

ABSTRACT

THE INFLUENCE OF EXERGAMING ON THE PHYSICAL FITNESS; ATTITUDE TOWARDS PHYSICAL ACTIVITY; AND SELF-CONCEPT IN OVERWEIGHT AND OBESE CHILDREN

The rapidly growing rate of childhood obesity makes it imperative to develop an effective intervention program for obese children. This study was an attempt to answer the question as to whether exergaming can drive overweight and obese children towards adopting a healthier lifestyle, becoming more physically active for life and improving their self-concept. The study consisted of a 6-week intervention on the Nintendo Wii. Participants were aged between 9-12 years old. Subjects were assigned to three groups according to location: experimental group (n=11), control group A (n=10) and control group B (n=10). The experimental group participated in the exergaming intervention program, control group A had access to traditional video games and control group B continued with their everyday life activities with no intervention. Health-related and functional-fitness protocols were used to assess the physical fitness of the subjects. The Cratty Self-concept questionnaire determined self-concept amongst subjects and a closed-ended interview was conducted to conclude changes in attitude towards physical activity.

Statistical calculations revealed that the experimental group showed significant improvement in their level of functional fitness ($p < 0.05$). Coordination, reaction time, speed and agility increased by magnitudes of 28%, 94% and 37% respectively. Reductions in resting-blood pressure and heart rate mean scores were observed. Both the control groups displayed marginal increases in their overall level of fitness that were not significant. No changes were observed and recorded for self-concept and attitude towards physical activity across the board. These results support the concept that exergaming can be used as an alternative means to improve the level of functional fitness as well as promoting physical activity in children.

Key words: Physical Fitness; Physical Activity; Self-concept; Child Obesity;

Exergaming; Nintendo Wii