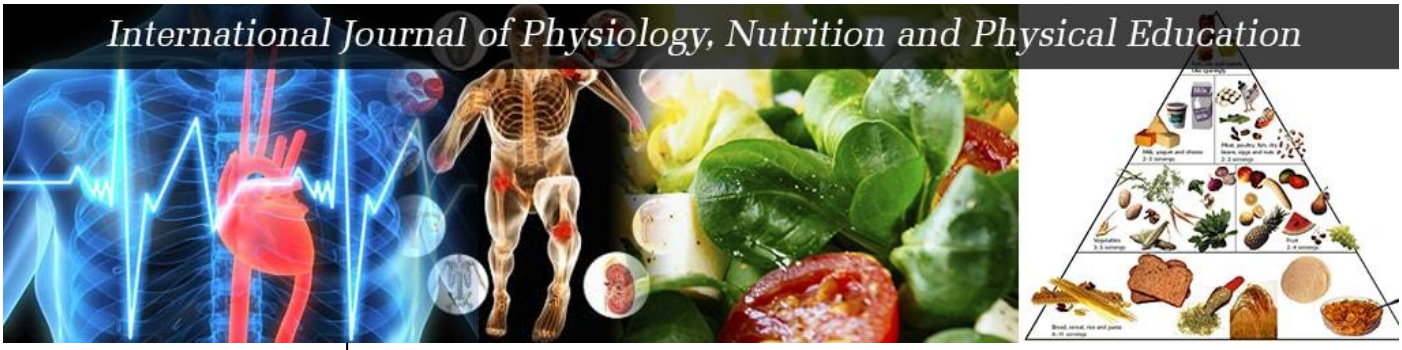

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Effect of game specific training on selected physiological and psychological variables among school Kabaddi players

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Abstract
The purpose of this study was to find out the effect of game specific training on selected physiological and psychological variables among school kabaddi players. To achieve this purpose 30 subjects are selected randomly from St Claret Higher Secondary School karumathur, Madurai and Dolphin Matriculation Hr.Sec.School ponmeni Madurai. The subject age were ranged from 14 to 17 years. The selected subjects were randomly assigned into two groups of 15 each namely experimental group and control group. Experimental group was experimented with game specific training group and control group was not given any experimental. The variables selected for the study was. The physiological variables selected for this study were resting heart rate and breath holding time. The psychological variables selected for this study were anxiety and stress. The study was formulated as a true random group design consisting of a pre-test and post test. The subjects (N=30) were randomly assigned to two equal group of 15 subject in each group. The group was assigned as experimental group-(game specific training group) and control group respectively. Pre test were conducted for all the 30 subject on selected, physiological and psychological variables. After the experimental period of six weeks post test were conducted and the scores were recorded. The normality of the data were found through mean, standard deviation and F ratio and the data collected were found to be normal. The difference between the initial and final scores in selected variables were subjected to statistical treatment using analysis of covariance (ANCOVA) The level of significance was fixed at .05 level of confidence for all the cases. The result of the study indicates that there is game specific training group significant Improvement in Resting Heart Rate, Breath Holding Time. Significant reduction improvement on psychological variables anxiety and stress among School kabaddi players.

Keywords: Resting heart rate, breath holding time, anxiety and stress

Introduction
Kabaddi
Kabaddi is a combative team game, played with absolutely no equipment, in a rectangular court, either out doors of indoors with seven players on the ground in each side. Each side takes alternate chances at offense and defense. The basic idea of the game is to score points by raiding into the opponents' court and touching as many defense players as possible without getting caught on a single breath. During play, the players on the defensive side are called 'Antis' while the player of the offense is called the 'Raider'. Kabaddi is perhaps the only combative sport in which attack is an individual attempt while defense is a group effort. The attack in Kabaddi is known as a 'Raid'. The antis touched by the raider during the attack are declared out if they do not succeed in when their side scores points against the 2 opposite side during their raiding turn or if the remaining players succeed in catching the opponent's raider. **(Rao, 2002** the athlete's income in the Kabaddi of high level depends directly on several variables. The evaluation of the performance implicates the recognition and denomination of the individual level of the components of the sporting performance or of a conditioning situation. (Weineck, 1999). The ability to cope with pressure and anxiety is an integral part of sports, particularly among elite athletes (Hardy, Jones & Gould, 1996; Orlick & Partington, 1988). Researchers have reported that consultations among 50 athletes at an Olympic festival were related to stress or anxiety related problems **(Murphy, 1988).**

Methods

The investigator employed random design consisting of pre-test and post-test. The subjects (N=30) were randomly assigned to two equal groups of 15 men kabaddi players each. The groups were assigned as one experimental group and one control group. Pre-test conducted for all the 30 kabaddi players on selected physiological variables (Resting Heart Rate & Breath Holding Time) and psychological variables (Stress & Anxiety). The experimental group was put into game specific training for a period of 6 weeks and the control group did not undergo any training. The post-test were conducted on the selected dependent variables immediately after 6 weeks of game specific training. Analysis of "co-variance (ANCOVA) was used in this study to find out the effect of game specific training on selected physiological and psychological variables among school kabaddi players. The level of significance was fixed at 0.05 level of confidence which was considered to be the appropriate one for this study. F ratio was found for significant

Table I

Analysis of covariance for the pre, post and adjusted post Test mean values for Game specific Training Group and control Group on Resting Heart Rate

Test	Game Specific practices Group	Control Group	Source of variance	Sum of square	Df	Mean square	F ratio	Table value
Pre Test Mean	73.20	72.53	Between	3.33	1	3.33	1.084	4.20
			within	86.13	28	3.07		
Post Test Mean	69.93	73.06	Between	73.63	1	73.63	21.96*	4.20
			within	93.86	28	3.36		
Adjusted Post Test Mean	69.82	73.17	Between	80.91	1	80.91	25.70*	4.21
			within	84.98	27	3.47		

Table F-ratio at 0.05 level of confidence for 1 and 28 (df) =4.20, 1 and 27 (df)=4.21

The table showed that the pre –test mean values on Resting Heart Rate of game specific training group and control group are 73.2 and 72.53 respectively. The obtained F ratio 1.08 for pre-test mean was less than the table value 4.20 for df 1 and 28 required for significance at 0.05 level of confidence on Resting Heart Rate. The post-test mean values on game specific training group and control group are 69.93 and 73.06 respectively. The obtained F ratio 21.96 for post-test mean was greater than the table value 4.20 for df 1and 28 required for significance at 0.05 level of confidence on Resting Heart Rate. The adjusted post-test mean of game specific training group and control group are 69.82 and 73.17 respectively. The obtained F ratio 25.70 for adjusted post-test mean was greater than the table value 4.21 for df 1 and 27 required for significance at 0.05 level of confidence on Resting Heart Rate.

BAR DIAGRAM

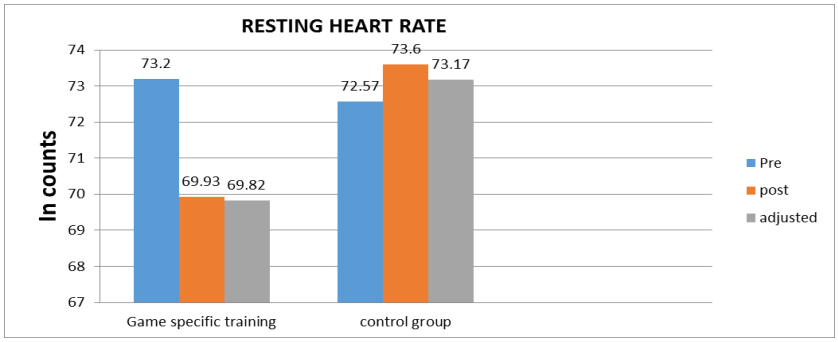


TABLE II

Analysis of covariance for the pre, post and adjusted post test mean values for Game specific Training Group and control Groups on Breath Holding Time

Test	Game Specific practices Group	Control Group	Source of variance	Sum of square	Df	Mean square	F ratio	Table value
Pre Test Mean	32.52	32.94	Between	1.31	1	1.31	.23	4.20
			Within	156.75	28	5.59		
Post Test Mean	35.36	33.65	Between	22.15	1	22.15	4.51*	4.25
			Within	137.41	28	4.90		
Adjusted Post Test Mean	35.52	33.49	Between	30.53	1	30.53	15.61*	4.21
			Within	52.81	27	1.95		

The table showed that the pre –test mean values on Breath Holding Time of game specific training group and control group are 32.52 and 32.94 respectively. The obtained F ratio .23 for pre-test mean was less than the table value 4.20 for df

1 and 28 required for significance at 0.05 level of confidence on Breath Holding Time. The post-test mean values on game specific training group and control group are 35.36 and 33.65 respectively. The obtained F ratio 4.51 for post-test mean was greater than the table value 4.20 for df 1and 28 required for significance at 0.05 level of confidence on Breath Holding Time. The adjusted post-test mean of game specific training group and control group are 35.52 and 33.49 respectively. The obtained F ratio 15.61 for adjusted post-test mean was greater than the table value 4.21 for df 1 and 27 required for significance at 0.05 level of confidence on Breath Holding Time.

Bar Diagram

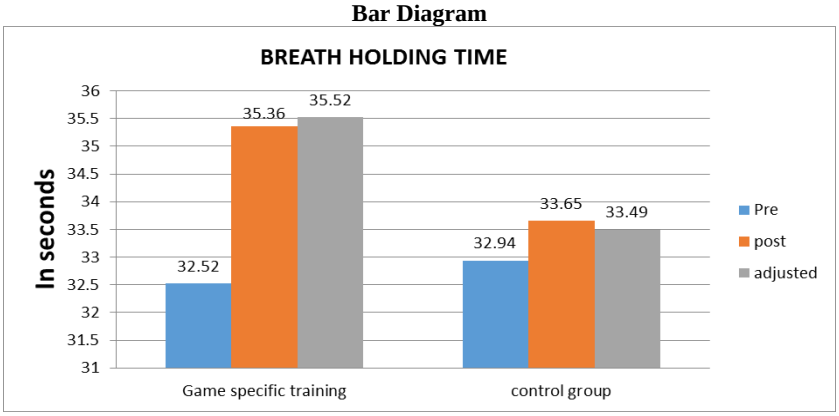


TABLE III: Analysis of covariance for the pre, post and adjusted post test mean values for Game specific Training Group and control Groups on Anxiety

Test	Game Specific practices Group	Control Group	Source of variance	Sum of square	Df	Mean square	F ratio	Table value
Pre Test Mean	28.80	28.66	Between	.13	1	.13	0.19	4.20
			within	193.73	28	6.91		
Post Test Mean	26.53	28.86	Between	40.83	1	40.83	6.23*	4.20
			within	183.46	28	6.55		
Adjusted Post Test Mean	26.47	28.92	Between	45.04	1	45.04	39.38*	4.21
			within	30.88	27	1.14		

Table F-ratio at 0.05 level of confidence for 1 and 28 (df) =4.20, 1 and 27 (df) =4.21

The table showed that the pre –test mean values on Anxiety of game specific training group and control group are 28.80 and 28.66 respectively. The obtained F ratio 0.01 for pre-test mean was less than the table value 4.20 for df 1 and 28 required for significance at 0.05 level of confidence on Anxiety. The post-test mean values on game specific training group and control group are 26.53 and 28.86 respectively. The obtained F ratio 6.23 for post-test mean was greater than the table value 4.20 for df 1and 28 required for significance at 0.05 level of confidence on Anxiety. The adjusted post-test mean of game specific training group and control group are 26.46 and 28.92 respectively. The obtained F ratio 39.38 for adjusted post-test mean was greater than the table value 4.21 for df 1 and 27 required for significance at 0.05 level of confidence on Anxiety.

Bar Diagram (In Average Score)

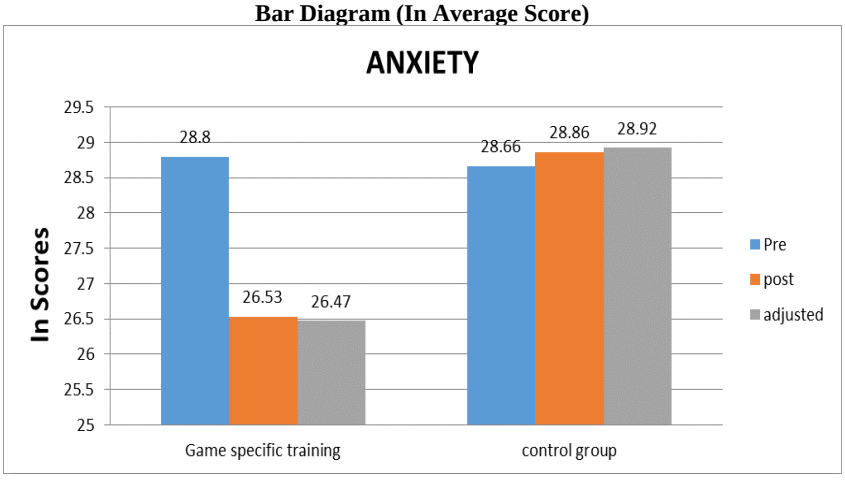


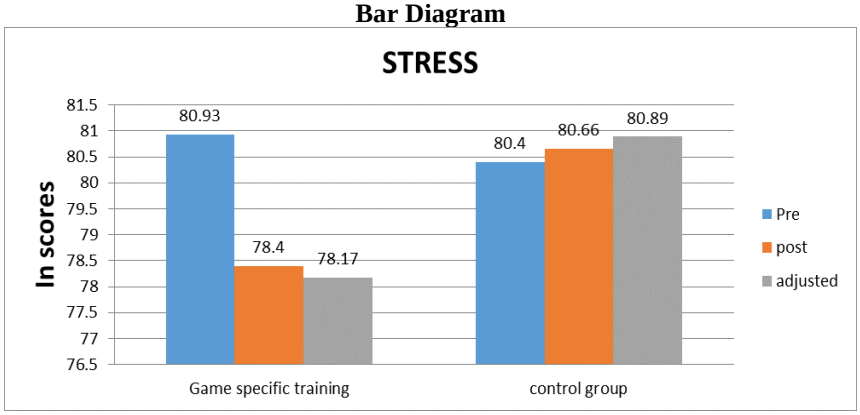
Table IV: Analysis of covariance for the pre, post and adjusted post test mean values for Game specific Training Group and control Groups on Stress

Test	Game Specific practices Group	Control Group	Source of variance	Sum of square	Df	Mean square	F ratio	Table value
Pre Test Mean	80.93	80.40	Between	2.13	1	2.13	.37	4.20
			within	158.53	28	5.66		
Post Test Mean	78.40	80.66	Between	38.53	1	38.53	7.44*	4.20
			within	144.93	28	5.17		
Adjusted Post Test Mean	78.17	80.89	Between	54.70	1	54.70	47.65*	4.21
			within	30.99	27	1.14		

Table F-ratio at 0.05 level of confidence for 1 and 28 (df) =4.20, 1 and 27 (df) =4.21

The table showed that the pre –test mean values on Stress of game specific training group and control group are 80.93 and 80.40 respectively. The obtained F ratio .37 for pre-test mean was less than the table value 4.20 for df 1 and 28 required for significance at 0.05 level of confidence on Stress. The post-test mean values on game specific training group and control group are 78.40 and 80.66 respectively. The obtained F ratio 7.44 for post-test mean was greater than the table value 4.20 for df 1and 28 required for significance at 0.05 level of confidence on Stress. The adjusted post-test mean of game specific training group and control group are 78.17and 80.89 respectively. The obtained F ratio 47.65 for adjusted post-test mean was greater than the table value 4.21 for df 1 and 27 required for significance at 0.05 level of confidence on Stress.

Bar Diagram



Conclusions

From the analysis of the data the following conclusions are drawn

1. The game specific training group (Experimental group) has achieved significant positive improvement on physiological variables resting heart rate and breath holding time among School kabaddi players.
2. The game specific training group (Experimental group) has achieved significant reduction improvement on psychological variables anxiety and stress among School kabaddi players.

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