MedicalXpress

Quality of parent-toddler relationship could affect risk for childhood obesity

April 19 2011, by Emily Caldwell

Toddlers who do not have a secure emotional relationship with their parents, and particularly their mothers, could be at increased risk for obesity by age 4 ½, according to new research.

The study suggests that children at age 24 months who show insecure attachment patterns have at least 30 percent higher odds for obesity by age 4 ½.

The association persisted even after researchers accounted for other family-related factors that could provide alternative explanations for the children's obesity.

Psychologists describe securely attached children as those who rely on their parents as a "safe haven," which allows them to explore their environments freely, adapt easily to new people and be comforted in stressful situations. Toddlers who are insecurely attached tend to have experienced negative or unpredictable parenting, and may respond to stress with extreme anger, fear or anxiety, or avoid or refuse interactions with others.

The findings suggest that overlapping regulatory areas of the brain that govern emotional and stress responses, as well as control appetite and energy balance, could provide a stronger influence than previously thought on the likelihood that a young child will be obese.

"I hope this work can help to broaden our thinking about the causes of

childhood obesity," said Sarah Anderson, assistant professor of epidemiology at Ohio State University and lead author of the study.

"Our hypothesis is that secure attachment could reduce the risk for childhood obesity by preventing frequent or exaggerated stress responses from disrupting the normal functioning and development of the systems that affect energy balance and body weight. Children's stress responses and emotion regulation are formed in early childhood in the context of parent-child interactions, and one indicator that the child has developed healthy emotion regulation and stress response is secure attachment."

Anderson co-authored the paper with Robert Whitaker, professor of public health and pediatrics at Temple University. The research is published in a recent issue of the journal *Archives of Pediatrics & Adolescent Medicine*.

Anderson and Whitaker analyzed data collected on children who were born in the United States in 2001. Thousands of children were assessed at age 24 months and evaluated again at 4 ½ years for the Early Childhood Longitudinal Study, Birth Cohort, a study conducted by the National Center for Education Statistics to provide information about learning environments, health and development of young U.S. children. A total of 6,650 children were included in the analytical sample for this work.

During the assessment when the children were 24 months old, trained research staff spent about two hours observing and evaluating the child and mother in their home. They rated how closely 45 specific behaviors applied to the child. Among the behaviors they documented: whether the children sought and enjoyed being hugged by their mothers, and whether crying children could be comforted by contact with their mothers.

From these evaluations, the observers gave each child an attachment

security score. For the study, Anderson and Whitaker classified children in the lowest quartile of scores as insecurely attached.

Anderson and Whitaker also calculated the body mass index (BMI) of the children at age 4 ½ using the measured heights and weights of the children. BMI measurements were converted into percentiles for age and sex based on growth charts developed by the Centers for Disease Control and Prevention. For this study, children were considered obese if their BMI scores were at or above the 95th percentile on those charts.

The researchers examined other issues from the same national data set that might also explain the increased risk for obesity, including how responsive the mothers were to their children and how engaged the children were with their mothers. Also explored were a variety of parenting practices related to eating habits and household routines, various measures associated with the mothers' health, and several sociodemographic characteristics.

The addition of each factor had a slight effect on the relationship between attachment security and later obesity. But when all of the factors were included together, there remained a clear association between the security score and later obesity: a 30 percent increased risk for obesity in children who were insecurely attached at age 24 months.

"We adjusted for other variables because they could offer alternative explanations for an association between insecure attachment and obesity, but it is also possible that some of these variables could be part of the causal pathway between attachment security at 24 months and the child's weight status at age 4 ½," Anderson said. "Even after adjusting for all of those things, there remained a statistically significant 30 percent increased odds for obesity among the children who were less securely attached."

Looking at only those two variables – the attachment security score and obesity – the researchers found that insecurely attached toddlers had 48 percent higher odds of being obese at age 4 ½. The prevalence of obesity was 23.1 percent in children with insecure attachment and 16.6 percent in children with secure attachment, according to the analysis.

Anderson is studying additional ways in which early development might be connected to childhood obesity, and believes the complicated relationship likely has origins in the brain, and particularly areas of the brain that control responses to stress. Those same areas, contained in the limbic system, also control the sleep/wake cycle, hunger and thirst, and a variety of metabolic processes, mostly through the regulation of hormones.

Obesity may be one manifestation of dysregulation in the functioning of the stress response system, Anderson said, adding that that likelihood, coupled with these latest findings, suggests that there is more to preventing childhood obesity than focusing on food intake and exercise.

"A novel approach to preventing obesity is to help children develop healthy ways to regulate their emotions and behaviors when they encounter psychological stress," she said.

Provided by The Ohio State University

Citation: Quality of parent-toddler relationship could affect risk for childhood obesity (2011, April 19) retrieved 26 April 2024 from https://medicalxpress.com/news/2011-04-quality-parent-toddler-relationship-affect-childhood.html

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.