

# Social network, food patterns and physical activity influence obesity in rural Brazilian adolescents

August 10 2023

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A new study in Northeast Brazil sheds light on the role of social networks, food patterns, and physical activity in contributing to

overweight/obesity among adolescents in rural areas. The research, published in the journal *Nutrients*, provides important insights into the factors influencing the growing incidence of obesity in this demographic.

Obesity has become a global concern, and Brazil is no exception, with increasing rates of overweight and obesity among adolescents. This study focused on a rural school in Northeast Brazil and involved 90 [high school students](#) (62.9% girls) who completed questionnaires on sociodemographic characteristics, [food consumption](#), [physical activity](#), and social networks.

The findings of the study revealed that:

- Participants cited a total of 2,070 people from their social networks, which included family, friends at school, friends outside of school, and others. The family network had the highest degree of influence (61%), followed by friends outside of school (28%). Among these, the family had the most shared meals with adolescents (47%).
- Principal component analysis was used to determine food patterns. Unhealthy food patterns, characterized by high consumption of stuffed biscuits, sweets, processed foods, soda, and fried snacks, were associated with a 72% higher likelihood of being categorized as overweight/obese.
- Regular consumption of breakfast emerged as a protective factor against overweight/obesity. Adolescents who reported having breakfast regularly were less likely to be overweight/obese compared to those who ate breakfast irregularly.
- The study also identified adolescents with a higher degree of eigenvector centrality in their social networks, indicating a central and influential position within the network, were more likely to be in the overweight/obesity category.

Dr. Flavia Cristina Drumond Andrade, a professor of social work at the University of Illinois Urbana-Champaign and study co-author, stated, "Our findings suggest that social networks play a significant role in shaping adolescents' dietary habits and physical activity levels, which in turn can influence the prevalence of overweight and obesity. Interventions aimed at promoting healthier food patterns and lifestyles within social networks, especially among families, could help combat the rising trend of obesity in this population."

The researchers emphasize the importance of public policies and interventions targeted at adolescents and their social networks to address the growing concern of overweight/obesity in rural Brazil.

**More information:** Maria de Jesus Xavier Aguirre et al, Social Network, Food Patterns, Physical Activity and Associations with Overweight and Obesity in Adolescents from a School in Rural Brazil, *Nutrients* (2023). [DOI: 10.3390/nu15153305](https://doi.org/10.3390/nu15153305)

Provided by University of Illinois at Urbana-Champaign

Citation: Social network, food patterns and physical activity influence obesity in rural Brazilian adolescents (2023, August 10) retrieved 12 May 2024 from <https://medicalxpress.com/news/2023-08-social-network-food-patterns-physical.html>

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