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Upper limb aerobic training versus chest physical therapy in asthmatic children rehabilitation

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Statement of the Problem:

Asthma is a serious global health problem. People of all ages in countries throughout the world are affected by this chronic airway disorder that when uncontrolled it can place severe limits on daily life and is sometimes fatal. The prevalence of asthma is increasing in most countries, especially among children. Researchers have reported that asthmatic children have significant deterioration of pulmonary functions that result in impairment in functional capacity and quality of life. Chest physical therapy remains an essential component of pulmonary rehabilitation. There is a large body of literature supports the effectiveness of aerobic exercise on pulmonary function, dyspnea, and functional capacity.

Methodology & Theoretical

Orientation: In this study was a trail to compare the therapeutic effects of aerobic exercise versus chest physical therapy on the pulmonary functions in asthmatic children for 16 weeks of training- 40 asthmatic children of both sexes participated in this study. They were assigned randomly into two groups: (Group A) 20 children who received chest physical therapy program including (breathing exercise and Incentive Spirometer training, (Group B) contained 20 children who received arm ergometry training protocol and Forced vital capacity "FVC", Forced expiratory volume after 1 second "FEV1", Peak Expiratory Flow Rate " PEFR" were evaluated by Discovery Spirometer pre and post-treatment for both group.

Findings: The pre-treatment results of this study showed that there were no significant differences in all measured parameters among both groups, The post-treatment results of this study revealed that there was a significant improvement

in both groups of the patient's ventilatory function "FVC, FEV1, and PEFR".

Conclusion & Significance:

The arm ergometry training protocol used in this study can be considered as a beneficial therapeutic program that can be used to improve the pulmonary functions in asthmatic children. Recommendations are made for establishing the arm ergometry training protocol in schools for asthmatic children.

Biography

Mohamed E Khalil, Assistant Professor of pediatric physical therapy, Medical Rehabilitation College, Qassim University, He holds a bachelor's degree in physiotherapy, master's degree and a doctorate degree in pediatric rehabilitation, He has his expertise in the field of physical therapy and pediatric rehabilitation after about 18 years of experience in teaching and practice in hospital and education institutions in Egypt and Saudi Arabia. He is a pediatric rehabilitation consultant in Saudi Commission for Health Specialties, He is interested in the fields of Pediatric physical therapy and rehabilitation- Growth and Development- Gait and Motion analysis- Electrodiagnostic studies.

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