

Obesity in U.S. children and adolescents has nearly tripled in the last three decades. Although the country is trying, we have not been able to significantly reduce the rate of obesity in children yet. More research into what causes, and what might prevent, obesity is needed.

We now know that body weight is affected by genetics, behavior and social determinants, such as social class, education level and race/ethnicity. However, little is known about how the local neighborhood environment relates to childhood obesity.

Our research set out to identify the influence of a child's home neighborhood on their body mass index (BMI) and their obesity-related behaviors, such as exercise, eating habits and screen time. We linked health survey data and physical fitness measures from 1,048 5th and 6th grade students gathered in fall 2009 with US census data describing parks, retailer and crime information. We expected to learn that greater access to good quality neighborhood amenities would lead to better health.

Results

Of the 1,048 5th and 6th graders, we found that 18.1% were overweight and 28.9% were obese. Students reported an average 2.4 hours of screen time in a work day (more than the daily amount recommended by the American Academy of Pediatrics). We found that neighborhood environments are an important factor in childhood obesity:

- Children with strong social groups in their neighborhoods exercise more frequently - this factor was more important than a child's perception of the safety of their neighborhood
- In neighborhoods with higher property crime, children tend to have a higher BMI
- Children that live further from a grocery store (more than a half a mile), or live in a neighborhood with more fast-food restaurants, have a higher BMI on average
- A child's perception of how easy it is to access a park or a gym in their neighborhood was associated with their health - this was more important than the actual distance to a park in their neighborhood

Recommendations

From these data we learn that we must develop sustainable, locally-meaningful programs and policies that go beyond the individual and work to provide safer, healthier neighborhood environments for children to thrive and grow into healthy adults.

Key Findings

- <50% of the 5th and 6th grade students evaluated were overweight or obese
- Neighborhood environments are an important level at which to intervene to prevent childhood obesity and its adverse consequences
- A higher BMI was associated with:
 - » Living further from a grocery store
 - » Living in a neighborhood with more property crime
 - » Living within a 5-minute walk of a fast food outlet
- Positive social ties to a child's neighborhood were associated with more frequent exercise

