


# The Impact of a Text Messaging Campaign on the Dietary Behavior and Physical Activity Levels of Mothers in Newark, NJ

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SCHOOL OF  
PUBLIC HEALTH

University of Medicine & Dentistry of New Jersey

Healthy People 2020

Bridging the Gaps Focus Areas

Adapted from HP2010 and HP2020

Nutrition and Weight Status

Physical Activity

Social Determinants of Health

Adolescent Health

Maternal & Infant Child Health



Greater Newark Conservancy is a nonprofit organization that promotes environmental stewardship to improve the quality of life in New Jersey’s urban communities through community gardening, beautification of neighborhoods, job training opportunities environmental justice advocacy, and environmental education. Here, emphasis is placed on partnerships with urban schools, community and civic groups, youth organization, senior citizens, intergenerational groups and adolescent youth. The conservancy’s guiding principle is to foster a lifelong appreciation of our natural world and to encourage and highlight community pride, empowerment, and self-sufficiency. In addition to the project outlined below, we also interacted with the students from the Newark Youth Leadership Program (NYLP), Farm Stands, and attended Nutrition Workshops for both parents and students. The NYLP students participated in various projects including selling fresh produce at farm stands at the conservancy and at other locations in Newark. The parents from the parent nutrition workshops were really helpful in making our project successful.

## Introduction

With the guidance of Renee Kee, the Nutritional Director at the Greater Newark Conservancy, we developed a text messaging project to educate, encourage, and remind participants about ways to maintain a healthy lifestyle. We were interested in how a text messaging campaign could impact behavior despite barriers to healthy eating and physical activity. Because of the close relationship between maternal dietary behavior and childhood health, we focused on Newark mothers with children between the ages of 2 and 18.

## What Did We Do?

To assess if the text messaging campaign influenced maternal dietary behavior towards meal planning and physical activity, a Pre/ Post survey was given to 20 participants. Surveys contained a Nutrition Assessment, Physical Assessment, and questions which asked mothers to weigh the importance of individual environmental, social, psychological, and physical barriers. Text messages were sent out after pre-surveys were administered, completed, and returned. 2 texts were sent to participants’ mobile phones, once before lunch, 11am, and once at 5pm, just before dinner. This lasted two weeks. Participants received *Meal on a Budget*, a food manual that offers prices and recipes to create healthy and cost-efficient meals, nutritional information on food groups, and visual guidelines for discerning

## What We Found

### Group Demographics:

- 75% Identified as Black
- Average age: 32
- 65% earned less than \$20,000 per year
- Majority on Government Assistance:
  - WIC and/or SNAP

### Motivation to eat healthy

Average score:  
8 out of 10

### Motivation to perform physical activity

Average score:  
7 out of 10

### Nutrition Assessment

- 15 out of 20 ate less than the recommended amount of fruits per day
- 11 out of 20 seldom ate fast foods
- 11 out of 20 ate veggies at least once a day (*5 ate veggies 2-3 times per day or more*)

### Physical Activity Assessment

- Walking:** 13 out of 20 walked less than once per day
- Running/Jogging:** 17 ran/jogged less than once per day
- Gym:** 14 out 20 never go to the gym or go once a month
- Rec Activities:** Majority, 11/20, never participate in a recreational sport
- Other:** 12 participated in some other kind of activity, majority of whom participated in these activities at least once a week.

### Meal Preparation

- Most Important Factors:** Time, Self Confidence, Food Prices, Taste and Portion size.
- Least Important Factors:** Religion, Advertisements

### Physical Activity

- Most Important Factors:** Time, Self Confidence, Motivation, Energy Level, Physical Limitation
- Least Important Factors:** Social Circle and Culture

### Follow-Up Results

- 3 mothers opted out of the project after it had started
- Only 5 participants were reached for our follow-up survey.
- Of the 5, majority found the text messages to be helpful. On a scale of 1-10 the average rating was 9.
- The average motivation to exercise score for this group was an 8 out of 10.
- The average motivation to eat healthy score was 7.
- Their individual results for the other categories remained relatively the same as the first survey.

### Challenges

Initially, the mothers were eager to participate in our project. One even asked members from her church to participate. When trying to contact them however, many didn’t respond, failed to return calls, and provided us with the invalid contact information. These problems were the same for the follow-up survey. A future project with a larger group of women would be helpful in identifying whether text messages are influential in changing individual physical activity and eating behaviors.