

Thesis Title The Effect of Exercise Program on Pulmonary
 Function and Exercise Tolerance in Asthmatic
 Children
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ABSTRACT

Exercises are the basic biological needs which help to maintain health and physical fitness. Many asthmatic children avoid participating in physical activities and exercises due to fear of asthmatic attack. So, they don't want to play with their friends and show poor performance, hence, they will develop low self-esteem, poor general physical fitness and motor skills. It is important to plan suitable activities and exercises for these asthmatic children in order to promote their regular and continuous exercise in their lifestyle. The purpose of this study, was to study the effect of exercise program on pulmonary function and exercise tolerance in asthmatic children. A quasi - experimental research design was implemented. The sample group consisted of 30 asthmatic children, ages between 8 - 13 years old from a private chest clinic. Purposive sampling technique was used. The sample was equally divided into two groups as the experimental and control group. There were no significant differences in age and initial percentage fall in PEFr between these two groups. The experimental group participated in 30

minutes of supervised exercise training program three times each week for four months. On the other hand, the control group recieved routine instruction from the physician and the nursing staff in the clinic. The tools used in this study included demographic data form, Wright Mini Peak Flow Meter, Bicycle ergometer and daily severity of asthma scores form. Data were analyzed by using t-test. The results were as follows :

1. The experimental group showed better pulmonary function than the control group with statistically significant difference ($p < .01$)

2. The experimental group showed higher exercise tolerance (Work loads) than the control group with statistically significant difference ($p < .001$)

3. Both of the experimental group and the control group, there were no statistically significant difference between the daily severity of asthma scores before the study and after the study. ($p > .05$)

From the results of this study, the researcher recommends that nursing staff should set up group exercises for stable athmatic children. So, it will promote their health and reduce exercise induced asthma. For further study, the researcher suggests that this study should be repeated by increasing the subjects and types of exercise programs such as running, swimming, etc. Also, the exercise training sample group should be followed up for at least 6 months, or one year in order to rule out signs and severities of illness, and study other variables such as VO_2 max. value, resting pulmonary functions, and psychosocial and emotional status of the subjects.