

THE EFFECT OF A FREE COMMUNITY PEDIATRIC HEALTH INITIATIVE ON BMI, FITNESS MEASURES, AND QUALITY OF LIFE: A PILOT STUDY

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ABSTRACT

Background: Pediatric obesity affects approximately 18% of children in the United States. Childhood obesity contributes to several health-related issues, including diabetes, hypertension, decreased quality of life (QOL), and adult morbidity. Risk factors for developing childhood obesity include socioeconomic factors, sedentary lifestyle, diet, and genetics. Programs tailored toward educating children and parents on healthy lifestyle choices, exercise, and nutrition have been shown to improve health-related outcomes for this population.

Objective: The purpose of this study was to retrospectively investigate the effects of an 8-week community pediatric health program on body mass index (BMI), fitness measures, and QOL in overweight children.

Methods: Subjects aged 8-16 years were recruited from a hospital-based weight management clinic to participate in an 8-week weight loss program. Subjects attended weekly one-hour sessions of health and wellness education, exercise instruction, home program development, and practical goal-setting. Seven children participated in the program and completed all outcome measures. Outcome measures included Body Mass Index (BMI), functional strength (jumping jacks, wall sits, push-ups, and sit-ups), balance (single-limb stance, SLS), flexibility (straight leg raise, SLR), endurance (6-minute walk test, 6MWT), and QOL assessment (Pediatric Quality of Life Inventory, PQOL). Outcomes were assessed at baseline and week eight.

Results: Although the BMI did not show clinically significant improvement, three functional strength measures (wall sit $p=0.026$; push-ups $p=0.010$; sit-ups $p=0.003$), endurance (6MWT, $p=0.026$), and flexibility (left SLR, $p=0.011$, right SLR, $p=0.046$) showed statistically significant improvement at week eight. Jumping jacks and the PQOL showed improvement without reaching statistical significance ($p>0.05$). No improvement in SLS was noted ($p>0.05$).

Conclusion: The findings indicate a community-based pediatric health and wellness program significantly improved overweight children's fitness. Further research is needed to determine the long-term effects of this program.

Keywords: Pediatric obesity, childhood obesity, health and fitness, BMI, quality of life

INTRODUCTION

Pediatric obesity is an ongoing problem in the United States, affecting approximately 18% of children [1]. Obesity is often defined using the Body Mass Index (BMI), calculated in kilograms per meter squared. Children and adolescents with a BMI over the 85th but less than the 95th percentile for age and gender are considered overweight. Those with a BMI greater than the 95th percentile are considered obese. Limitations exist when using BMI with the possibility of overestimating body fat in the more athletic population due to muscular builds. However, BMI is often used because of the low cost of routinely attaining the weight and height required to calculate the measurement.