## Rowan University Rowan Digital Works

Stratford Campus Research Day

25th Annual Research Day

May 6th, 12:00 AM

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

Nicholas Averell Rowan University

Rushali Desai Rowan University

Archana Menon Rowan University

Ayushi Naik Rowan University

Arpun Shah *Rowan University* Follow this and additional works at: https://rdw.rowan.edu/stratford\_research\_day

Part of the Community Health and Preventive Medicine Commons, Dietetics and Clinical Nutrition Commons, Food Studies Commons, Medicine and Health Commons, Nutritional and Metabolic Diseases Commons, Pediatrics Commons, Public Health Education and Promotion Commons, and the Urban Studies Commons

Let us know how access to this document benefits you - share your thoughts on our feedback form.

Averell, Nicholas; Desai, Rushali; Menon, Archana; Naik, Ayushi; and Shah, Arpun, "Association between Childhood Obesity and Lack of Healthy Food Access in Urban Food Deserts" (2021). *Stratford Campus Research Day*. 15.

https://rdw.rowan.edu/stratford\_research\_day/2021/may6/15

This Poster is brought to you for free and open access by the Conferences, Events, and Symposia at Rowan Digital Works. It has been accepted for inclusion in Stratford Campus Research Day by an authorized administrator of Rowan Digital Works.



# 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

#### Limitations Results Socioeconomic Lack of power Status Confounding variables Lower SES → Lack of adequate control group Childhood obesity Varying age range of participants across studies Cost of healthy foods vs junk foods4,8,11,2 **Future Directions Neighborhood Food Advertising Forces** Explore the link between SES status and food Environment Childhood choices using cohort studies Low-price stores Obesity Presence of display junk foods at convenience stores and the entrance<sup>8</sup> limited-service restaurants<sup>2</sup> 02 equity of vulnerable populations Comorbidities Educate the population about healthy food 03 10%-16.1% increase in choices DM as well as higher incidence of CVD<sup>1,14</sup> References Conclusion Lower Lower Lower Parent Healthy Household Education Food and Income Level Intake



### 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 obesity4

## **Objectives & Methods**

- Explore studies that research the association 1. between living in an urban food desert and the prevalence of obesity in children (ages 5-12 vears)
- 2 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 3. SES children at greater odds for developing obesity

Encourage physician responsibility for health

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

02

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.

O3Recognize specific risk factors putting lower SES<br/>children at greater odds for developing obesity

Explore studies that research the association between living in an urban food desert and the prevalence of obesity in children (ages 5-12 years)

01

02

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<br/>children at greater odds for developing obesity