

Comparison of aerobic - resistance training on physical fitness related to the health of mental retardation children and their normal peers

tina ghafari*,

The objective of this research was to investigate the effects of a 6-week period of Aerobic - resistance training on physical fitness related to the health of mental retardation children and their normal peers. To this end, 20 exceptional children (with average age of 14.4 ± 1.6 years, average weight of 59.9 ± 17.7 kg and average IQ of 80.2 ± 3.7) and 20 normal children with the same age (with average age of 14 ± 1.7 years, average weight of 58.6 ± 15.9 kg and average IQ of 110 ± 6.7) were picked randomly Roodbar city's schools. First, based on their medical records some information such as (IQ, pulmonary and cardiovascular conditions, age and physical problems) were collected and together with other information (height and weight), physical fitness factors related to health (body compositions, cardiovascular endurance, muscular strength, muscular endurance and flexibility) were examined and used consequently as pre-tests. After a 6-week period of aerobic - resistance training (3 session for week), both groups were being investigated again and the records were utilized as pro-tests. This study show that there was significant decrease in BMI ($p=0/001$), fat ($p=0/0001$) and significant increase in cardiovascular and respiratory endurance ($p=0/002$), muscular endurance ($p=0/001$), muscular strength ($p=0/001$) and flexibility ($p=0/0001$) in mentally retarded children. Also there significant increase in BMI ($p=0/01$), fat free mass ($p=0/002$), cardiovascular and respiratory endurance ($p=0/005$), muscular endurance ($p=0/001$), muscular strength ($p=0/0001$) and flexibility ($p=0/0001$) and significant decrease fat ($p=0/001$) in normal children. Then, to compare variables for within-subjects pre-tests and pro-tests, dependent t-test and for within-group comparison, independent t-test were applied. The results showed that a period of aerobic - resistance training improves physical fitness in both exceptional and normal children. It should be mentioned that

these exercises have more effects on mental retardation children than their normal peers, but the difference is not significant.

Keywords : Aerobic - Resistance Training, Mental retardation children, Physical fitness

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