

Tough neighborhoods linked to teen obesity and cognitive delays

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The real estate maxim about the importance of location is true for teenagers too. Their intellectual and physical health depends on location, location, location.

Teens living in [disadvantaged neighborhoods](#) face a higher risk of obesity and reduced cognitive ability, according to new research by a Cornell sociologist. In addition, adolescent girls in the most disadvantaged environments are more likely than boys to become obese, he found.

These are the first national studies to look at the long-term effects of neighborhood disadvantage on obesity and cognitive development in kids and the first to show these negative effects get worse as kids grow into teens.

The mechanism triggering these problems is likely to involve the peers, adults and institutions the teen interacts with, as well as the neighborhood's physical condition, from its sidewalks to its educational resources, said the studies' author, Steven Alvarado, assistant professor of sociology.

"Given the lack of jobs and other opportunities, on average children growing up in a disadvantaged neighborhood might not have as many positive adult [role models](#) who they see getting up early every day and going to work or doing other things that are valued in mainstream society compared to children in more affluent [neighborhoods](#). This can create a

mismatch in norms and expectations that can negatively affect the healthy development of children," Alvarado said. "Does the neighborhood have a playground? Is there a park? Is there a library? Are there social influences to exercise or eat certain foods? All these things form the opportunity structure for children to develop both physically and cognitively."

Like most experts in the field of neighborhood effects, Alvarado defines "disadvantage" as a constellation of factors: the percentage of residents who are unemployed or out of the workforce, are professionals or managers, have a college degree and are living in poverty, as well as the neighborhood's median income and median housing value.

Alvarado is among the first to provide empirical evidence for a long-standing theory that suggests neighborhoods have a greater influence on kids as they grow older, because kids interact more frequently with the people and institutions in that neighborhood as they gain independence from their families.

"The 6-year-old in my data set is going to have very different face-to-face interactions with neighborhood peers or role models or institutions like the police compared to the 16-year-old," Alvarado said. "What starts to matter more as children age are factors outside the home, whether they are ideas, behavioral influences or new people or places."

In his study, *Neighborhood Disadvantage and Obesity across Childhood and Adolescence*, published in *Social Science Research*, Alvarado found the risk of obesity was higher for youth who lived in a disadvantaged neighborhood between ages 11 and 18 compared to those between ages 2 and 10. And 11- to 18-year-olds in the most disadvantaged neighborhoods were 45 percent more likely to be obese compared to young children who lived in the most advantaged neighborhoods. Alvarado also found that girls who lived in the most disadvantaged

neighborhoods were 33 percent more likely to be obese than boys in the most advantaged neighborhoods.

In Alvarado's study on cognitive ability and behavior problems, "Delayed Disadvantage: Neighborhood Context and Child Development," published in *Social Forces*, he found the older the child was when she began to be exposed to the disadvantaged environment, the worse her cognitive outcomes. "By and large, there's no effect on cognitive outcome if you're exposed at a very young age. As you're growing up, that exposure accumulates until it starts to matter in a statistically significant way," he said.

In both studies, Alvarado analyzed never-before-used data from the National Longitudinal Survey of Youth, which includes information about educational level, employment, income, health, marital and childbearing histories and census tract locations of parents and their children. Specifically, he looked at 13 waves of data including the height, weight, reading and math scores and behavior of nearly 11,500 children who were between the ages of 2 and 18 at some point between 1986 and 2010. The data provided Alvarado with key indicators on children's cognitive, socioemotional and physical development that he tied to the survey's census tract residential data.

The research may provide policymakers with a new, politically effective weapon in the fight against health and cognitive disparities, Alvarado said.

"Reforms like putting a jungle gym or a tutoring program in a neighborhood lack a tie-in to a specific poor person or family. They are a public good and benefit everyone. That's one reason why they may have potential for political traction," Alvarado said.

More information: Steven Elías Alvarado. Delayed Disadvantage:

Neighborhood Context and Child Development, *Social Forces* (2016).
[DOI: 10.1093/sf/sow020](https://doi.org/10.1093/sf/sow020)

Steven Elías Alvarado. Neighborhood disadvantage and obesity across childhood and adolescence: Evidence from the NLSY children and young adults cohort (1986–2010), *Social Science Research* (2016). [DOI: 10.1016/j.ssresearch.2016.01.008](https://doi.org/10.1016/j.ssresearch.2016.01.008)

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