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Childhood Obesity Found Linked to Math Performance

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Boys' and Girls' Weight Status and Math Performance from Kindergarten Entry through Fifth Grade: A Mediated Analysis

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Obesity among children has increased dramatically over the past 40 years and has been tied to many health problems. Now a new study has found that children's weight is associated with their math performance.

The longitudinal study, published in the journal *Child Development*, was carried out by researchers at the University of Missouri, Columbia, the University of California, Los Angeles, and the University of Vermont.

"The findings illustrate the complexity of relations among children's weight status, social and emotional well-being, academics, and time." according to Sara Gable, associate professor of nutrition and exercise physiology at the University of Missouri, Columbia, who led the study.

The researchers looked at more than 6,250 children from the Early Childhood Longitudinal Study-Kindergarten Cohort, a nationally representative sample. The children were followed from the time they started kindergarten through fifth grade. At five time points, parents provided information about their families, teachers reported on the children's interpersonal skills and emotional well-being, and children were weighed and measured; they also took academic tests.

When compared with children who were never obese, boys and girls whose obesity persisted from the start of kindergarten through fifth grade performed worse on the math test, starting in first grade, and their lower performance continued through fifth grade. For boys whose obesity emerged later (in third or fifth grade), no such differences were found, and for girls who became obese later, poorer math performance was temporary.

In addition, for girls who were persistently obese, having fewer social skills explained some part of their poorer math performance. And for both boys and girls who were persistently obese, feeling sadder, lonelier, and more anxious also explained some of their poorer math performance.

“Our study suggests that obesity in the early years of school, especially obesity that persists across the elementary grades, can harm children’s social and emotional well-being and academic performance,” Gable said.

The study was supported by the United States Department of Agriculture’s Economic Research Service through its Food Assistance and Nutrition Research Program.

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Summarized from *Child Development*, Volume 83, Issue 5, Boys’ and Girls’ Weight Status and Math Performance from Kindergarten Entry through Fifth Grade: A Mediated Analysis by Gable, S (University of Missouri, Columbia), Krull, JL (University of California, Los Angeles), and Chang, Y (University of Vermont).
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