 = highly unlikely, 10 = highly likely).

mean scores). Higher scores indicate more positive social intentions. The items within each sub-scale were in a fixed order, but sub-scale order of presentation was counterbalanced during the telephone survey.

### Psychometric properties of the SII scale

An investigation of the psychometric properties of the new SII scale was undertaken in the context of the experimental study. The Kaiser–Meyer–Olkin value (0.94) indicated sufficient sampling adequacy. Based on a parallel analysis and inspection of Cattell's scree plot, two factors were extracted by a principal axis factor analysis with promax rotation. As expected, the SII items loaded on two separate factors that mapped onto the child–parent items (child factor, 55.18% explained variance; parent factor, 11.43%). The two factors were moderately correlated ( $r = 0.43$ ). For the research sample, the scale items had good internal consistency as a whole and for both sub-scales (Cronbach's alphas, child section 0.94, parent section 0.83, total 0.93).

## Results

### Sample

Of the 485 parents contacted, 165 were ineligible as they did not have a child aged 5–12 years and 70 chose not to participate. The remaining 250 participants (78% of eligible parents) were randomly allocated to the healthy weight or overweight child profiles and completed the telephone survey (Fig. 1). There were no significant differences in the demographic characteristics of participants allocated to each group (all  $P_s > 0.05$ ).

### Social interactions intentions

Scores on the sub-scales and overall scale were normally distributed (*Skew* ranging between  $-0.58$  and  $-0.42$ ; *Kurtosis* ranging between 0.15 and 0.47). A two-manipulated profile (overweight and healthy) analysis of variance performed on the overall scale index found a significant effect of the experimental manipulation,  $F(1, 248) = 4.95$ ,  $P = 0.027$ ,  $\eta^2 = 0.020$ . A multiple analysis of variance assessing the effect of the manipulated profile (overweight and healthy) on the two sub-scales (child and parent) found a multivariate effect, Pillai's trace = 0.031,  $F(2, 247) = 3.98$ ,  $P = 0.020$ ,  $\eta^2 = 0.031$ . Univariate tests confirmed a dissociation in weight bias between the child and parent sub-scales, child sub-scale,  $F(1, 248) = 7.27$ ,  $P = 0.007$ ,  $\eta^2 = 0.028$ ; parent sub-scale,  $F(1, 248) = 1.35$ ,  $P = 0.246$ ,  $\eta^2 = 0.005$ . Means scores on the child sub-scale of the Child Social Interaction Intention Scale and overall scale scores were significantly higher among participants allocated to the healthy weight child profile compared with the overweight child profile. Scores on the parent sub-scale did not differ significantly by experimental condition (Table 1).

## Discussion

The study findings suggest that, based on their parents' perception, children are likely to afford their obese peers fewer opportunities for social interaction. Such findings corroborate previous research documenting the smaller social networks of obese children, and the negative attitudes, and lower friendship preferences of children towards their obese peers.<sup>3–7</sup>

Weight bias among parents themselves regarding their own intentions to facilitate the social interactions of their child with the hypothetical child, however, was not evident in this study. It is not clear whether parental responses for themselves reflect socially desirably responding, or potentially more positive attitudes towards obese youth compared with their children's attitudes. Given previous research documenting prejudicial attitudes of parents towards obese children<sup>6,8,9</sup> and correlations of inter-generational transmission of attitudes,<sup>12</sup> one might expect negative attitudes among parents to be more readily apparent. However, it may be that weight bias among parents is less likely to be manifested in their efforts to influence social interactions with their children, compared with other forms of parent-child communication, some of which may be more subtle.<sup>13</sup>

The study provides important information to aid our understanding of the social isolation experienced by many obese children. Given the importance of the development of meaningful child friendships in protecting obese children against psychosocial morbidity, the results of the trial provide further evidence supporting investment in interventions to facilitate child friendship and eliminate weight-based stigmatisation and victimisation of obese children. For paediatric clinicians, the findings underscore the importance of addressing negative weight-based stereotypes at every opportunity. For young children in particular, clinicians should encourage parents to role model non-prejudicial attitudes and behaviour, to intervene when children demonstrate negative weight-based attitudes or behaviours and to support children when they are victims of weight-based stigmatisation. In doing so, clinicians will contribute to reducing adverse social (e.g. peer rejection, and teasing) and psychological (e.g. depression, anxiety and disordered eating) risks experienced by overweight children.<sup>14</sup>

## Acknowledgements

The authors acknowledge the funding support provided by NSW Health through the Hunter Medical Research Institute and the in-kind contribution of Hunter New England Population Health.

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