

Introduction to the Special Issue: Pediatric Overweight

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Over the past three decades, overweight has become a major health problem among children and adolescents. Using age- and gender-adjusted growth charts for children, overweight is defined as body mass index (BMI) (weight in kg/height in m²) \geq 95th percentile and at risk for overweight is defined as BMI \geq 85th and <95th percentile (Centers for Disease Control and Prevention, 2006). There is no agreed-upon definition for obesity in children, although the term is often used. To avoid confusion, the articles in this Special Issue have tried to adhere to the formal definitions of overweight and at risk for overweight.

Data from the most recent National Health and Nutrition Examination Survey (NHANES-IV) show that 17.1% of children and adolescents are overweight, an increase of 2.2% in females and 4.2% in males from 2002 to 2004 (Ogden et al., 2006). Not only is the epidemic of overweight increasing among children, but it begins early in life, with estimates of over 10% of preschoolers with a BMI above the 95th percentile, based on age- and gender-specific charts—double the expected rate. Recent studies have shown that rate of weight gain during the first few months of life can track into overweight during childhood (Dennison, Edmonds, Stratton, & Pruzek, 2006; Ong & Loos, 2006).

Pediatric overweight is associated with both immediate and long-term health problems, including hypertension, asthma, musculoskeletal problems, obstructive sleep disorders, type II diabetes, depression, and social stigmatization (Cruz et al., 2005; Kiess et al., 2001). Not only do overweight children suffer physical and psychological risk (Reilly et al., 2003), but overweight status during childhood and adolescence is a significant risk factor for adult obesity and other chronic illnesses (Engeland, Bjorge, Tverdal, & Sogaard, 2004; Kvaavik, Tell, & Klepp, 2003; Whitaker, Wright, Pepe, Seidel, & Dietz, 1997).

Although the development of overweight is a chronic disease that is influenced by genetic, metabolic, and physiological factors, there are environmental and psychological factors that contribute to overweight and therefore can be the focus of prevention and treatment efforts. The purpose of the Special Issue of the *Journal of Pediatric Psychology* on pediatric overweight is to focus on the environmental, familial, psychological, and health factors associated with pediatric overweight, with an ultimate goal of informing prevention and treatment.

Special Issue

The first set of five articles in the Special Issue examines physical activity, dietary behavior, and body image among cross-sectional community samples of children and adolescents, generally recruited from schools. In the first article, self-reported physical activity from a school-based sample of 1655 12th grade girls was influenced by perceptions of access to equipment and social support (Motl, Dishman, Saunders, Dowdam, & Pate, 2006). This article suggests that perception of resources was related to girls' self-efficacy for engaging in physical activity and potentially their choices in physical activities. In the second article, Mackey and La Greca (in press) studied 705 high school students (66% girls) and reported that adolescents' physical activity, dieting, and bulimic behaviors were related to peer group affiliation. Membership in an ethnic group (Whites, African Americans, and Latinos) further moderated health-risk behavior. Controlling for gender and ethnicity, adolescents who identified with the Burnouts (skip school, get into trouble) reported a pattern of unhealthful eating, low exercise, and bulimic behavior that differentiated them from other peer groups (Brains, Jocks, or Populars). Thompson, Shroff, Herbozo, Rodriguez, and Rodriguez (2006) examined peer influences in a sample of

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325 adolescent girls and found that perceived peer influences predicted body dissatisfaction among at risk and overweight adolescents, but not among normal weight adolescents. Two studies examined children's body image from the perspectives of parents and/or children. Gilliland and colleagues (2006) found that among 650 fifth graders, parent-reported child body image discrepancy scores were associated with poor mental-health-related behaviors among the children. Mitola, Papas, Le, Fusillo, and Black (2006) reported that body size satisfaction between 215 adolescents and their female caregivers varied by the adolescents' body size. Adolescents at risk of overweight, but not overweight, had less agreement with their caregivers than adolescents of normal weight, suggesting that adolescents at risk of overweight recognized their increased weight as a problem before their caregivers. These studies illustrate that the physical and interpersonal contexts in which children and adolescents experience being overweight may influence their coping strategies and choices regarding weight status modifications.

The second set of articles refines the focus of overweight management by observations of mealtime behaviors. Moens, Braet, and Soetens (2006) observed family mealtime interactions among 56 children of varying weight. Parents of overweight children were more controlling and less supportive than parents of normal weight children. These discrepancies were not apparent on self-report measures, suggesting that mealtime observation provided unique information that is not available through self-report. Jacobs and Fiese (2006) conducted mealtime observations among 80 families of children with and without asthma. They found that families with a child who was both overweight and had asthma had difficulty assigning roles during meals and had meals dominated by chaotic and dysregulated patterns of interactions—conditions that may result in stressful mealtimes. Again, the context of the behaviors was crucial to the outcomes, although parental perceptions of the children's health needs or overweight status may have influenced patterns of interaction (Young-Hyman, Herman, Scott, & Schlundt, 2000).

The third set of articles includes clinical samples of overweight children seeking weight loss treatment. Beebe and colleagues (2006) examined sleep disorders through both objective and self-report methods among 60 children from a weight management clinic and 22 healthy children. They found that overweight children had more sleep-related problems than healthy children, when measured by actigraphy and parent report,

and that differences in grades and depressive symptoms were related to sleep problems. Storch and colleagues (2006) studied 92 children in a Lipid Clinic and demonstrated that they were often targets of peer victimization, which was related to their mental health symptoms, including depression, anxiety, loneliness, and internalizing and externalizing behaviors. Stern and colleagues (2006) studied 100 adolescents who were participating in an obesity treatment program and found high rates of self-reported stigmatization and poor overall psychosocial functioning, which interfered with their quality of life. Glasofer and colleagues (2006) studied 160 treatment-seeking adolescents and found that 45% had engaged in binge or loss of control eating. Adolescents with binge eating disorder (BED) had higher levels of eating disordered attitudes, depressive symptoms, and anxiety than adolescents who did not meet criteria for BED. This set of articles focuses on children and adolescents whose weight-related concerns resulted in treatment seeking. Overweight becomes the context for co morbid psychological and physiological distress, and bi-directional effects of overweight status and other morbidities are often linked.

The final two articles address intervention methods. Johnston and Steele (2006) studied 41 children who participated in a treatment program for overweight children, and a comparison group of children who received treatment as usual, and found that the Traffic Light Diet (TLD) was a feasible and effective intervention that resulted in weight loss in a treatment setting. Germann, Kirschenbaum, and Rich (2006) studied 228 overweight children who were enrolled in a treatment program and found that self-monitoring was associated with successful weight loss. In both articles, monitoring of food intake enhanced weight loss.

Comments and Conclusions

The articles in this Special Issue highlight the psychological, family, health, and social challenges associated with weight-related issues among children, illustrating the importance of incorporating contextual factors into an understanding of pediatric overweight. Children are aware of their body size and are sensitive to perceptions regarding weight-related issues from peers and families. Two observational studies showed that family mealtime interaction patterns vary by children's weight status, suggesting that family interactions, along with dietary recommendations, may be a focus of future intervention studies. Other studies showed that monitoring of food

intake was an efficacious method to facilitate weight loss. There is only one set of studies to date that has combined this approach and achieved successful long-term weight loss (Epstein, 1996).

In this Special Issue, one study included children with asthma and one addressed sleep problems among overweight children, but there were no articles available for publication on other comorbidities associated with pediatric overweight, in particular the association between weight status and weight-related illness such as type II diabetes and cardiovascular disease. As the health problems associated with pediatric overweight increase in prevalence, the behavioral and family aspects of pediatric overweight and associated problems are likely to be future areas of significant concern among pediatric health care providers. The studies presented in this Special Issue underscore the need for combining contextual approaches with behavioral interventions which monitor food intake, provide opportunities for physical activity, and involve families, peers, and treatment personnel.

The two intervention studies in the Special Issue are encouraging because they illustrate how experimental findings can be translated into clinical situations. Both TLD and self-monitoring were associated with weight loss. However, there are few examples of successful, sustainable pediatric weight loss programs. This area will undoubtedly be a focus of future investigations.

None of the articles submitted for consideration for the Special Issue included longitudinal data, overweight prevention programs, or attention to aspects of the environment beyond family and peers. Longitudinal data are necessary to understand how children's weight and weight-related behavior change over time and how the built environment, school setting, and family milieu may provide opportunities for prevention and treatment.

Evidence from a recent review of 22 prevention trials conducted by the Cochrane Collaboration (Summerbell et al., 2005) found that most programs had very little impact on BMI, possibly because they often lacked a theoretical framework regarding the mechanisms that promote behavior change and did not involve families, peers, or the surrounding environment. The targets for overweight prevention among children are well known: promoting breastfeeding, promoting physical activity, reducing television/video viewing, increasing fruit and vegetable consumption, reducing sugar-sweetened drink consumption, and reducing portion sizes (Sherry, 2005). What is needed are innovative prevention studies that begin early in life before children have become overweight

and help families build healthy patterns of nutritional intake and physical activity.

Children and families are confronted with an obesogenic environment, as evidenced by ready access to large portions of high-fat foods and sedentary activities (television and screen time) and limited opportunities for physical activity. Little is known about how to help children and families overcome these environmental challenges. Even less is known about effective strategies to alter public policies that can impact the rates of development of overweight during childhood. For example, attempts to legislate that schools mandate a minimum of physical activity each school day have generally been unsuccessful (Healthcare Georgia Foundation, 2005).

Attention to the health problems associated with pediatric overweight has come from all sides, including the popular press and professional interdisciplinary accounts, such as a recent report from The Institute of Medicine (2005). Recommendations are to begin health promotion early in life before children have become overweight, to include families and children's proximal environments (e.g., home and school), and to advocate for community and environmental policies that encourage healthy lifestyles for families. The articles in this Special Issue provide directions to move forward on those recommendations.

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