

RESEARCH LETTER

Primary Care of Overweight Children: The Importance of Parent Weight and Attitudes about Overweight: A MetroNet Study

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Purpose: The purpose of this study was to identify the association of parents' weight and attitude about their child's weight with the child's body mass index (BMI) status.

Design: Cross-sectional, clinic-based study in a practice-based research network.

Methods: One hundred seventy-one parents or adults accompanying children aged 5 to 17 years to a primary care visit in 4 family medicine centers completed a questionnaire. Parent/adult overweight status and attitudes were compared with child overweight status.

Results: Forty-eight percent of children were overweight or obese (BMI \geq the 85th percentile) as were 56% of mothers and 77% of fathers (BMI \geq 25 kg/m²). Child and parent overweight were significantly associated, as were mother overweight and beliefs about child overweight status. Children aged 5 to 13 years were more likely to be overweight than those aged \geq 14 years.

Conclusions: Parents of overweight children are often overweight and many do not recognize that their children are overweight. Suggestions are made for primary care physicians to engage parents of overweight children in family weight control efforts. (J Am Board Fam Med 2008;21:361–363.)

In 2003 to 2004, 17.1% of US children and adolescents were overweight and 32.2% of adults were obese.¹ The epidemic of childhood obesity and overweight is challenging primary care physicians to champion the changes needed to alter their patients' eating, exercise, and lifestyle choices.² Family patterns of obesity and the parental influence on child weight that begins at conception are well recognized.³ We hypothesized that child obesity has a family context and that parents of overweight children may not accurately recognize the child's overweight status.

Methods

Design and Subjects

Using a cross-sectional survey study design, parents or adults accompanying a child aged 5 to 17 years to a primary care visit were asked to complete a study questionnaire. One hundred seventy-one adults were recruited from 1 of 4 family medicine centers that are members of the MetroNet practice-based research network. Almost all the adult respondents (92.4%) were the parents of the children that they accompanied; 5.3% were not parents; and for 2.3%, the relationship to the child was missing (hereafter we refer to the adult respondents as "parents"). These parents provided all study data including the child's weight status, the weight status of both father and mother, and the parent's belief about the child's overweight status.

Data Analysis

Overweight for children was defined as the 85th percentile body mass index (BMI) for age; for adults, overweight was defined as BMI \geq 25 kg/m². χ^2 tests were used to examine the associations of child overweight status with child demographic

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Table 1. Associations of Child and Parental Factors with Child Body Mass Index (BMI)

	All Subjects (n = 171) (%)	Child BMI \geq 85% percentile*		P
		Yes (n = 67) (%)	No (n = 74) (%)	
Child's age				0.04
5 to 10 years	63 (37.7)	25 (37.3)	20 (27.0)	
11 to 13 years	40 (24.0)	21 (31.3)	15 (20.3)	
14 to 17 years	64 (38.3)	21 (31.3)	39 (52.7)	
Child's sex				0.93
Male	81 (48.5)	33 (49.3)	33 (49.3)	
Female	86 (51.5)	34 (50.7)	37 (50.0)	
Child's race				0.32
Black	53 (31.9)	26 (38.8)	21 (28.8)	
White	91 (54.8)	31 (46.3)	43 (58.9)	
Other	22 (13.3)	10 (14.9)	9 (12.3)	
Mother overweight [†]				0.02
Yes	86 (55.5)	42 (66.7)	32 (46.4)	
No	69 (44.5)	21 (33.3)	37 (53.6)	
Father overweight [†]				0.06
Yes	107 (77.0)	46 (86.8)	48 (72.7)	
No	32 (23.0)	7 (13.2)	18 (27.3)	
Do you think child weighs more than he/she should?				0.01
Yes	33 (20.0)	28 (42.4)	1 (1.4)	
No	132 (80.0)	38 (57.6)	72 (98.6)	

*BMI \geq 85 percentile: at-risk for overweight and overweight.

[†]Parent overweight defined as BMI \geq 25 kg/m².

variables, plus parent weight status and parent attitude about the child's weight status.

Results

The mean age of the children accompanying the parent respondents was 11.6 years and 51.5% of the children were female. Parental reports of the child's race were as follows: 54.8% white, 31.9% black, and 13.3% other (see Table 1).

Data on the child's weight status was obtained from 141 of the 171 parent respondents. Based on parents' responses, we calculated 67 children with a BMI \geq 85th percentile. Younger age was associated with overweight status, with children ages 5 to 13 years more likely to be overweight than those 14 years or older. Parents reported that 55.5% of mothers were overweight; maternal overweight was associated with child overweight ($P = .02$). Respondents were less likely to provide weight status information for fathers (n = 32 missing); however, for the data reported, 77.0% (107/139) of fathers were overweight. Father overweight status was also associated with child overweight ($P = .06$).

We examined the association of child weight status with parental perception of the child's weight. Almost all (72/73 or 98.6%) parents with a child of normal weight indicated their child was not overweight. However only 42.4% (28/66) of parents with an overweight child indicated their child was overweight ($P < .001$).

We hypothesized that the overweight parents would be more likely to indicate their overweight child was *not* overweight. We had insufficient numbers for a valid χ^2 test that combined both parents, which we believe resulted from limited variance with the fathers' weight status variable. Among the 42 overweight mothers with overweight children, 20 (47.6%) did not think the child was overweight whereas 22 (52.4%) thought that the overweight child (BMI > 85%) was indeed overweight ($P = .04$).

Discussion

The parents in our study tended to say that their overweight child was not overweight, with slightly less than half of all parents correctly recognizing their

child's overweight status. In addition, child overweight was associated with parental overweight. These findings highlight the family context of weight problems, especially among younger children, and suggest that child obesity interventions should optimally focus on physician-parent partnerships.⁴

Physicians might first advise parents of overweight children about the risks of obesity-related problems that can harm the child's health. Then they can act as change agents² and offer family-based interventions that are designed for primary care providers⁵ and which include health education and efforts to change misunderstandings of healthy weight for children.

In addition, resources are recommended for physicians to identify those parents ready to make changes for overweight children and to identify families that are likely to benefit from physician-led interventions.⁶ Other suggestions are to consider using published guidelines for family interventions as reviewed by Snethen et al⁷ or proposed by O'Brien et al⁸ and Epstein.⁹ Among families where the child is overweight and particularly among families where both parents and children are overweight, the family unit is the elemental focal point for reducing the prevalence of childhood obesity and encouraging healthy eating. This can be a most important role for primary care physicians who seek to be change agents.²

References

1. Ogden CL, Carroll MD, Curtin LR, et al. Prevalence of overweight and obesity in the United States, 1999–2004. *JAMA* 2006;295:1549–55.
2. Lavizzo-Mourey R. Childhood obesity: What it means for physicians. *JAMA* 2007;298:920–2.
3. Savage J, Fisher J, Birch L. Parental influence on eating behavior: Conception to adolescence. *J Law Med Ethics* 2007;35:22–34.
4. Wald ER, Ewing L, Cluss P, et al. Establishing a family-based intervention for overweight children in pediatric practice. *Ann Fam Med* 2005;3(supp 2):S45–7.
5. Meizi H, Evans A. Are parents aware that their children are overweight or obese? Do they care?. *Can Fam Physician* 2007;53:1493–9.
6. Rhee KE, De Lago CW, Arscott-Mills T, et al. Factors associated with parental readiness to make changes for overweight children. *Pediatrics* 2005;116:e94–101.
7. Snethen JA, Broome ME, Cashin ES. Effective weight loss for overweight children: A meta-analysis of intervention studies. *J Pediatr Nurs* 2006;21:45–56.
8. O'Brien SH, Holubkov R, Reis EC. Identification, evaluation, and management of obesity in an academic primary center. *Pediatrics* 2004;114:e154–9.
9. Epstein LH. Family-based behavioural intervention for obese children. *Int J Obes Relat Metab Disord* 1996;20(suppl 1):S14–21.