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IMPACT OF ENDURANCE TRAINING ON CARDIO-RESPIRATORY FITNESS OF BADMINTION PLAYERS

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Abstract:

The main purpose of this study is to find out the comparative effect of endurance training on cardio-respiratory fitness of badminton players . To get these goal twenty students were randomly selected. The subject's age ranged between from 12-15 years. The subject are categorized into two groups randomly viz. treatment group ten (N=10) and control group ten (N=10). The selected criterion variable Cardio-vascular endurance assessed by 600 yard Run and Walk. The fitness training underwent the treatment group for Six weeks, Five days per week. Before and after examination information were collected Before and after Six weeks of fitness training programme. The information was analyzed using 'paired sample t-test'. The level of confidence was fixed at .05 level for all the cases. All statistical tests were calculated using the Microsoft excel 2007. It was evident from the result that Cardio-vascular the treatment group showed significant improvement. The exposure of fitness programme was useful to improve Cardio-vascular endurance Badminton students of treatment group.

Key Cardiorespiratory Endurance; Resting Heart Rate; Heart Rate Recovery

Introduction

Today, many people participate in sports and games for fun, happiness, pleasure for health and fitness. There is a growing emphasis on looking good, feeling good and living longer. Increasingly, scientific evidence tells us that one of the keys to achieve these ideals is fitness and exercises. Getting moving is a challenge because today physical activity is less a part of our daily lives. For the cause of invention of advance scientific technology. Earlier children can maintain their health through play. It also helped them for proper growth and development. But now-a-days, the sport participations among the children have considerably reduced. This is because children can find their relaxation in the form of watching television, playing computer games etc. So the concept of active relaxation is missing from modern day children. Our body is like a temple and it is said that-"Sound body is the temple of sound

mind". So the lack of physical activity among children is also affecting their mental health. Apart from that, consumption of junk foods like Pizza, Burger, chips etc. has caused a major problem related to obesity in children. Due to this advanced scientific technological invention the body movements of the human being have been restricted and also the sedentary habit has been created. This has resulted in high incidence of obesity, high rate of heart diseases and diabetes. These factors are very harmful to the human beings So not only to manipulate the excess energy in children towards good or for the growth and development of bones, muscles, organs etc., regular physical activity is mandatory in children. This is not only true for children; it is also applicable for every adult human being including sportsmen.

Study and Material

Purpose: The main purpose of this study is to find out the comparative effect of endurance training on cardio-respiratory fitness of boys students ***Objectives:*** i) To find out the any effect of endurance training on cardio-respiratory fitness of badminton Players. ii) To find out comparative effect of endurance training on cardio-respiratory function of badminton Players. iii) To find out the cardio-respiratory fitness of badminton Players.

Significance: *i)* The study might be helpful to know the cardio-respiratory function of badminton Players. ii) This study might be helpful to the coaches, physical education teacher to adapt this type of training for the development of cardio-respiratory level. iii) The Study might be helpful in improving the healthy physiological functions of the Players. iv) The study might be helpful the students for selecting various games and Sports, which requires cardio-respiratory Endurance .v) The findings of this study might be helpful in preparing endurance training programme for the development of cardio-respiratory

.***Hypothesis:***(i) It is hypothesized that endurance training will be effect on cardio-respiratory fitness of badminton Players. ***Scope:*** i) The study was delimited to the 20 students of, Yavatmal. ii) The age of students varied from 12-15 years. iii) The study was delimited to cardio-respiratory fitness only. iv) The study was delimited to endurance training exercises only. v) The study was delimited to six (6) weeks training programme only. vi) The study was delimited to 20 badminton players subjects only.

Sources: The study was conducted to find out the Impact of endurance training on cardio-respiratory fitness of badminton players. For this present study the selected subjects from yavatmal public School Yavatmal

Selection of subjects: For the present study forty (20) subjects were selected randomly from yavatmal public School Yavatmal (Maharashtra). Their age ranges varied from 12 to 15 years. All the subjects belong to 8^{th} classes and different socio-economic conditions.

Criterion Measures: For the present study the researcher wanted to measure the cardio-respiratory fitness of boys and girls students in secondary school with the help of nine (9) minute continuous run and walk test. The cardio-respiratory fitness was measured the distance cover in nine minutes.

Administration of test: After the selection of the subjects from yavatmal public School Yavatmal, the administered nine minute (9) run and walk test to measure the Cardio-respiratory Endurance before and after the endurance training programme of six weeks. Cardio-respiratory Endurance will be tested and measured through standard procedure with the help of expert and under the direct supervision of the experimenter.

Experimental Design and Interpretation

For the present study Twenty (20) subjects (10 Players) were selected in simple random sampling method from Yavatmal Public School Yavatmal. Their age varied from 12 to 15 years. The Twenty (20) Players were divided into two equal groups of Ten(10) and Ten (10) . Again these two groups were subdivided into 2-2 groups, of 10-10 Players . One group from both subdivide groups (10 Players) was treated as experimental group and another (10 Players) as control group. The experimental group underwent six weeks endurance training, for 5 (five) days in a week, for 60 (sixty) minutes each day, for the period of six weeks under direct supervision of the experimenter. The control group does not undergo any specific training during the period of six weeks apart from the physical education programme.

All the data pertaining to the present study were examined by employing 't' test to find out whether any significance difference between the means of pre and post test score of the two groups before and after the period of six weeks training programme. The collected data of this study were tabulated in different tables for the statistical treatment. To see any significant difference 0.05 level of confidence was used.

E.G. – Experimental group, C.G. – control group, N – Number of subjects in group, M- mean of the group, MD – Mean difference between pre and post scores, SD- Standard deviation 't'- t ratio.

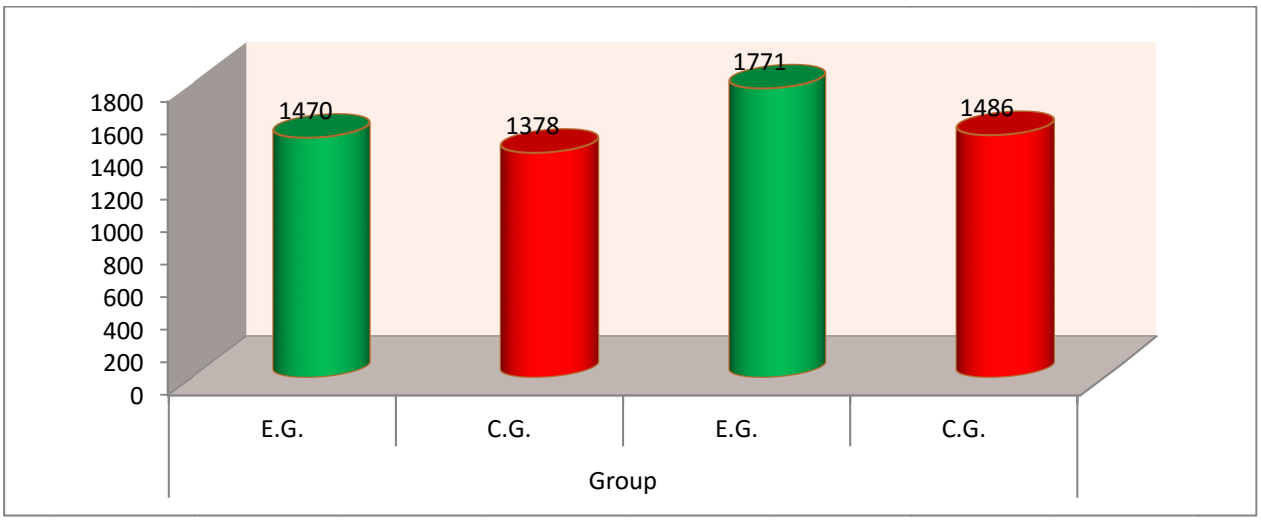
Mean differences between the pre and Post test scores of experimental and control groups on Cardio-respiratory fitness of Players students (in mts.**)**

Sr. no.	Group	Test	N	Mean	SD	MD	df	't' value
1.	E.G.	Pre test	10	1470	121.01			
2.	C.G.	Pre test	10	1378	217.07	92	18	1.17*
1.	E.G.	Post test	10	1771	163.06			
2.	C.G.	Post test	10	1486	103.09	285	18	4.67*

*Significant at .05 level of confidence. Table value .05(18) df= 2.10

Table no.-1 reveals that the mean of pre test Experimental and Control groups are 1470 and 1378, and their calculated't' value is 1.17* which is smaller than that of tabulated value 2.10 (18 df at 0.05 level of confidence). It is indicates that there is no significant of difference between the pre test of experimental and control groups. Therefore, it is indicated that there is no significant difference found before the endurance training programme between the experimental and control groups. It was indicated that before training the cardio-respiratory fitness of both the group were same. shows that the mean of post test Experimental and Control groups are 1771 and 1486 and their calculate 't' value is 4.67* which is greater than that of tabulated value 2.10 (18 df at 0.05 level of confidence). It is indicates that there is significant difference between the post test of experimental and control groups. Therefore, it is indicated that endurance training effects on cardio-respiratory fitness of experimental group. It is due to the fact that endurance training would be effect on Heart and Lungs function. Hence, the null hypothesis is rejected.

The Pre and post test mean values of experimental and control group on cardio-respiratory fitness have been graphically presented in the fig-1.



Conclusions:

1. The present study shows that there exist significant effects on cardio-respiratory fitness of Players in secondary school after the endurance training of six weeks on the experimental group. The found that cardio-respiratory fitness was improved after giving the 6 weeks of endurance training programme. This might be due to the fact that endurance training might be helped to increases the working capacity of heart and lung.

2. Finally researcher concluded that endurance training have more significant effect on cardio-respiratory fitness of badminton players.

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