The effect of 8 weeks of core stability training on static and dynamic balance mentally retarded children 8 to 10 years

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Introduction: Restrictions motor development of children with intellectual disability deprives them a lot of situations in life. Studies have shown that people with intellectual disability in cognitive tasks, information processing, language and actions have defects. Some of the children compared to normal persons have difficulties in motor skills, including balance (1). Balance is a complex motor skill that describes the dynamics of the body to prevent fall (2). Studies have shown the role of core stability exercises on individual performance (3). In this direction present research studies the effect of eight weeks of training core stability based on static and dynamic balance educable mentally retarded children 8 to 10 years.

Methodology: The population of the study was equal with statistical sample and included 36 educable mentally retarded students with mean and standard deviation of height and weight 122.58±7.55 cm and 24.69±5.17 kg in terms of a healthy physical and voluntarily participated in this study. The initial assessment of the subjects state of static balance with eyes open and close Sharpend Rombrg test were used and to assess the dynamic balance were used up and go test. Based on the total score balance tests, subjects were randomly replaced into three groups with 12subjects, including two experimental and one control group. Two groups of core stability training executed eight weeks with three sessions per week and each session lasted for 45 minutes. The first experimental group executed the first four weeks static core stability training and the second four weeks executed dynamic core stability training and the second experimental group executed the first group program in reverse order. During this period, the control group did not exercise. After eight weeks, all three groups were participated in the initial tests again. Data were analyzed through dependent t test and ANOVA at 0.05.

Results: The results showed that a significant effect of eight weeks core stability training on both static balance with open and close eyes and dynamic balance(p=0.001). There was no significant difference between the two experimental groups after eight weeks of core stability training (p>0.05). There was a significant difference between both experimental groups with the control group (p=0.004).

Discussion: Balance requires sensory data integration in given the state of the environment and Defect in which leads to delays in motor development. Due to limitations in cognitive and motor mental retardation in processing sensory information for balance and posture it can be used Core stability exercises to improve balance for children with intellectual disability and no differences between Primacy and recency of static and dynamic in their training program.

Key words: Core stability, static and dynamic balance, mentally retarded, children

References: