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# Family Gym: A Novel Initiative to Prevent Obesity among Families with Young Children

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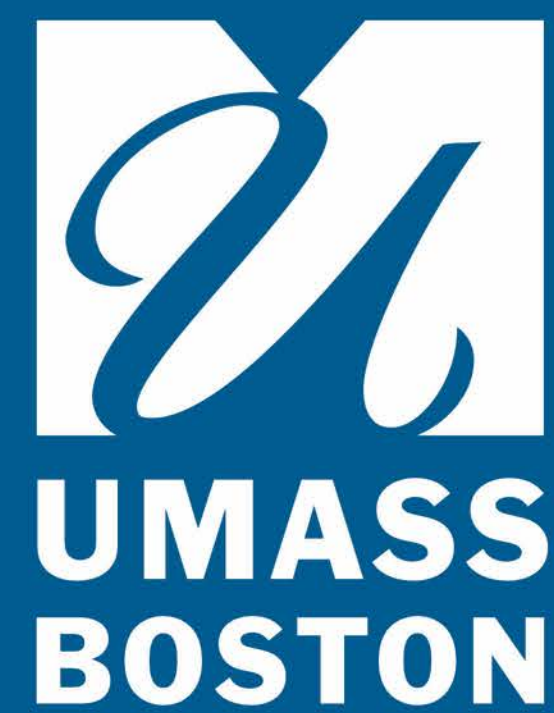
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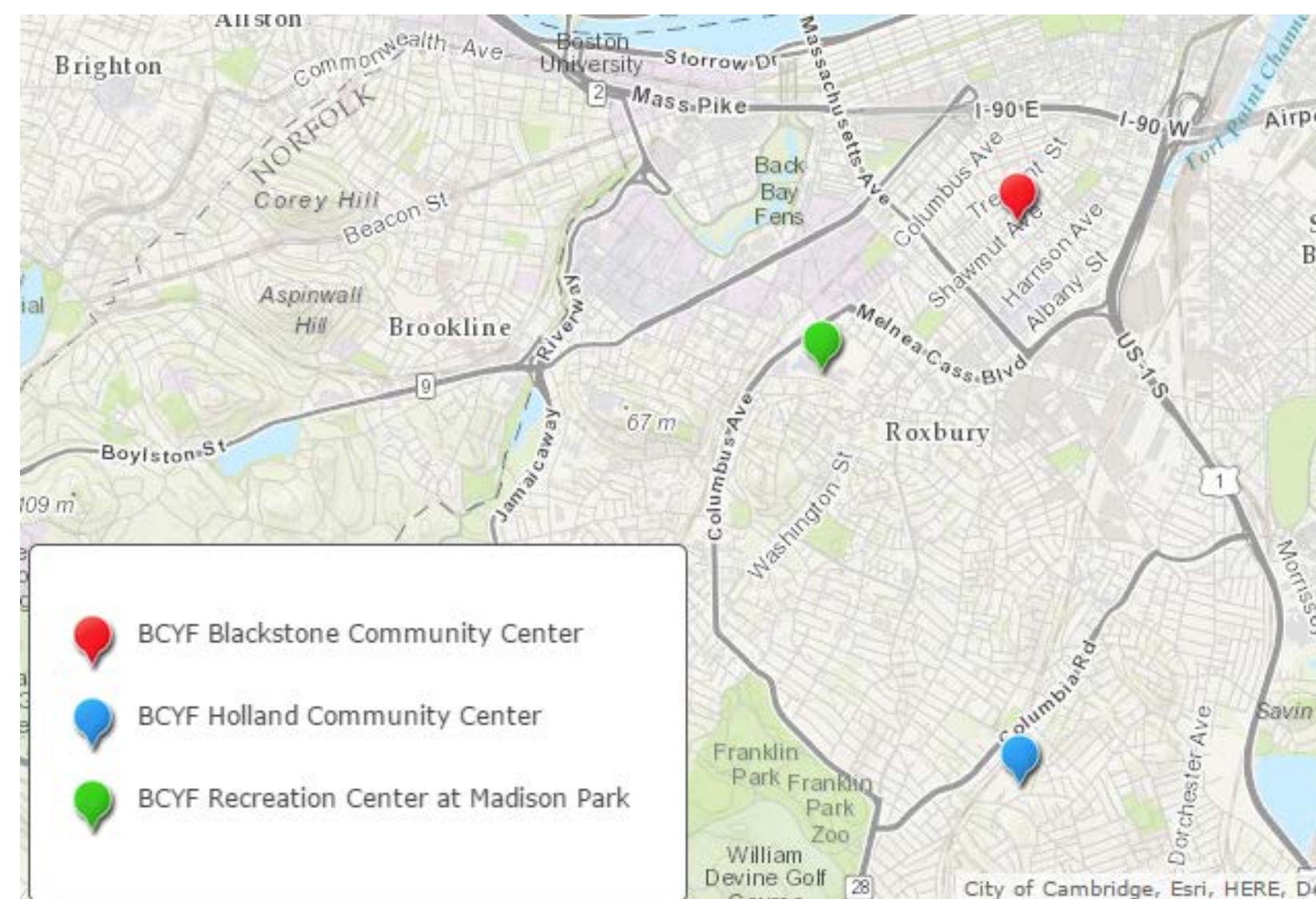
## Summary

Family Gym is a program that occurs every Saturday at one of three community centers. In this program, parents bring their child(ren) in for up to 90 minutes to play in areas equipped with engaging, age-appropriate activities. Each area is staffed by student activity leaders trained to make the experience safe and fun. Parents are encouraged to play with their child(ren)

The research aspect of Family Gym is observing the families and how they interact as well as their activity level. As a research team, we want to learn how parents participating in physical activity with their child(ren) affects both the parent and the child(ren)'s physical activity and health. The age range of the children is from 2-8 years of age.

The research aspect of Family Gym is only taking place at the BCYF Holland Community Center.

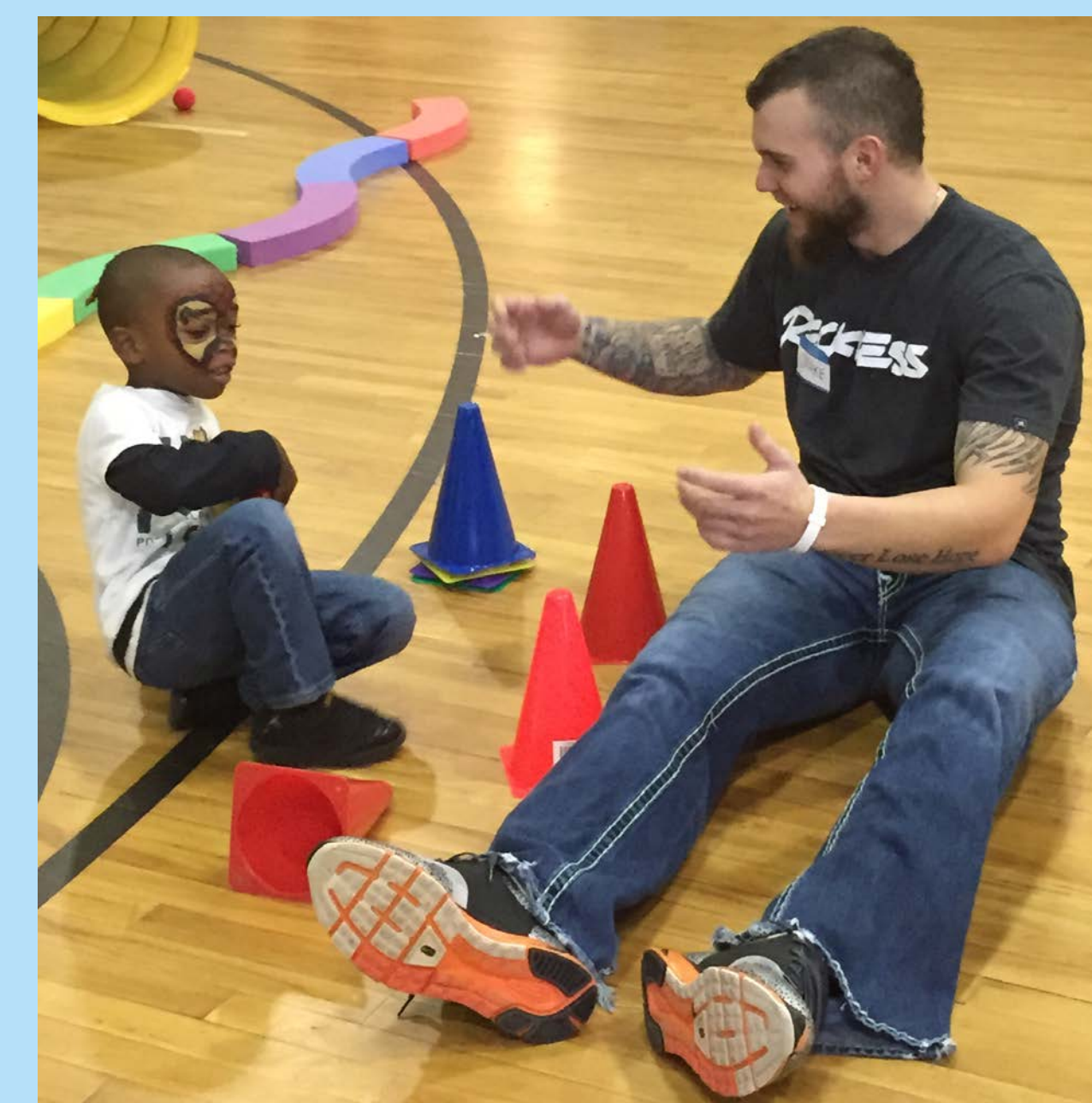
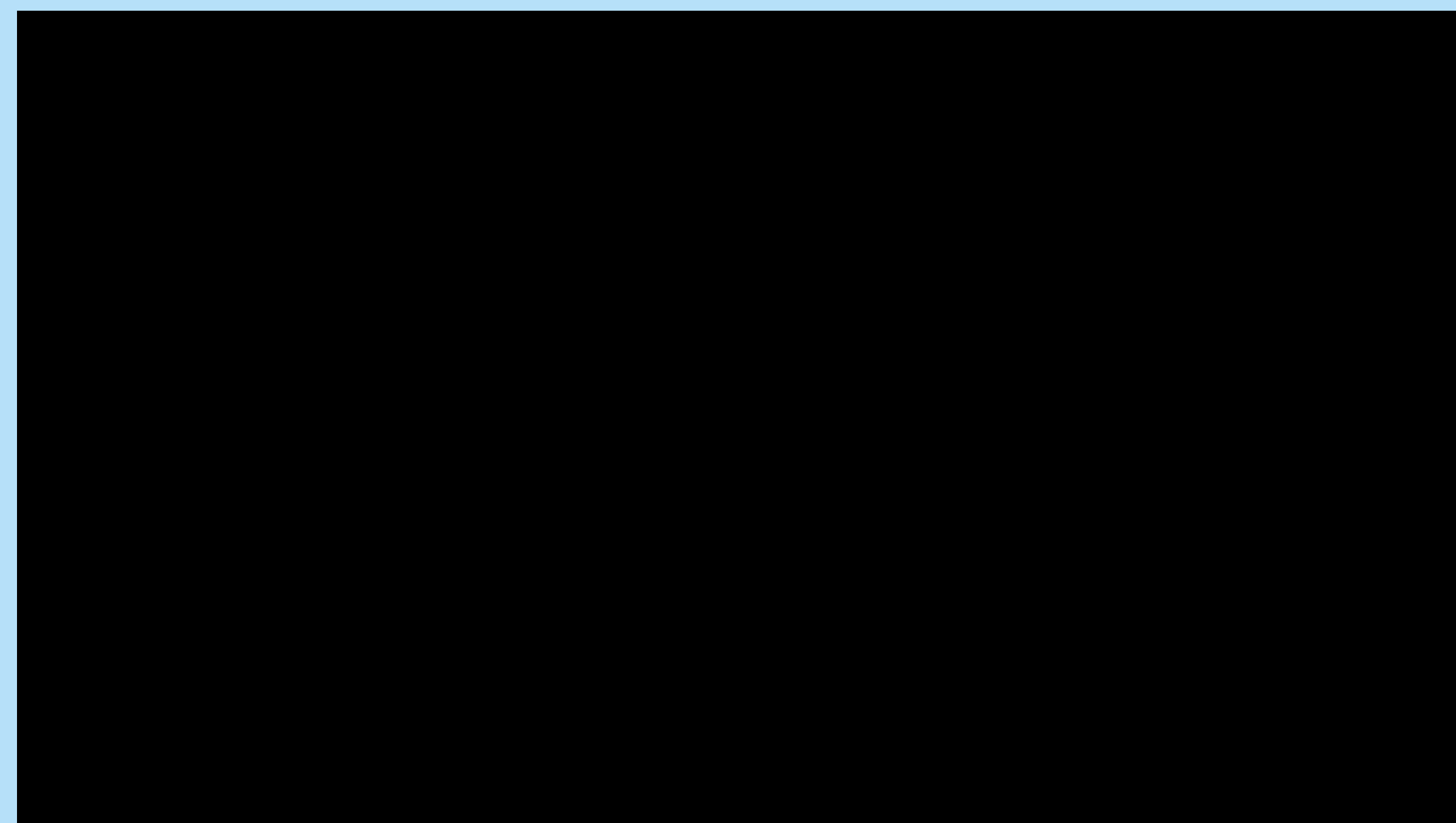
## Locations



**BCYF Holland Community Center**  
85 Olney St., Dorchester, MA 02121

**BCYF Recreation Center at Madison Park**  
55 Malcolm X Blvd., Roxbury, MA 02120

**BCYF Blackstone Community Center**  
50 West Brookline St., Boston, MA 02118



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## Collaborators

**UMass Boston Principal Investigator:**  
**Ronald J. Iannotti**, PhD, Professor, Exercise and Health Sciences

### Collaborators:

Carmen Sceppa, MD, PhD, Associate Professor, Department of Health Science and Director, Graduate Programs in Exercise Science, Northeastern University

Jessica Hoffman, PhD, Associate Professor, Department of Counseling and Applied Educational Psychology, and Director, School Psychology PhD and MS/CAGS Programs, Northeastern University

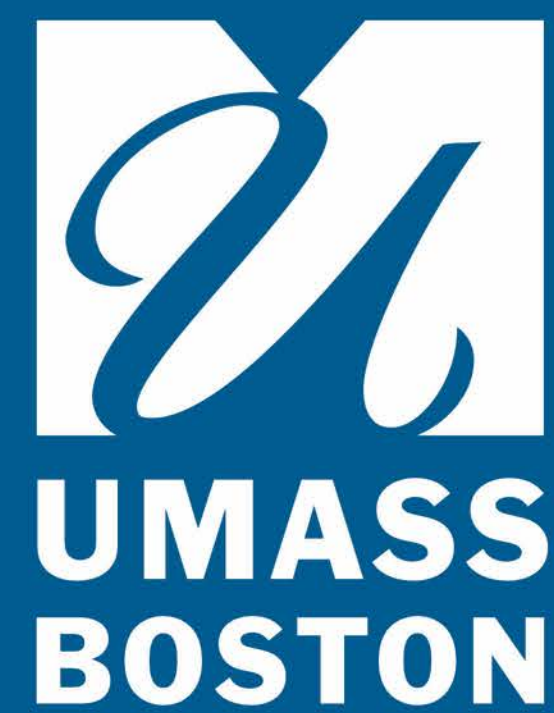
Laurie Milliken, PhD, Associate Professor, Department of Exercise and Health Sciences, UMass Boston

### UMass Boston Graduate Students:

Patrick Filanowski, MS, CSCS  
PhD Student, Exercise and Health Sciences,

Emily McCular  
Master's Student, Exercise and Health Sciences





# Family Gym: A Novel Initiative to Prevent Obesity among Families with Young Children

## Introduction

When the families first join Family Gym, we describe the project to the parents, letting them know it is completely voluntary and they can participate in Family Gym without participating in the study.

After explaining the consent form, we talk to the child(ren) about the study and ask them if it is okay that we measure their height and weight and observe them playing with their parents. After consent is granted, we measure the heights and weights of the children and the parents. For this study, we only observe one child and one parent per family, but measure the heights and weights of all the children. Each child then receives a jump rope for getting their height and weight measured.

## Observation

After families have arrived at Family Gym and have begun playing, the research team begins observing the families using SOFIT forms.

This method of observing uses set timed intervals for alternately recording children's and parents' activity levels using audio cues as to when to observe and when to record. On the form, the researchers record how active the child/parents are and what area of the Family Gym they are playing in (including an out-of-area option).

Physical activity is rated on a 1 to 5 scale, where 1 is laying down and 5 is running around or other vigorous activity. After 12 intervals are recorded, the researchers observe another family at random and repeat this process until Family Gym is over.

## Interviews

Apart from the observations, the researcher also conduct parent interviews at the time they agree to the study and after Family Gym has ended. The initial interviews are done either on the phone or on-site at the community center.

**Phone Interviews:** the researchers ask the parents for their contact information as well as the best time to call them. In either scenario, the researcher conducting the interview follows a script. The interview consists of questions relating to the physical activity of the parent and physical activity and sedentary time of the child(ren) at home.

At the completion of both interviews, the parents receive a \$5.00 gift card to Walgreens.

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## Activities

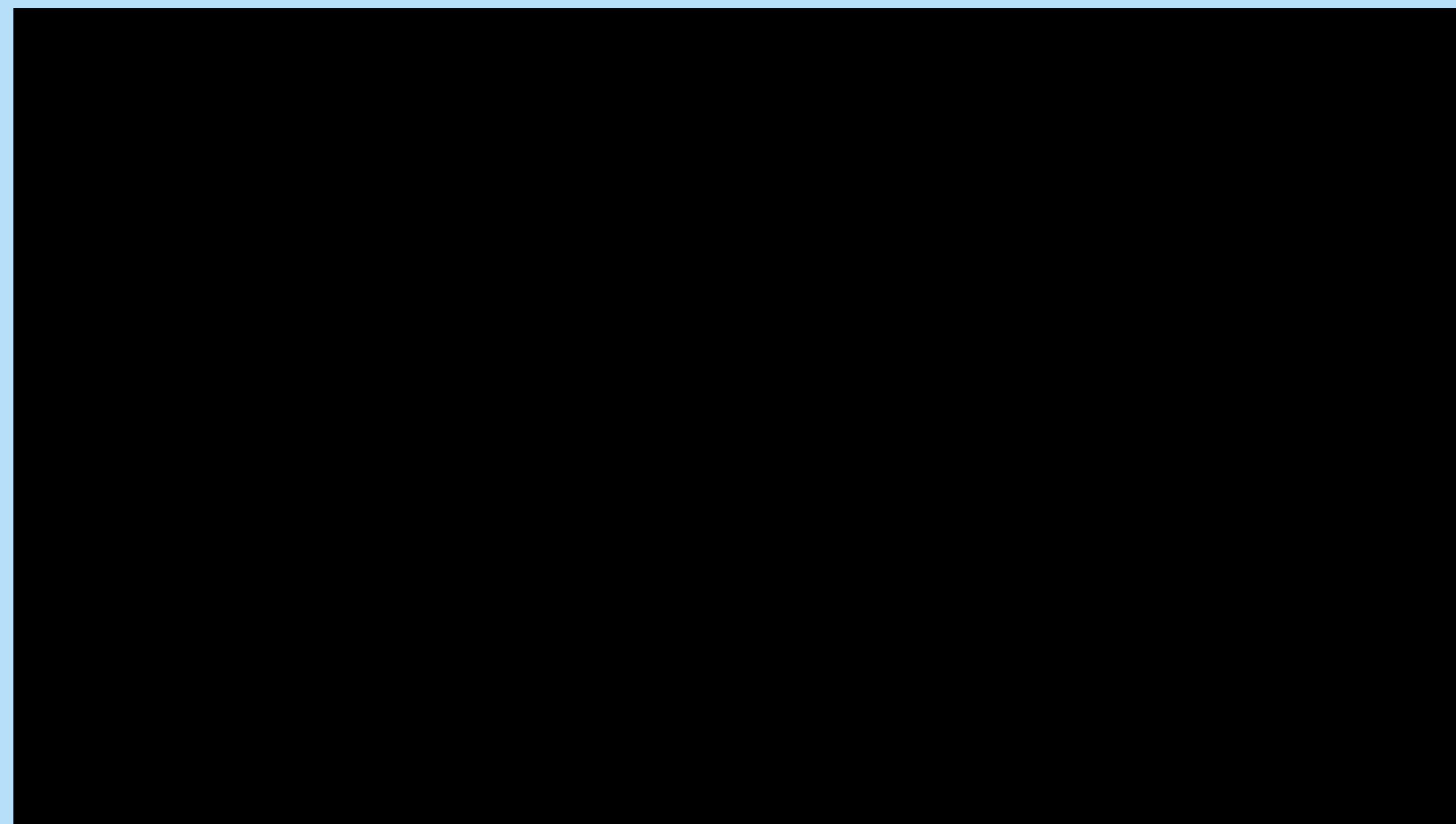
During Family Gym at the Holland research site, there are three different activity centers in which the children can play.

1. **Little kids area** - consists of games and toys suitable for children on the younger spectrum of age
1. **Balls area** - area consists of basketballs, bouncy balls, and a tennis area for the children to play in
2. **Obstacle course area** - is a loop of balancing on beams and crawling through tunnels that the Gym Leaders set up prior to the start of Family Gym each day

Occasionally, there is a special activity area, for example, Zumba.

## Observation

We observe which area the children and the parents are in for the time span in which they are being observed. This shows us what areas were more popular with the children and, to go along with the physical activity observation, how active the children are in each area. We can also determine which areas parents are more active with their children.

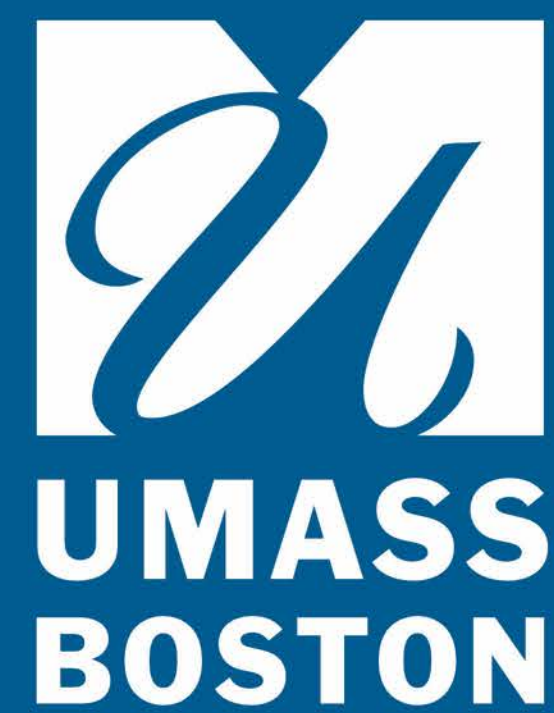


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## Research Questions

The aim of our research is to determine how the Family Gym program affects physical activity and health in children and their parents. Family Gym is intended to create opportunities for wellness for Boston families with young children in an effort to address health disparities and prevent childhood obesity.

### Research questions:

1. What are the overall physical activity levels for parents & children?
2. How do parents & children's physical activity levels vary by activity area?
3. Does the physical activity level of parents vary according to their child's age? We hypothesize that parents of younger children will engage in higher physical activity than parents of older children (we are defining "older children" as those who are at least 5 years of age).
4. Does the physical activity level of parents vary over time?
5. Does the physical activity level of children vary over time?
6. Are parents & their children playing together in Family Gym? In order to answer this question, we would examine area as a proxy for playing together.
7. How are parent & child activity related? If so, how?

## Metrics

### Participant Characteristics:

Participants' age, gender, race/ethnicity, home addresses, telephone number and anthropometrics are obtained to determine if Family Gym reaches participants with demographic characteristics and from neighborhood environments that place them at increased risk for obesity. Frequency of attendance at Family Gym sessions will also be examined to see if there is a change in their engagement in physical activity that will be associated with an improved risk factor profile for obesity.

### Beliefs, Attitudes, Daily Physical Activity, and Family Influences:

Caregivers are asked to complete a survey assessing physical activity enjoyment, motivation, self-efficacy, and planning on themselves and their children twice during Family Gym in the fall and spring sessions. This survey helps to determine whether Family Gym increased the participant's knowledge of the positive effects of physical activity and if they have some rules at home about physical activity and diet.

### Assessment of Physical Activity during Family Gym Sessions:

The System for Observing Fitness Instruction Time (SOFIT) is used to assess the type, intensity, frequency and duration of physical activity during Family Gym sessions. We want to determine if the caregivers and children are engaged in moderate-to-vigorous levels of physical activity during the majority of sessions.

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