



ISSN: 2456-0057
IJPNPE 2019; 4(1): 1360-1363
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www.journalofsports.com
Received: 04-11-2018
Accepted: 06-12-2018

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Familiarizing sports in a recreative way: Reassessing effectiveness on health related physical fitness parameter among physically constraint high school boys

Manjunatha NV and Dr. PC Krishnaswamy

Abstract

The purpose the current study was to find out the playing sports in a recreative way: effectiveness on health related physical fitness parameter among physically constraint high school boys. The study was 75 physically constraint high school boys were selected randomly from private high school of Bangalore north district, Karnataka, India. The age of the subjects ranged between 13 to 17 years. (Physically constraint school boys are who did not involve in any physical activities and not participate in any intramural sports and inter school sports and games competition during school physical education programme). The selected were divided into five groups (N=15) Experimental group Kabaddi, Kho-Kho, Volleyball, Football and Control groups for the training period of 12 weeks. The health related physical fitness parameter such as muscular endurance; push ups post-test ('F' value is 7.034 and 'p' value is 0.000) and cardio-vascular endurance; 600 yards run/walk, post-test ('F' value is 2.042 and 'p' value is 0.005) The analysis of covariance (ANOVA) Duncan's post hoc-test was applied and the level of significant was set at the 0.05 level of confidence. The result indicated that experimental groups (Kabaddi, Kho-Kho, Volleyball, Football and Control group) were significantly improved compared to pre-test to post-test. It was indicated that the recreative way of playing Kabaddi, Kho-Kho and Football groups had significantly improved the muscular endurance and cardio-vascular endurance respectively. The study suggested that results would provide a scientific base and guidance to the Physical Educationists, Coaches and design the training program for Physically Constraint High School Boys.

Keywords: Recreation, physically constraint, muscular endurance and cardio-vascular endurance

Introduction

Physical Education and Recreational activities are national building activities. These activities can exert their influence on a people if the obstacles standing in their way are first removed. Recreational games are essential for any individual familiarizing themselves to achieve sustainable, health related physical fitness and psycho-physiological developments, healthy life for all the age groups. Modern day students follow unhealthy life style habits and use electronic gadget mass media, cell phones, video games, internet, including unhealthy eating and inactivity that lead to becoming obese and developing hypo kinetic diseases. Our children also suffer from the hampering influence of school and college life, viz; too much intellectual work, the stress and strains of test examination etc. Examination and tests may not in themselves be harmful but when, as in India, the emphasis is stressed entirely upon examination results, the slowing children. The health of our children's appears to be seriously affected at graduator degree level. Participating in sports and recreative games at school level helps in achieving all round development of children. It gives each individual to feel better themselves and make to feel that they are more capable of handling potential health related fitness producing situations. Vivid movements and physical activities not only develop physical fitness, mental growth, sports and recreational activities promotes feeling of well-being improving health related physical fitness sedentary life style to academic programme in reassessing of playing sports in a recreative way.

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Health Related Physical Fitness

Physical fitness program improved to be a very much essential in the rehabilitee war victims and it was also used in the educational and training institutions in the form of physical activates, is Right at the grass root level, many training programs and an idea of improving the physical fitness were launched. Each child was given an opportunity to assess their health-related physical fitness as to develop health and fitness level. In school were no special periods allotted for physical fitness it was expected that children would develop a certain amount of health-related physical fitness through participation in some physical activities in school.

Statement of the problem

The main purpose of this study was find out familiarizing sports in a recreative way: reassessing effectiveness on health related physical fitness parameter among physically constraint high school boys.

Objective of the study

The objective of this study was to determine the effectiveness of health related physical fitness parameters such as muscular endurance and cardio-vascular endurance among physically constraint high school boys.

Statement of Hypothesis

It was hypothesized that 12 weeks of playing sports in a recreative way of Kabaddi, kh-kho, volleyball, football training will have significant improvement on muscular endurance and cardio-vascular endurance among physically constraint high school boys.

Methodology

The subjects (n=75) were randomly assigned to five equal groups of 15 each physically constraint high school boys in their age between 13- 17 years. The groups were assigned as experimental groups I, II, III, IV and control group. per-test post-test (initial) scores were conducted for all the subjects on health related physical fitness, such as, muscular endurance and cardio-vascular endurance done for a period of 12 weeks. The post-test scores showed good improved compared in per-test data. The analysis of covariance (ANOVA) was used to determine the significance of the means for each variable. Duncan’s post hoc-test was made using the treatment given the best in all the groups ‘F’ value was significant. In all cases 0.05 level and 0.01 level was fixed to test the hypothesis.

Results and Discussion

Analysis of the treatment effectiveness on kabaddi, kho-kho, volleyball, football and control groups selected criterion parameters were presented in Table-1 to Table-4

Table 1: Analysis mean, standard deviation, ‘t’ value (HRPF) on muscular endurance: Push ups on between Experimental and control group.

Group -N	Subjects	Mean ± SD		Mean ± SD df	‘t’ value	‘p’ value
		Pre -test	Post-test			
Kabaddi	15	19±6.4	22±4.9	2.4±3.1	2.923*	0.011
Kho-Kho	15	15±5.5	16±4.1	0.6±3.7	0.619 ^{NS}	0.546
Volleyball	15	15±4.8	16±4.9	1.5±1.8	3.151*	0.005
Football	15	15±6.3	17±6.4	2.8±3.7	2.954*	0.001
Control	15	13±3.6	13±3.2	0.8±4.2	0.736 ^{NS}	0.474

^{NS}Not Significant; * Significant at 0.05 level (df=28 is 2.04)

Mean, standard deviations’t’ value ‘p’ value 19±6.4, 15±5.5, 15±4.8, 15±6.3 and 13±3.6 for pre and 22±4.9, 16±4.1, 16±4.9, 17±6.4, and 13±3.2 for post respectively. groups

Kabaddi (t-value is 2.923 and p-value is <0.011), Volleyball (t-value is 3.151 and p-value is <0.007), and Football (t-value is 2.954 and p-value is <0.011) at 0.05 level of significance.

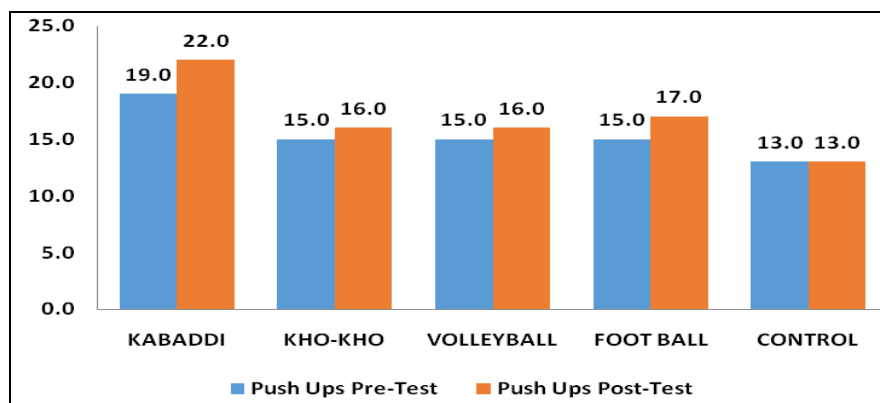


Fig 1: Bar chart for Push ups per and post-test for between the groups

Since significant ‘t’ ratio was obtained, the results were further subjected to one-way ANOVA analysis using and results presented in Table-2.

Table 2: One-way ANOVA significant difference of muscular endurance: push ups between groups.

Sources of Variance	Sum of Squares	Degree of Freedom	Mean Square	‘F’ Value	Sig.
Between the Groups	667.147	4	166.287	7.034	0.000
Within the Groups	1654.800	70	23.640		
Total	2319.947	74			

*Significant at 0.05 level with (df 4 and 74 is 2.50) ‘F’ value is 7.034.

Mean sum of squares between the groups 667.147 and within the groups 1654.800 and the total 2319.947. 'F' value is 7.034 with (df 4 =74) required for significant at 0.05 level.

Duncan's post hoc-test muscular endurance; push ups Kabaddi group is alpha 0.05. 21.7333

Table 3: Analysis mean, standard deviation, 't' value (HRPF) on cardio-vascular endurance:600 yards run/walk on between Experimental and control group.

Group -N	Subjects	Mean ± SD		Mean ± SD df	't' value	'p' value
		Pre -test	Post-test			
Kabaddi	15	202.6±28.5	209±25.1	6.4±12.2	2.020 ^{NS}	0.063
Kho-Kho	15	214.1±26.1	217.3±27.5	3.2±9.7	6.266 *	0.001
Volleyball	15	203.6±21.0	202.1±23.1	1.5±10.1	0.587 ^{NS}	0.566
Football	15	216.4±6.2	224.6±6.6	8.2±24.2	5.319 *	0.001
Control	15	188.4±4.8	187.5±5.1	0.9±8.2	0.437 ^{NS}	0.669

^{NS}Not Significant; * Significant at 0.05 level (df=28 is 2.04)

Mean, standard deviation 't' value 'p' value 202.6±28.5, 214.1±26.1, 203.6±21.0, 216.4±6.2, and 188.4±4.8 for pre and 209±25.1, 217.3±27.5, 202.1±23.1, 224.6±6.6, and

187.5±5.1 for post respectively. kho-kho (t-value is 6.266 and p-value is 0.001) and Football (t-value is 5.319 and p-value is 0.02) are significant at 0.05 level of significance.

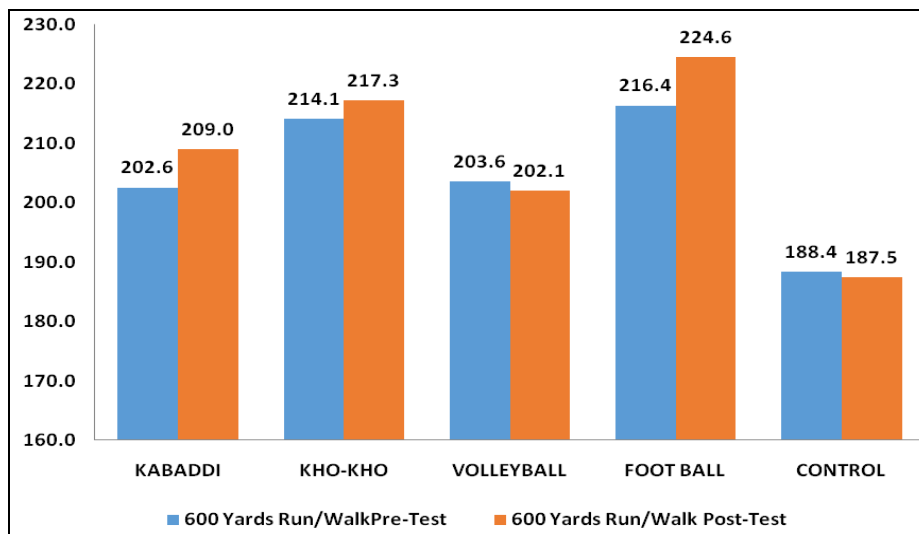


Fig 2: Bar chart for Push ups per and post-test for between the groups

Since significant 't' ratio was obtained, the results were further subjected to one-way ANOVA analysis using and

results presented in Table-4

Table 4: One-way ANOVA significant difference of Cardio-vascular endurance: 600 yards run/ walk. between groups.

Sources of Variance	Sum of Squares	Degree of Freedom	Mean Square	'F' Value	Sig.
Between the Groups	10183.333	4	2545.833	4.042	0.005
Within the Groups	44090.667	70	629.867		
Total	54274.00	74			

*Significant at 0.05 level with (df 4 and 74 is 2.50) 'F' value is 4.042.

Mean sum of squares between the groups 10183.333 and within the groups 44090.667 and the total 54274.00. 'F' value is 4.042 with df (4=74) required for significant at 0.05 level.

Duncan's Multiple range test (DMRT) post hoc-test cardio-vascular endurance; 600 yards run/walk Football group is alpha at 0.05. 216.4000.

Conclusion

It was concluded that varied playing sports in a recreation way: all groups were significantly improved health related physical fitness (HRPF) muscular endurance: push ups and cardio-vascular endurance of physically constraint high school boys. The results suggested that health related physical fitness parameter such as Kabaddi, Kho-Kho, Volleyball, Football and Control groups. The results for muscular endurance and cardio-vascular endurance for increasing among health related physical fitness the physically constraint

high school boys were seeming to be more necessary and also improve the selected parameters of cardio-vascular endurance. The presents study would provide a significant base and guidance to who are not participate in basic sports and games. And also the coaches, sports fitness trainer, physical education teachers to design the training program for playing sports in a recreation way for physically constraint high school boys.

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