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Effect of aerobic training on selected psychological variable of college women kho-kho player

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Abstract
The study was designed to investigate the Effect of aerobic training on selected psychological variable of college level women kho-kho player. To investigate the study, thirty college level women kho-kho player were randomly selected from Sri Krishna Adithya College of Arts & Science, Coimbatore, and their age were ranged between 18 and 22 years. The subjects were randomly assigned to two equal groups (n=15). All the subjects were divided in to two groups with 15 subjects each as experimental and control group. Group-I underwent game aerobic training for a period of 12 weeks and group-II acted as control who did not participate in any special training other than the regular routine. The psychological variables such as anxiety and stress were selected as dependent variables. Pre and post-test random group design was used for this study. The dependent't' test was applied to determine the difference between the means of two groups. To find out whether there was any significant difference between the experimental and control groups. To test the level of significant of difference between the means 0.05level of confidence was fixed. The result of the study shows that, there was a significant improvement takes place on anxiety and stress of women kho-kho player due to the impact of 12 weeks of aerobic training. And also concluded that, there was a significant difference exists between experimental and control groups in anxiety and stress. The control group did not improve the selected criterion variables.

Keywords: Aerobic Training, Anxiety and Stress

Introduction
Kho-Kho is one of the most popular indigenous sports in India requiring high levels of speed, endurance, agility, and psychological stability. Aerobic training improves cardiovascular efficiency, stamina, and oxygen utilization, but it may also influence psychological aspects such as stress reduction, confidence, mood, and concentration. Women players, especially at the college level, often face academic and social pressures, making psychological readiness essential for performance. Hence, studying the effect of aerobic training on psychological variables is highly relevant.

Methodology
Selection of Subjects
Thirty (N = 30) college-level women Kho-Kho players from Sri Krishna Adithya College of Arts & Science, Coimbatore were selected at random.

Grouping
The subjects were randomly divided into two equal groups:
- Aerobic Training Group (ATG): n = 15
- Control Group (CG): n = 15

Pilot Study
A pilot study was conducted to assess the initial capacity of the subjects. Based on the results, the training load was fixed appropriately for the experimental group.

Training Protocol: The experimental group underwent aerobic training 3 days per week for a total duration of 12 weeks. Training included activities designed to improve cardiovascular endurance and psychological readiness.

Control Group
The control group did not undergo any special training program other than their regular routine practice.

Design
Psychological Variables Selected
- Anxiety – measured using a standardized Questionnaire Test.
- Stress – measured using a Questionnaire Test.

Testing Schedule
The selected psychological variables were measured at two phases:
- Baseline (Pre-test): Before the commencement of training.
- Post-test: After 12 weeks of training.

Training Technique
The experimental group followed aerobic training techniques for 12 weeks, 3 sessions per week. The control group continued only with their routine activities without any specific training.

Statistical Analysis
The collected data on the selected psychological variables (anxiety and stress) were analyzed to determine the effect of aerobic training. The pre-test and post-test scores obtained after the 12-week training period were subjected to statistical analysis using the paired sample 't'-test. This test was employed to identify the significance of differences between the experimental group and the control group. In all cases, the level of significance was fixed at 0.05 level of confidence ($p < 0.05$), which was considered sufficient to test the hypothesis.

Table 1: Computation of 'T' Ratio on experimental group and Control group selected college level women kho-kho player.

Group	Variables		Mean	N	Std. Deviation	Std. Error Mean	t ratio
Experimental Group	Anxiety	Pre	18.28	15	1.58	0.29	7.38*
		Post	16.07	15	1.38		
	Stress	Pre	39.86	15	2.50	0.50	5.66*
		Post	37.00	15	1.96		
Control Group	Anxiety	Pre	18.14	15	2.76	0.46	1.38
		Post	18.78	15	3.06		
	Stress	Pre	39.80	15	4.74	1.01	0.39
		Post	40.20	15	3.70		

*Significant level 0.05 level degree of freedom (2.14, 1 and 14)

Table I reveals the computation of mean, standard deviation and 't' ratio on selected emotional factors variable namely anxiety and stress of experimental group. The obtained't' ratio on anxiety and stress were 7.38 and 5.66 respectively. The required table value was
2.14 for the degrees of freedom 1and 14 at the 0.05 level of significance. Since the obtained 't' values were greater than the table value it was found to be statistically significant.

Further the computation of mean, standard deviation and 't' ratio on selected psychological variable namely anxiety and stress of control group. The obtained 't 'ratio on anxiety and stress were 1.38 and 0.39 respectively. The required table value was 2.14 for the degrees of freedom 1and 14 at the 0.05 level of significance. Since the obtained 't' values were lesser than the table value it was found to be statistically not significant.

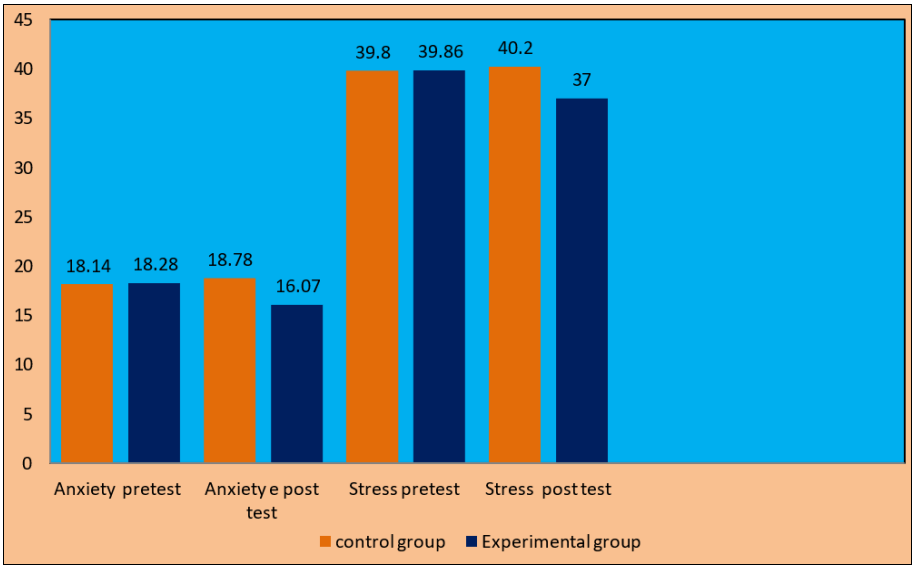

Fig 1: Psycological Variable

Discussion and Findings
The result of the present showed the effect of aerobic training on psychological variables of college level women kho-kho player. And there was a difference between experimental group and control group. The findings of the present study are in line with investigator referred in this study. Anxiety and stress developed due to the aerobic training after 12week training period Rajaram (2018) [1] Effect of aerobic training on agility of men Kho-Kho players. Murugavel (2018) [2] Effect of speed training program on selected skill related physical fitness variables of inter-collegiate men kho-kho players. (Sasireka 2020) [3] Effect of specific training on

selected psychological and skill variables of inter college female kho-kho players (Shaik 2013) [4] effect of specific training on selected physical fitness physiological psychological and skill variables of high school male kho-kho players. (Sujit 2014) [5] Impact of kho-kho playing on Physiological Changes and Development of Some Specific Skill Related Physical Fitness Factors. From the result of the present study, it is speculated that the observed changes in Anxiety and stress may properly designed aerobic training which are suitable for college level women kho-kho player.

Conclusion

1. The results of the study revealed that 12 weeks of aerobic training produced significant improvement in the selected psychological variables of college women Kho-Kho players.
2. It was found that there existed a significant difference between the experimental group and the control group in relation to the psychological variables such as anxiety and stress, in favour of the experimental group.

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