



CHANGES IN PHYSICAL FITNESS AMONG SEDENTARY STUDENTS THROUGH SPECIFIC HANDBALL TRAINING PROGRAM

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Abstract

The main objective of this study is to find out the effect of specific training in handball on sedentary high school male students by understanding the changes in physical fitness variables. The study was delimited to 60 male high school students from Kottayam district leading a sedentary lifestyle. The study lasted for 6 weeks and the age of subjects ranged from 13 to 16. The variables delimited for evaluation included agility, endurance, balance, flexibility, muscular strength, reaction time, speed.

Keywords: agility, endurance, balance, flexibility, muscular strength, reaction time, speed.

Introduction

Physical fitness offers a wide variety of health benefits including but not limited to prevention of obesity, improving self confidence, and a marked improvement in the sense of well being. Physical education and training programs within the school setting can set the stage for children view fitness, activities and future health. Sports include a range of activities that is governed by a set of rules and customs which is mostly engaged competitively. Physical education is part of sports as well as our education system. One good way of determining the activity levels of school children are by checking the extent of participation in the organized sports and physical education. Handball is a fast paced

game involving two teams of seven players who pass, throw catch, and dribble a specific ball with their hands while trying to score goals. The team with the most goals wins the game. A game consists of one hour duration with two halves of thirty minutes and ten minutes half time break. The game is fast and the players need to be fit. This study is intended to create awareness about importance in specific training in handball and improvement of physical fitness.

Methodology

The purpose of the study was to find out the effect of specific training in handball on health related physical fitness variables of sedentary high school males. The study was limited to a total of sixty male high school level sedentary students selected from the Kottayam district. The age ranged between 13 and 16 years. The experimental treatment was restricted for a period of 6 weeks. The following variables were delimited for the evaluation: agility, endurance, balance, flexibility, muscular strength, reaction time, speed. The research scholar analyzed various available literatures, consulted experts in the field of physical education and selected the following standardized test item to collect relevant data on the selected dependent variables and they are presented in the table. The data pertaining to the health related variables such as speed, flexibility, muscular strength, endurance, reaction time, balance and reaction time was collected by conducting



pretest and posttest using the appropriate measurement procedure. The data collected was statistically analyzed with analysis of covariance (ANCOVA) to determine whether the programs of the training produced significant improvement in the health related physical abilities after participation in handball.

Results

TABLE NO. 1
EFFECT OF TRAINING PROGRAM ON VARIOUS VARIABLES
OF HANDBALL PLAYERS AFTER 6 WEEKS

Variables	Source of Variance	Sum of Squares	df	Mean Square	F	Sig.
Agility	Between Groups	17.495	4	4.374	76.095*	.00
	Within Groups	16.956	295	.057		
Endurance	Between Groups	473	4	.118	26.225	.00
	Within Groups	1.329	295	.005		
Balance	Between Groups	1027.353	4	256.838	65.883	.00
	Within Groups	1150.033	295	3.898		
Flexibility	Between Groups	716.420	4	179.105	20.869	.00
	Within Groups	2531.750	295	8.582		
Muscular strength	Between Groups	767.620	4	191.905	61.294	.00
	Within Groups	923.617	295	3.131		
Reaction time	Between Groups	1191.453	4	297.863	72.792	.00
	Within Groups	1207.133	295	4.092		
Speed	Between Groups	16.246	4	4.061	93.486	.00
	Within Groups	12.816	295	.043		

*Significant at 0.05 level of significance

The table gives F value for agility as 76.095 and P value is .000 since P value is less than 0.05 there is significant difference in agility between experimental groups. The F value for endurance is 26.225 and P value is less than .00. Since P value is less than 0.05 there is a significant difference in endurance between

experimental groups. When it comes to balance the F value is 65.883 and P value is .000 since P value is less than 0.05 there is significant difference in balance between experimental groups. The F value for flexibility is 20.869 and P value is .000 since P value is less than 0.05 there is significant difference in flexibility between experimental groups. The F value for muscular strength is 61.294 and P value is .000 since P value is less than 0.05 there is significant difference in muscular strength between groups. The F value for reaction time is 72.792 and P value is .000 since P value is less than 0.05 there is significant difference in reaction time between experimental groups. Since the F value for speed is 93.486 and P value is .000 since P value is less than 0.05 there is significant difference in speed between experimental groups.

Discussion of findings

The result of the study indicate that students had significantly improved on the selected criterion variables namely on agility, endurance, balance, flexibility, muscular strength, reaction time, speed. The findings shed a new light on how certain physical fitness variables deeply impact on specific training programs in handball. The study underlines the importance of specific training in handball and improvement of physical fitness. This study could be helpful for the development of a team from grass root level, which ultimately leads to upliftment of performance at the later stages of the carrier.

Conclusion

Based on the result of the study, the following conclusions were drawn:

- Weekly stages have significant difference on criterion variables namely agility,



- endurance, balance, flexibility, muscular strength, reaction time, speed.
- The various group have significant improvement on physical fitness variables namely agility, endurance, balance, flexibility, muscular strength, reaction time, speed.

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