Wellness 4 Uth: Increasing Health Through a School-Based Wellness Program

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Introduction

- 12.7 million obese children in America
- Individual, Behavioral , & Environmental factors contribute to risk of obesity
- Schools are ideal for wellness intervention because of their engagement of students, families, educators, and community workers.
- Schools also provide a safe place for children to engage in physical activity
- The purpose of this project was to determine whether an afterschool wellness programwould be effective in promoting healthy eating habits and increasing physical activities in 3rd-5th grade students.

Aims

1. To determine baseline BMI and physical fitness and knowledge on healthy nutritional behaviors and physical activities among third through fifth grade students in an elementary school.
2. To implement a school based educational intervention that promotes an increase in physical activity and nutritional behaviors over a 12-week period
3. To determine post intervention BMI and physical fitness and knowledge on healthy nutritional behaviors and physical activity in 3rd-5th graders who completed the 12-week intervention.

Methods

Design & Sample

- Pre-test, post-test quality improvement project
- 12-week program split into 3, 4-
- Study population included 10 3rd- 5th grade Hispanic students in an urban school.
- Any student with parental consent and afterschool transportation was allowed to participate in the program

Table 1. Baseline Demographics n(%)

Gender (%)	
Female	6 (60)
Male	4 (40)
Age (%)	
8	1 (10)
9	3 (30)
10	5 (50)
11	1 (10)
Race/Ethnicity (%)	
Hispanic	10 (100)
BMI[a] (%)	
5%-85%b	2 (20)
86%-95%c	2 (20)
>95%d	6 (60)

a. body mass index b. percentile indicates healthy weight c. percentile indicates overweight d. percentile indicates obesity

Study Measures

- Healthy Habits Assessment: measure nutritional and physical activity behaviors
- Fitness Test: ¼ mile run, SitUps, PushUps, Reach
- Module Tests: 5-item assessment of knowledge given before and after each module
- BMI: calculated using height, weight, gender, and age of participant

Statistical Analysis

Aim one was analyzed using descriptive statistics. Aims two and three were analyzed nonparametric tests due to the small sample size. These aims were analyzed using the Wilcoxon Signed Rank Test.

Results

Healthy Habits Assessment

- Scores ranged from 7-28
- 7-14: poor; 15-21: fair; 22-28: good
- Pre-intervention: 8 fair, 1 good
- Post-intervention: 3 fair, 3 good
- Changes not statistically significant (p = 0.317)

Fitness Test

The run component had 3 matched pairs. The other three components of the fitness test were analyzed using five matched pairs.

Table 3. Pre-& Post Fitness Test Comparison (n=pairs)

	pre-test	post-test	p-value
Run (3)	2:24	9:18	0.102
Sit-Ups (5)	14	28	0.102
Pushups (5)	7.5	21	1.000
Reach (5)	8.25	10	0.083

Educational Modules

- Educational modules covered two or three of the eight core principles of healthy living that were outlined in *Eat Well & Keep Moving: An Interdisciplinary Elementary Curriculum for Nutrition and Physical Activity*
- Module 1 covered I & V
- Module 2 covered principles II, III, & IV
- Module 3 covered principles VI, VII, & VIII

Table 2. Pre-test vs. Post-test Comparison

	Pre-Test	Post-test	p-value
Module 1_a	40	50	0.234
Module 2_b	40	50	0.461
Module 3_c	50	60	0.102

a. core principles I & V; b. core principles II, III, & IV; c. core principles VI, VII, & VIII

8 Core Principles of Healthy Living

I. Make the switch from sugary drinks to water
II. Choose colorful fruits & vegetables instead of junk food
III. Choose whole-grain foods & limit foods with added sugar
IV. Choose foods with healthy fat, limit foods high in saturated fat, & avoid food with trans fat
V. Eat a nutritious breakfast every morning
VI. Be physically active every day for at least 1 hour per day
VII. Limit TV & other recreational screen time to 2 hours or less
VIII. Get enough sleep to give the brain & body the rest it needs

Conclusions

Overall there were no statistically significant findings. However, the Wellness 4 Uth program was able to offer lessons for future research. There are a few changes that need to be made to the program that could produce different outcomes. With proper advertisement, a more child friendly curriculum, and a longer run-time, there could be significant changes seen in the participants. The information provided by this project can inform other SBHCs or schools in general that would like to make an effort to decrease and further prevent childhood obesity by starting school-based wellness programs.

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