The Relationship of Child Body Mass Index to Parental Child Feeding Practices, Weight Perceptions, and Personal Eating Behaviors Among 3-5 Year Olds Attending Head Start

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The prevalence of overweight and obesity in the United States continues to increase for both adults and children. Prevalence of childhood overweight has increased in all sociodemographic groups; however, disparities do exist. Particularly at risk for childhood overweight are African American girls, Hispanic girls and boys, and children from low-income households. Many factors contribute to the development of overweight in children; however, recent literature suggests several factors that need further exploration, including parents' child feeding practices, parents' perceptions of children's weight status, and parents' personal eating behaviors. Previous studies addressing these factors have included primarily Caucasian and middle- to upper-income participants. The current study adds to the existing literature by including participants from a low-income, primarily African American population.

There were three primary objectives of the current research: 1) To determine the accuracy of parents' perceptions of their children's weight status, 2) To determine the relationship of parents' child feeding practices to their children's weight status, and 3) To determine the relationships among parents' personal eating behaviors, their child feeding practices, and their children's weight status. A cross-sectional descriptive study design was used to address each of the research objectives. Participant recruitment and data collection occurred during the fall 2004 orientation session held for parents of children attending Head Start centers in one south Mississippi county. Parents and/or caregivers of children completed surveys assessing their child feeding practices (as measured by the Child Feeding Questionnaire), perceptions of their children's weight status (assessed with culturally appropriate body image silhouettes developed for this study), and personal dietary behaviors (as measured by the Three Factor Eating Questionnaire). Children's measured height and weight were obtained from Head Start records, and their weight status was classified as underweight, normal weight, at risk of overweight, or overweight based on current Centers for Disease Control and Prevention criteria. The final sample used for analyses in this study included 281 mother/child pairs. Statistical analyses included Chi-Square, Spearman correlations, multivariate analysis of covariance, and regression analyses.

One of the most important findings in this study was the significant degree of misclassification of children's weight status by their mothers. Results clearly suggested that mothers'
perceptions of their children's weight status did not correspond with the definitions of weight status in children established by the scientific and medical communities. In part, this may reflect cultural differences with respect to acceptable or desirable body size, an idea supported by the fact that a large number of the mothers in this study only recognized the largest figures in a body image silhouette scale as depicting an overweight child. These results suggest the need for educational interventions that emphasize the potential health consequences of children's BMI-for-age percentiles, while respecting and working within the context of cultural body size preferences. A focus on accurate perceptions of children's weight status by mothers for the sake of health is warranted, with an emphasis on promoting healthy eating behaviors in all children, regardless of their body size.

Other results demonstrated that mothers' child feeding practices differed with respect to their children's weight status. However, results varied depending on whether the statistical analyses were based on children's actual weight status or mothers' perceptions of their children's weight status. This becomes a concern when the large degree of children's weight misclassification by these mothers is taken into account. Further, results from this study suggest that promoting dietary restriction may not be an appropriate focus in efforts to prevent overweight, as mothers of overweight children (based on actual weight status) reported a significantly greater degree of restriction of their children's food intake when compared with mothers of underweight children or mothers of children classified as at risk of overweight.

Head Start is in a unique position to impact the upward trend in childhood obesity through its mandated nutrition services and education for children and their families. Head Start programs often place an emphasis on building quality parent-child relationships. Results of this study suggest that, within this context, it is also important to address aspects of parent-child feeding relationships, although additional research is needed to further clarify the role of mothers' child feeding practices in the development of overweight in low-income, primarily minority children.

The cross-sectional nature of this study only allows the identification of relationships among factors rather than the establishment of cause and effect. Mothers' child feeding practices may occur in response to children's weight status, rather than predict children's weight status. However, this study is an important starting point in that the results may inform other larger and longitudinal studies related to the role that maternal perceptions and behaviors may play in development of childhood overweight in similar populations.