Fall 11-13-2023

Garden-Based Nutrition Education for Low Income Hispanic School Children

Larry Bui
Dominican University of California

https://doi.org/10.33015/dominican.edu/2024.NURS.RP.02

Garden-Based Nutrition Education For Low Income Hispanic School Children

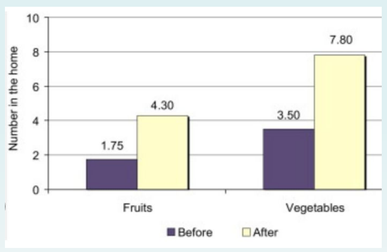
Larry Bui
Department of Nursing

Introduction

Childhood obesity is a pressing public health concern, particularly affecting children from low-income and ethnically diverse backgrounds, such as Hispanic communities (CDC, 2021). In the United States, childhood obesity rates exhibit a concerning trend, with Latino school children experiencing a disproportionate impact compared to the general population (CDC, 2021). This health disparity underscores the critical need to address childhood obesity and nutritional knowledge deficiencies within underserved communities.

Research has consistently highlighted insufficient nutritional knowledge and unhealthy dietary habits as critical contributors to childhood obesity. Children in low-income areas face significant challenges in acquiring essential dietary knowledge and making healthier food choices, leading to immediate and long-term health consequences, including an increased risk of obesity, diabetes, and cardiovascular diseases (Gittelsohn et al., 2017; Swindle et al., 2018)(Black & Macinko, 2017; Ng et al., 2014)

Gardening-based nutrition education models may be an effective and sustainable method of obesity reduction by establishing a connection between improved dietary knowledge and dietary choices, thus leading to a lower incidence of obesity.



Email Contact: larry.bui@students.dominican.edu

Hypothesis

The implementation of a 11-week garden-based nutrition curriculum will positively impact dietary habits and nutrition knowledge within low-income Hispanic children at San Pedro Elementary School.

Method

Participants

- Convenience sample - 200 Students at San Pedro Elementary School in San Rafael, CA split into a control group and an interventional group
- Participants ages 7-10

Independent Variable:

- An 11-week garden-based nutrition education program

Dependent Variable:

- Healthy Eating Index (HEI) Score differences between the pre-test and post-test

Tools:

- Health Eating Index (HEI) Survey

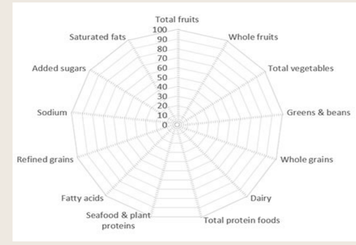
Procedure

- Classes will be randomized into a control or interventional group
- Both control and interventional group will take the HEI survey at the start of the study
- The experimental group will receive weekly nutrition education classes adhering to a predetermined curriculum.
- Students discouraged from discussing lesson content with each other.
- HEI survey taken again after 11 weeks.

Results

HEI scores will be broken down into the different categories tested for and the delta for each section will be averaged in order to compare average delta between control and interventional groups. Descriptive statistics will be used to compare the survey results and to determine the effectiveness of the intervention. A t-test will be used to evaluate the statistical significance between the two groups.

Figure 1: Proposed Result Graph



Conclusion

If the hypothesis is correct, the implementation of the school-based nutrition education program will result in greater differences between pre-test and post-test HEI scores for the interventional group than the control group. This would also support the notion that this is an effective intervention for low-income Hispanic school children and can provide a framework for longer-term efforts to combat the disproportionate rate of childhood obesity in this demographic.

IRB

This proposal is pending Dominican University IRB Approval

References:
Black JL, Macinko J. Neighborhoods and obesity. Nutr Rev. 2008 Jan;66(1):2-20. doi: 10.1111/j.1753-4887.2007.00001.x. PMID: 18254880.
Centers for Disease Control and Prevention (CDC). (2021). Childhood Obesity Facts. https://www.cdc.gov/obesity/data/childhood.html
Gittelsohn, J., Rowan, M., & Gadhoke, P. (2017). Interventions in Small Food Stores to Change the Food Environment, Improve Diet, and Reduce Risk of Chronic Disease. Preventing Chronic Disease, 14, E03.