



Final Project

Family Gym

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HONR3310 | Northeastern University

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Introduction

- Free health and wellness program by BCYF
- Moderate-to-vigorous physical activities + nutrition education for families
- Weekly programming – currently virtual
- Early childhood obesity
 - 2017: 26% of U.S. preschoolers are overweight or obese, higher rates among low-income & minority children
 - 34% of children in BPS system are overweight or obese



Group Disciplines

Gillian

- Computer Science, Mathematics
- Intersection of health and tech
- Tech as an asset/liability to personal health



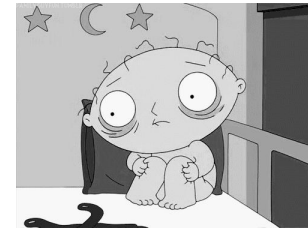
Nolan

- Journalism, Law & Public Policy/Communication Studies
- Health communication and science writing
- Importance of messaging in relaying information



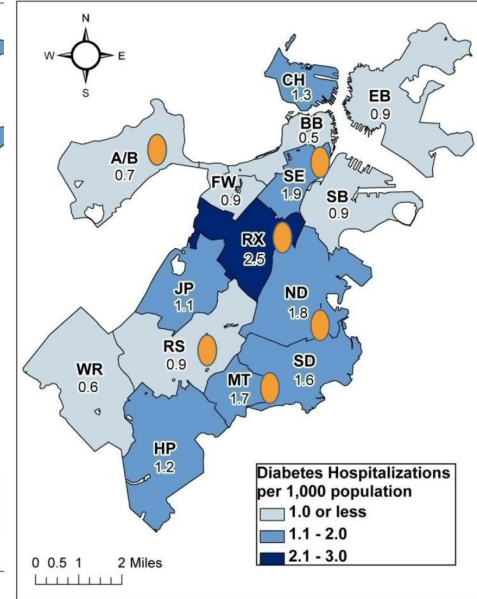
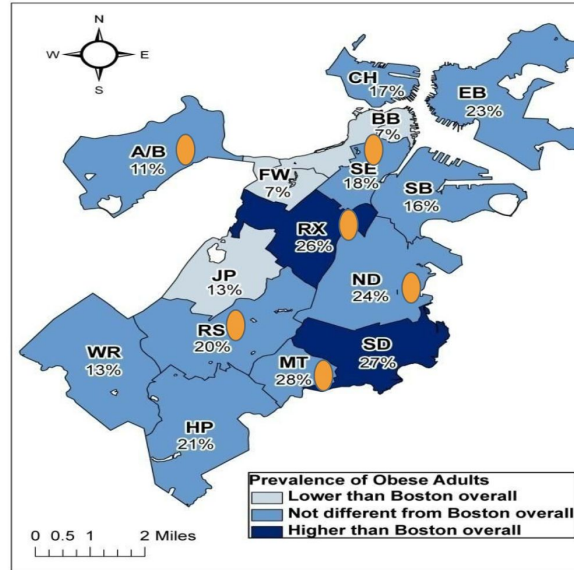
Joyce

- Biochemistry, Psychology; Pre-med
- Gene-diet interactions, childhood obesity & development
- Obesity is a public health issue



Community Analysis

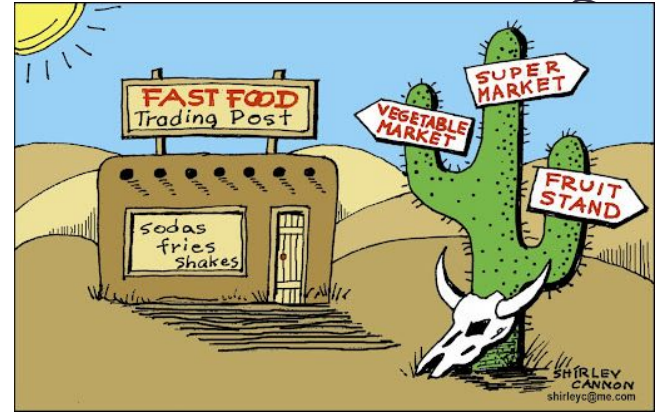
- **Mission statement:**
“To prevent obesity among children ages 3-8 living in vulnerable Boston neighborhoods by engaging families in the places children learn, live, and play”



● = pre-pandemic site

Community Analysis

- Food deserts: limited access to affordable and nutritious food
- Food swamps: abundance of fast food options over healthy alternatives
- Poor diet and increased risk of obesity
- Racial/socioeconomic disparities → geographic disparities



Community Analysis

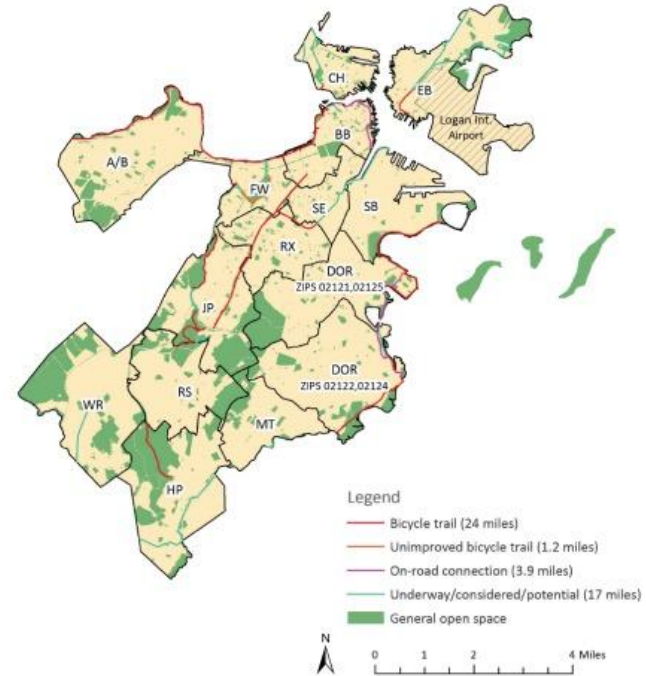
- Physical accessibility and affordability of nutritious foods
- Cost of healthier foods = 2X cost of unhealthier foods
 - Per calorie/serving, not by weight
- Low SES: fruits & vegetables ↓, processed fats & sugars ↑



Community Analysis

- Geographic lack of open space in Boston neighborhoods
 - Access to parks & greenery that encourage exercise & leisure
- Sparse bike trails
- Low-income/racial minorities disproportionately affected

Figure 3.8 General Open Space and Bicycle Trails by Neighborhood, 2017



NOTE: "BB" includes the Back Bay, Beacon Hill, Downtown, the North End, and the West End. "SE" includes the South End and Chinatown. Includes Thompson, Spectacle, and Long Islands.

DATA SOURCE: Boston Open Space, Parks and Recreation Department, City of Boston; and Bicycle Trails, Office of Geographic Information (MassGIS).

Needs Assessment

Assets:

- Physical gym facilities
- Dedicated team of staff & volunteers
- Government and institutional support



Constraints:

- Remote programming
 - Ex. Technology Requirements
- Whole family required to participate
- Long-term commitment to realize health benefits

Intervention/Service

- Create educational or recreational digital content that promotes children and families to live healthy, active lifestyles
- Remote & asynchronous, weekly uploads
- Adapt ABCD approach to maximize accessibility in home environments
- E.g., exercise tutorials, recipe cards, activity worksheets, story read-alongs



Deliverables

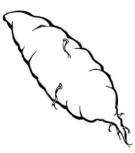
Fall Crossword

Identify these fall fruits and veggies then add them to the crossword and color them in!

1.



2.



3.



4.



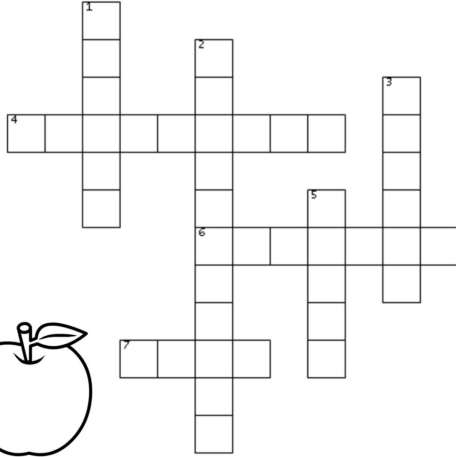
5.



6.



7.



Answers:
1. Squash 2. Sweet Potato
3. Turnip 4. Cranberry 5. Apple
6. Pumpkin 7. Pear

- Interactive worksheet
- Healthy, in-season fruits & vegetables
- Children and parents can work together

Deliverables

- Broad information reinforces what children have been learning
- Visuals are diverse and represent their audience
- Attempts to include both audiences (parents, children)

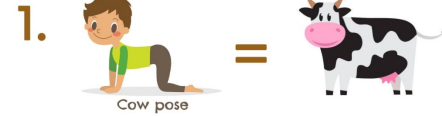


Deliverables

- Beginner-level tutorials with visuals & simple instructions
- Representation of different races & genders
- Work toward mastering a skill

ANIMAL YOGA

Find a mat or soft spot on the ground and try these animal-inspired stretches!
Hold each pose for **10 seconds** while focusing on your breath.



On your hands & knees, drop your belly and look up to the sky.



Start on your hands & knees. Push your tailbone up and keep your arms & legs straight.



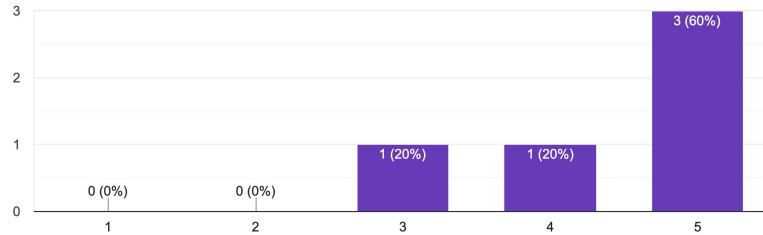
Start with your knees on the ground. Reach back for your ankles while pushing your hips forward.

Impact

- Surveyed efficacy of our content among families
- Families found deliverables useful, children likely to engage with content
- Parents likely to reuse deliverables after in-person programming resumes

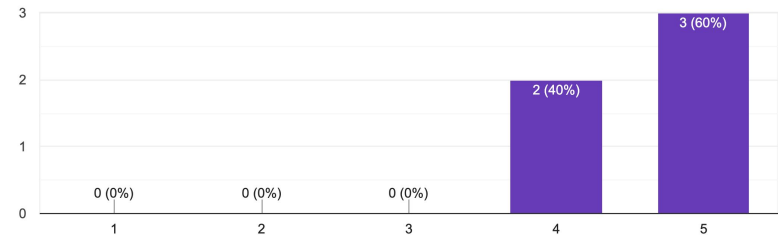
How likely is your child to use the interactive handouts (coloring, word search, etc.) each week?

5 responses



How useful have you found the handouts given out this fall?

5 responses



Sustainability

- Reuse activities/deliverables
 - Synchronous or asynchronous
 - Future content created should also keep environment/restrictions in mind
- Expand on content (e.g., exercise tutorial series)
- Social media posts
 - Highlights & supplemental content
- Partnerships with local organizations & initiatives
 - Boston Public Health Commission: REACH Community Physical Activity Initiative



Conclusion

- Family Gym is a free program aiming to reduce childhood obesity in vulnerable, low-income communities in Boston
- Structural inequities stemming from systemic racism and classism vary physical and economic access to health resources
 - Exacerbated by COVID-19
- Encourage preventive health behaviors through physical activity and nutrition that reduce likelihood of childhood obesity
- Contributed diverse, educational deliverables that were impactful for families



The background is a light yellow color with various fruit illustrations scattered around. At the top left is a lemon. In the top center are strawberries. To the top right is a pear and a carrot. On the left side, there is a slice of watermelon, a whole orange, and an apple. At the bottom left is another slice of watermelon. At the bottom right are cherries. Small geometric shapes like triangles and circles are also scattered throughout the background.

Thank you!

Questions?

References

BCYF Family Gym. Boston.gov. <https://www.boston.gov/health-and-human-services/bcyf-family-gym>. Published January 4, 2017. Accessed November 29, 2021.

Kern DM, Auchincloss AH, Stehr MF, et al. Neighborhood prices of healthier and unhealthier foods and associations with diet quality: evidence from the multi-ethnic study of atherosclerosis. *Int J Environ Res Public Health*. 2017;14(11):1394. Published 2017 Nov 16. DOI:10.3390/ijerph14111394.

Health of Boston 2016-2017 Report. Boston Public Health Commission. <https://www.bphc.org/healthdata/health-of-boston-report/Pages/Health-of-Boston-Report.aspx>. Accessed December 1, 2021.