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# Association between Childhood Obesity and Lack of Healthy Food Access in Urban Food Deserts

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## Association between Childhood Obesity and Lack of Healthy Food Access in Urban Food Deserts

Nicholas Averell, Rushali Desai, Archana Menon, Ayushi Naik, Arpun Shah Medical Scholarship Under the Guidance of Dr. Jillian Baker



Rowan School of Osteopathic Medicine

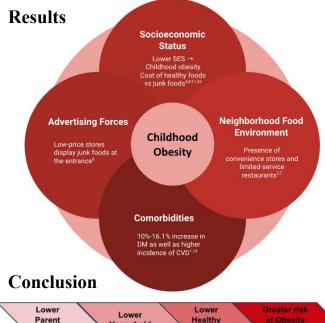
## **Background**

Childhood Obesity: growing epidemic affecting almost 20% of children and adolescents in the United States<sup>5</sup>

- Characterized by BMI greater than 95th percentile of their age and gender<sup>25</sup>
- Often leads to chronic medical conditions: high blood pressure, Type II Diabetes and heart diseases<sup>3,19</sup>
- Low socioeconomic status(SES), lack of healthy food access and urban neighborhoods have been associated with childhood obesity<sup>4</sup>

## **Objectives & Methods**

- Explore studies that research the association between living in an urban food desert and the prevalence of obesity in children (ages 5-12 years)
- Determine how social determinants like SES affect childhood obesity rates and elucidate how neighborhood food environments and market forces affect health outcomes.
- Recognize specific risk factors putting lower SES children at greater odds for developing obesity



Household

Income

Food

Intake

Education

Level

#### Limitations

- Lack of power
- Confounding variables
- Lack of adequate control group
- Varying age range of participants across studies

#### **Future Directions**

01	Explore the link between SES status and food choices using cohort studies
02	Encourage physician responsibility for health equity of vulnerable populations
03	Educate the population about healthy food choices

#### References

and

1.Berkowitz SA, Karter AJ, Corbie-Smith G, et al. Food Insecurity. Food "Deserts," and Glycemic Control in Patients With Diabetes: A Longitudinal Analysis. Diabetes Care. Jun 2018;41(6):1188-1195. doi:10.2337/dc17-1981 2.Chen H-J, Wang Y, Changes in the Neighborhood Food Store Environment and Children's Body Mass Index at Peripuberty in the United States. J Adolesc Health. 2016;58(1):111-118. doi:10.1016/j.jadohealth.2015.09.012 3.Congdon P. Variations in Obesity Rates between US Counties: Impacts of Activity Access, Food Environments, and Settlement Patterns. Int J Environ Res Public Health. Sep 7 2017;14(9)doi:10.3390/ijerph14091023 4. Cummins S, Macintyre S. Food environments and obesity-neighbourhood or nation? International Journal of Epidemiology. 2005;35(1):100-104. doi:10.1093/ije/dyi276 5. Elbel B, Tamura K, McDermott ZT, Wu E, Schwartz AE. Childhood Obesity and the Food Environment: A Population-Based Sample of Public School Children in New York City. Obesity (Silver Spring). Jan 2020;28(1):65-72. doi:10.1002/oby.226637 Galvez, M. P., Hong, L., Choi, E., Liao, L., Godbold, J., & Brenner, B. (2009). Childhood obesity and neighborhood food-store availability in an inner-city community. Academic pediatrics, 9(5), 339-343. https://doi.org/10.1016/j.acap.2009.05.003 8. Ghosh-Dastidar BP, Cohen DMDMPH, Hunter GMCP, et al. Distance to Store. Food Prices, and Obesity in Urban Food Deserts, American journal of preventive medicine. 2014;47(5):587-595. doi:10.1016/j.amepre.2014.07.005 11. Holston D, Stroope J, Greene M, Houghtaling B. Perceptions of the Food Environment and Access among Predominantly Black Low-Income Residents of Rural Louisiana Communities. International Journal of Environmental Research and Public Health. 2020;17(15):5340. 19. Pacheco LS, Blanco E, Burrows R, Reyes M, Lozoff B, Gahagan S. Early Onset Obesity and Risk of Metabolic Syndrome Among Chilean Adolescents. Prev Chronic Dis. Oct 12 2017;14:E93 doi:10.5888/pcd14.170132 25. Strauss RS, Knight J. Influence of the home environment on the development of obesity in children. Pediatrics Jun 1999;103(6):e85. doi:10.1542/peds.103.6.e85

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