

[https://doi.org/ 10.48047/AFJBS.6.5.2024.10371-10376](https://doi.org/10.48047/AFJBS.6.5.2024.10371-10376)



**African Journal of Biological  
Sciences**



## **EFFECT OF SAQ TRAINING AND CONCURRENT TRAINING ON PHYSIOLOGICAL VARIABLES AMONG INTER COLLEGIATE KABADDI PLAYERS**

**Mr. Hussainsab K.P\***

\*Ph.D. Scholar, Department of Physical Education and Yoga, Bharathidasan University,  
Tiruchirappalli, Tamilnadu, India.

**Dr. A. Mahaboobjan\*\***

\*\*Professor, Department of Physical Education and Yoga, Bharathidasan University, Tiruchirappalli,  
Tamilnadu, India.

### Article History

Volume 6, Issue 5, 2024

Received: 22 May 2024

Accepted: 22 Jun 2024 doi:

10.48047/AFJBS.6.5.

2024.

10371-10376

### **ABSTRACT**

The purpose of the research study was to find out the effect of SAQ training and concurrent training on Selected physiological variables among intercollegiate kabaddi players. To achieve the purpose of the study (N= 60) sixty men kabaddi players who has participated intercollegiate Tournament of Bharathidasan University Tiruchirappalli were Selected as subject, The age of the subjects ranged from 18 to 25 years. The selected subjects were divided into three equal groups (n= 20). Group I underwent SAQ training. Group II concurrent training. Group III acted as control group who did not undergo any specialized training program other than their daily routine. The physiological variables such as resting heart rate, breathing holding time, systolic blood pressure and diastolic blood pressure were selected as dependent variables and they were assessed by digital heart rate / monitor heart, holding the breath for time /digital stop watch, sphygmomanometer, respectively. The subjects were concerned with their particular training for a period of twelve weeks, three alternative days per week. The collected data from three groups prior to and immediately after the training programme on selected criterion variables were statistically analyzed with the analysis of covariance (ANCOVA). The level of confidence was fixed at 0.05 for all the cases to test the hypothesis. The result of the study reveals that the SAQ training and concurrent training groups achieved significant improvement on selected physiological variables such as resting heart rate, breathing holding time, systolic blood pressure and diastolic blood pressure inter collegiate kabaddi players.

**Keywords:**SAQ Training,Concurrent Training, Resting Heart Rate, Breathing Holding Time, Systolic Blood Pressure and Diastolic Blood Pressure.

### **INTRODUCTION**

Speed, agility and quickness (SAQ) training has become a popular way to train athletes. The SAQ exercise is a training method that has been commonly used by athletes, both beginners and advanced, in recent times. According to SAQ is an acronym of the transitional speed, agility and quickness. Noted that SAQ exercises incorporated in the modern training system produced, within a single training programme, the integrated effects of many physical capacities. **(Remco, Jonathan, & Andrew, 2009).**

Concurrent training may be defined as the specific training of endurance and strength capacities in 'immediate succession or with up to 24 hours of recovery separating the two exercise modes'. Training units are designed and periodized to build athletic potential in all sports by training the functional components essential to success in the sport. Fitness experts train multiple capacities in blocks to maximize responsiveness to this training stimulus because training time is a scarce resource. Training endurance and strength simultaneously can lead to interference if the growth of one capacity impedes the development of the other, as opposed to training each capacity separately and separately. **(Lewindon, D., & Joyce, D. 2014).**

### **Methodology**

To achieve the purpose of the study (N= 60) sixty men kabaddi players were selected from Bharathidasan University, Tiruchirappalli, India as subjects. The age of the subjects ranged from 18 to 25 years. The selected subjects were divided into three equal groups (n= 20). Group I underwent SAQ training. Group II concurrent training. Group III acted as control group who did not undergo any specialized training program other than their daily routine. The physiological variables such as resting heart rate, breathing holding time, systolic blood pressure and diastolic blood pressure were selected as dependent variables and they were assessed by digital heart rate / monitor heart, holding the breath for time /digital stop watch, sphygmomanometer. The subjects were concerned with their particular training for a period of twelve weeks, three alternative days per week. The collected data from three groups prior to and immediately after the training programme on selected criterion variables were statistically analyzed with analysis of covariance (ANCOVA). The level of confidence was fixed at 0.05 for all the cases to test the hypothesis.

**Table 1: Computation of Analysis of Covariance of Means of SAQ Training and Concurrent Training and Control Group on Resting Heart Rate, Breathe Holding Time, Systolic Blood Pressure and Diastolic Blood Pressure. (In Seconds and Mints).**

Variables	Test	SAQ Training Group (STG)	Concurrent Training Group (CTG)	Control Group (CG)	Source of Variance	Sum of Square	df	Mean Squares	F ratio
Resting Heart Rate	Pre Test	20.14	20.21	20.16	Between	0.333	2	0.11	0.06
					Within	1072.0	57	19.14	
	Post Test	25.54	23.47	20.40	Between	205.13	2	68.37	3.89*
					Within	982.80	57	17.55	
	Adjusted Post Test	25.43	23.43	20.49	Between	189.93	2	63.31	104.11*
					Within	32.84	56	23.14	
Breathe Holding Time	Pre Test	33.47	33.46	33.44	Between	0.633	2	0.317	0.082
					Within	219.30	57	3.847	
	Post Test	41.53	38.53	33.48	Between	256.033	2	128.017	33.388*
					Within	218.50	57	3.834	
	Adjusted Post Test	41.53	38.53	33.48	Between	248.188	2	124.09	581.028
					Within	11.960	56	4.214	
Systolic Blood Pressure	Pre Test	109.00	107.92	108.16	Between	0.933	2	0.311	0.08
					Within	2060.80	57	36.80	
	Post Test	105.26	102.21	107.93	Between	512.13	2	107.715	4.72*
					Within	2024.26	57	36.14	
	Adjusted Post Test	105.20	102.20	107.80	Between	473.19	2	157.73	350.25*
					Within	24.08	56	22.438	
Diastolic Blood Pressure	Pre Test	81.34	82.07	81.95	Between	1.600	2	0.533	0.21
					Within	1454.13	57	25.96	
	Post Test	74.21	76.34	81.82	Between	476.00	2	158.66	6.20*
					Within	1431.73	57	25.56	
	Adjusted Post Test	74.33	76.33	81.93	Between	472.82	2	157.60	350.87*
					Within	24.15	56	20.439	

\*Significant at 0.05 level of confidence. (Table value with df 2 and 56 and 2 and 57 were 2.76).

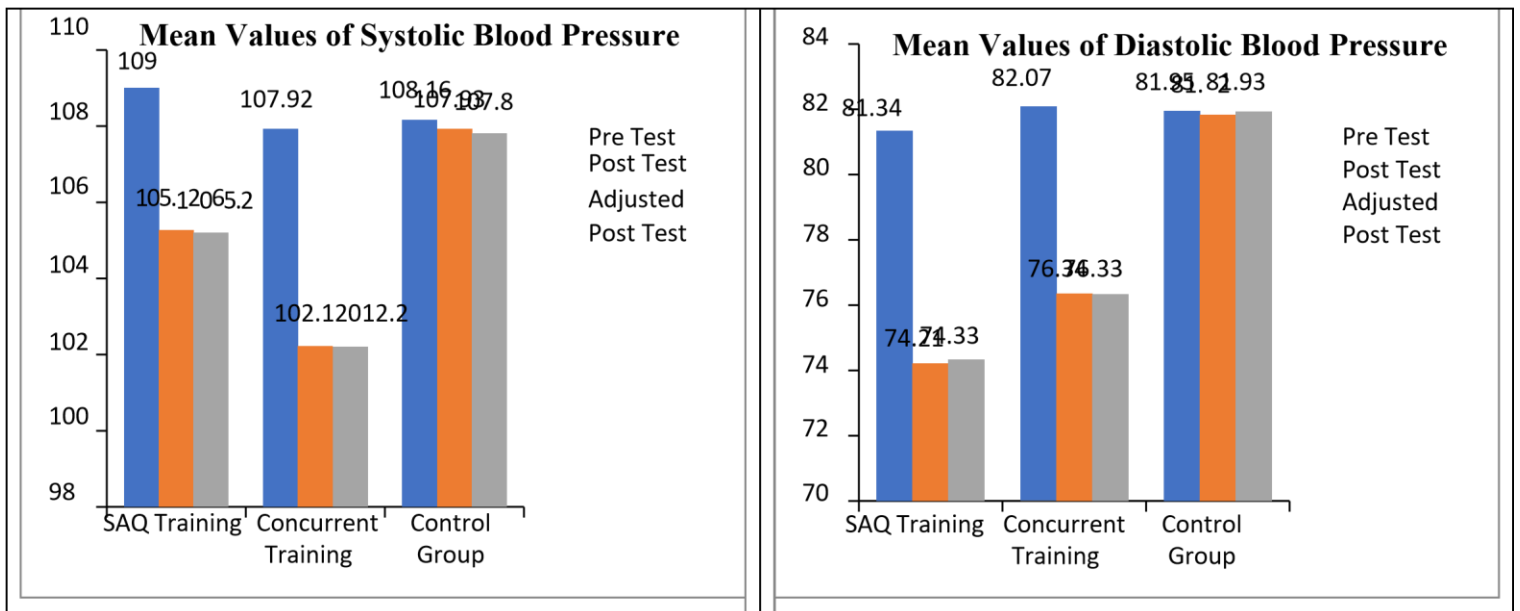
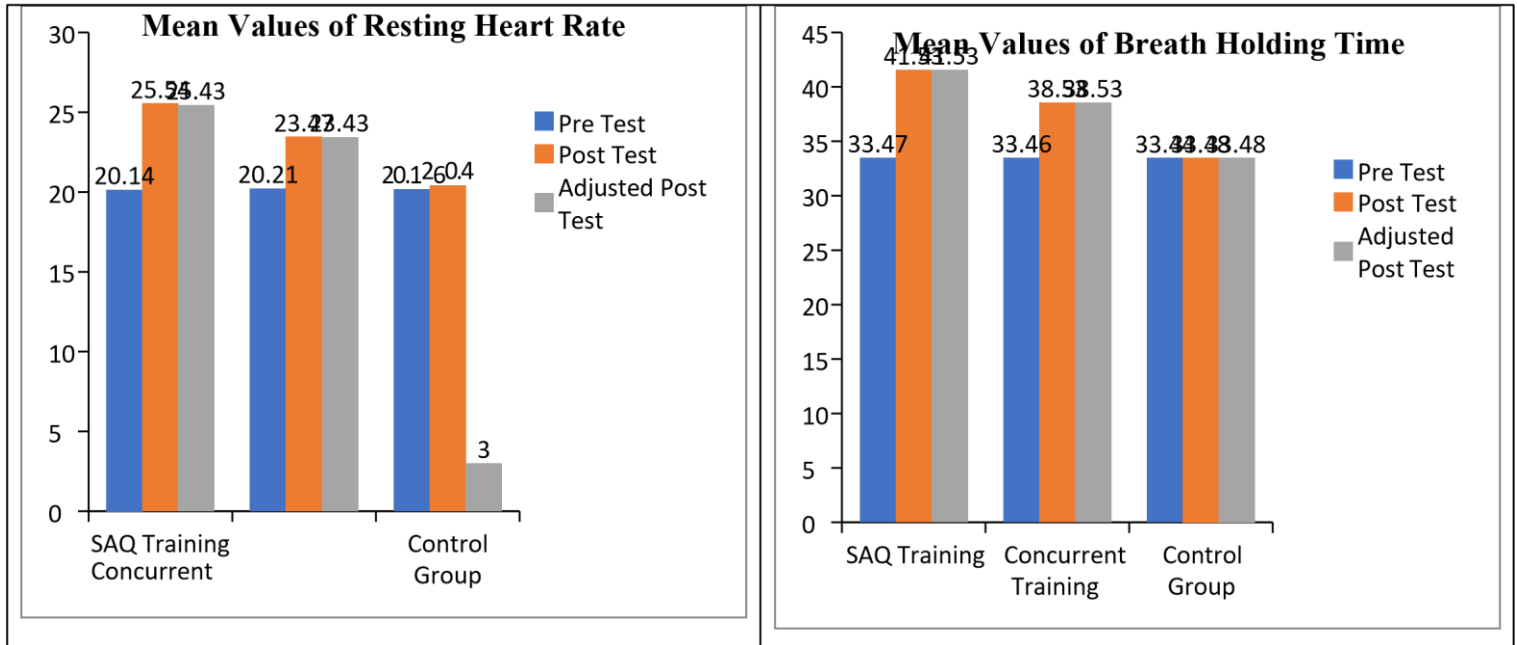
The pre, post-test and adjusted post-test mean values of resting heart rate on SAQ Training Group (STG), concurrent Training Group (CTG) and Control Group (CG) were 20.14, 25.54, 25.43; 20.21, 23.47, 23.43 and 20.16, 20.40, 20.49 respectively. The obtained F value of adjusted post-test were 104.11 was greater than the table value of 2.76. Hence it was proved that there was significant improvements on resting heart rate of inter college men kabaddi players.

The pre, post-test and adjusted post-test mean values of breathe holding time on SAQ Training Group (STG), concurrent Training Group (CTG) and Control Group (CG) were 33.47, 41.53, 41.53; 33.46, 38.53, 38.53 and 33.44, 33.48, 33.48 respectively. The obtained F value of adjusted post-test was 581.028 was greater than the table value of 2.76. Hence it was proved that there was significant improvements on Breathe Holding Time of inter college men kabaddi players.

The pre, post-test and adjusted post-test mean values of systolic blood pressure on SAQ Training Group (STG), concurrent Training Group (CTG) and Control Group (CG) were 109.00, 105.26, 105.02; 107.92, 102.21, 102.20 and 108.16, 107.93, 107.80 respectively. The obtained F value of adjusted post-test was 350.25 was greater than the table value of 2.76. Hence it was proved that there was significant improvements on systolic blood pressure of inter college men kabaddi players.

The pre, post-test and adjusted post-test mean values of diastolic blood pressure on SAQ Training Group (STG), concurrent Training Group (CTG) and Control Group (CG) were 81.34, 74.21, 72.33; 82.07, 76.34, 76.33 and 81.95, 81.82, 81.93 respectively. The obtained F value of adjusted post-test was 350.87 was greater than the table value of 2.76. Hence it was proved that there was significant improvements on diastolic blood pressure of inter college men kabaddi players.

The obtained F Values of threere, breath holding time ,systolic and diastolic blood pressure were 104.11: 581.02: 350:25: 350:27: respectevely .the obtained 'F' value were greeter then the table value of 2.76.hence it was proved that there was Significant in parameters on selected physiological variables searches resting heart rate



**Figure - I: Pre, Post and Adjusted Post Test Means of SAQ Training and Concurrent Training and Control Group on Resting Heart Rate, Breathe Holding Time, Systolic Blood Pressure and Diastolic Blood Pressure.**

**Discussion of Findings**

The result of the study indicates that the experimental group namely as SAQ training and concurrent training had significantly improved in the selected dependent variables namely as resting heart rate, breathing holding time, systolic blood pressure and diastolic blood

pressure. It is also found that the improvement caused by SAQ training and concurrent training was better when compared to control group (**Thiruvangadam, S., & Mohanakrishnan, R. (2023).**

#### Conclusions

The experimental group's namely as SAQ training and concurrent training had achieved significant improvement on selected The physiological variables such as resting heart rate, breathing holding time, systolic blood pressure and diastolic blood pressure when compared to control group.

It was concluded that SAQ training Training as better improvement when comparing to the concurrent training groups on selected the physiological variables such as resting heart rate, breathing holding time, systolic blood pressure and diastolic blood pressure.

It was concluded that college level player should practice both SAQ training and concurrent training for positive enhancement of playing

#### References

- Lewindon, D., & Joyce, D. (2014). Retraining The Injured Athlete. In Joyce, D. And Lewindon, D. (Eds.). High Performance Training For Sports (Pp. 86-96). United States: Human Kinetics Publishers.**
- Polman, Remco, Bloomfield, Jonathan, And Edwards, Andrew (2009) Effects Of Saq Training And SmallSided Games On Neuromuscular Functioning In Untrained Subjects. International Journal Of Sports Physiology And Performance, 4 (4). pp. 494-505.**
- Thiruvangadam, S., & Mohanakrishnan, R. (2023). Merged Impact Of Yogic Practice Andinterval Training On Flexibility And Resting Heart Rate Of Middle Age Armed Reserve Police Men In Cuddalore District. *Korean Journal Of Physiology And Pharmacology*, 27(2), 33-**