

Objectives

- Nutritional disparities are an uneven distribution of nutritional intake and/or nutrition knowledge in varying populations.⁵
 - These disparities are more common in minority groups or those with lower socioeconomic status^{1,5,8}
- Nutritional disparities have ties to obesity, diabetes, and other chronic diseases.
- There is minimal understanding on the direct and long term effects that nutritional disparities have within the under 18 population.^{8,9}
- The research hopes to determine the effects and influence of nutrition disparities on two populations of people living different lifestyles in the same area.
- We seek to determine how nutrition disparities affect high school children.
 - As the core members and the futures of communities, understanding and implementing nutritional education in this population is vital for the health of populations.
- Our research aims to assess the gap in nutrition between two communities to better understand how to narrow the gap.

Methods

- Pending IRB approval, high school students of two local school districts will have the opportunity to take part in this study.
- Before the research begins, a consent form will be collected from all students who plan to participate in the study.
 - The consent form, survey, and recruitment materials will be sent in both Spanish and English to account for the Hispanic population in the demographic surveyed.
- The survey:
 - Anonymous, designed to take 7-10 minutes
 - Addresses sources of nutrition for the student and their family, overall knowledge of general nutrition, and food accessibility
 - Analyzes ethnic and socioeconomic background
 - Uses multiple choice and likert scale questions
 - Responses will be gathered and analyzed by the research team.
- The research team will look for patterns and trends that could point towards nutrition disparities such as:
 - Diet tendencies that seem to correlate with race or income
 - Trends in food knowledge
 - Patterns of food intake in similar or completely different groups

Background

- There is a lack of studies analyzing the effects of nutrition disparities and the role they within the youth population.
- The nearness yet drastic differences of these communities make it ideal to study nutrition disparities
 - Bryan and College Station, Texas are neighboring cities within the same metropolitan area.

Demographic Data		
	Bryan ⁴	College Station ³
Average Age of Residents	30.6 years	22.8 years
Average Family Income	\$ 49,830	\$ 87,401
Percentage of Residents Below Poverty Line	21.9 %	11.5 %
Percent of Residents with SNAP Benefits	23.5 %	10.7 %
Racial Distribution		
	Bryan ⁴	College Station ³
Hispanic or Latino	37 %	16 %
White	45 %	65 %
Black	14 %	7 %
Asian	2 %	10 %

Table 1. Demographic statistics in Bryan⁴ and College Station³

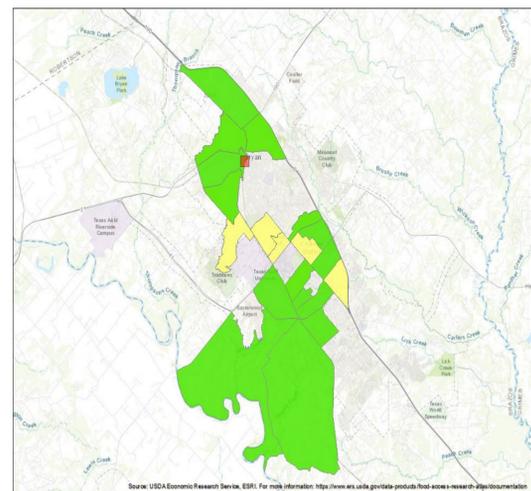


Figure 1. Map of food deserts in Bryan and College Station⁷

Yellow:
Low income area where more than 100 residents are without car and at least ½ miles from a supermarket

Green:
Low income area where significant amount of residents are more than 1 mile from a supermarket

Conclusions

- Timeline of research:
 - Seeking IRB and school approval - spring 2021
 - Initiate research and collect data.
 - Provide educational demonstration to students
- Data collected will contribute towards presentation given to the students
 - The presentation will focus on prevalent shortcomings determined from the study and the importance of nutrition education.
- The results can be used to demonstrate the need for better nutrition education in school and an improved nutrition resource infrastructure in the local community.
 - This includes advocating for better nutrition education in school and more resources outside of school

References

- ¹ Adler, Nancy E. "Overview of Health Disparities." Examining the Health Disparities Research Plan of the National Institutes of Health: Unfinished Business., U.S. National Library of Medicine, 1 Jan. 1970. www.ncbi.nlm.nih.gov/books/NBK57034/.
- ² "Map Details - Food Deserts in Texas." Centers for Disease Control and Prevention, Division for Heart Disease and Stroke Prevention, 13 July 2017. www.cdc.gov/dhdsp/maps/gisx/mapgallery/tx_food_deserts.html.
- ³ National Center for Education Statistics. (2018a). ASC School District Profile 2014-18. Nces.Ed.Gov. https://nces.ed.gov/Programs/Edge/ACS_Dashboard/4807350.
- ⁴ National Center for Education Statistics. (2018a). ASC School District Profile 2014-18. Nces.Ed.Gov. <https://nces.ed.gov/Programs/Edge/ACSDashboard/4811790>.
- ⁵ Satia, Jessie A. "Diet-Related Disparities: Understanding the Problem and Accelerating Solutions." Journal of the American Dietetic Association, U.S. National Library of Medicine, Apr. 2009. www.ncbi.nlm.nih.gov/pmc/articles/PMC2729116/.
- ⁶ Story, Mary, et al. "Creating Healthy Food and Eating Environments: Policy and Environmental Approaches." Annual Reviews, 21 Nov. 2007. www.annualreviews.org/doi/10.1146/annurev.publhealth.29.020907.090926.
- ⁷ United States Department of Agriculture (n.d.). *USDA ERS - Go to the Atlas*. Ers.Usda.Gov. Retrieved October 20, 2020, from <https://www.ers.usda.gov/data-products/food-access-research-atlas/go-to-the-atlas/>.
- ⁸ Zimmer, M. C., Rubio, V., Kintziger, K. W., & Barroso, C. (2019). Racial/Ethnic Disparities in Dietary Intake of U.S. Children Participating in WIC. *Nutrients*, 11(11), 2607. <https://doi.org/10.3390/nu11112607>
- ⁹ Childhood Obesity Facts. (2019, June 24). <https://www.cdc.gov/obesity/data/childhood.html>