https://doi.org/10.33472/AFJBS.6.4.2024.1131-1137

African Journal of Biological Sciences

Journal homepage: http://www.afjbs.com

Research Paper Open Access

The effect of SAQ training and plyometric training on Breath Holding time among volleyball Players

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Article History

Volume 6,Issue 4, 2024

Received: 07 March 2024

Accepted : 09 June 2024

doi:10.33472/AFJBS.6.4.2024.1131-1137

The subjects for this study were selected from Pachaiyappa's College for women Kancheepuram District, Tamilnadu, examined in the effect of SAQ training and plyometric training on Breath Holding time among volleyball Players. The investigator met the players of the institute and explained to them about the purpose and the nature of the study. Around sixty women players gave their voluntary consent to work as subjects for the study. Out of those volunteers five of them who were the age of 18-22 years were included for the study. The remaining sixty subjects (N=60) were divided random by using the table of randomly, they were divided randomly in to four groups as Group –I acted as, Control Group, Group –II undergone to SAQ Training, Group –III plyometric Training underwent and Group –IV gone into combined Training. the overall players were performed for the period of 8 weeks. Their written voluntary consent was obtained after clearly explaining the nature of the study, the training programme for the respective training groups and variables in which they have been tested. They were also informed that they were free to opt out of the study at any time if they feel any discomfort or any difficulty in continuing the training programme, but there were no dropouts throughout the period of study. pre and post data were collected and analysed with SPSS of ANCOVA and proven that there was a significant improvement on breath holding time due to training.

Keywords: Plyometric ,SAQ ,Breath holding time.

Introduction

Speed, agility, and quickness (SAQ) training is a type of physical training that focuses on developing the speed, agility, and quickness of an athlete. While SAQ training can be used to improve the performance of any athlete, it is most commonly used by athletes who participate in sports that require these skills, such as football, basketball, soccer, and hockey. That said, the ordinary joe can also benefit from SAQ training. Plyometric Training ;There are three types of muscle action; eccentric, isometric and concentric action. An eccentric action or negative work is when the muscle lengthens under tension, such as when a player has to decelerate. Isometric or static hold occurs when the muscle is staying at the same

length generating tension and there is little or no movement at the joint. **Breath Holding Time**

To hold his/her breathe as its own as can as possible, for a certain time (Marley P. William).

Aim

The aim of this study is to find out combined and isolated effect of SAQ training and plyometric training on selected bio motor, psychomotor and physiological variables among volleyball players.

Hypotheses

1. There will be significant changes on bio motor, physiological and psychomotor variables namely and of volleyball players due to twelve weeks of combined and isolated SAQ and plyometric training among volley ball players.

2. There will be significant changes on selected breath holding time variable of volley ball players due to twelve weeks of combined and isolated SAQ and plyometric training among volley ball players.

3. There may be not significant differences on selected psycho motor physiological and variables among experimental groups and control groups due to the effect of combined and isolated SAQ and plyometric training among volley ball players.

Significance of the study

1. The result of the study will be help full in developing a training programme for volleyball players.
2. Be of enormous help for the coaches and players to opt for the combined and isolated SAQ and plyometric training among volley ball players and others for coaching and practice in future.
3. The finding of this study will add to the body of knowledge in the area of physical education and sports.
4. The information helps professional to select and perform the most appropriate test and testing protocols for the benefit of their volleyball players.

Independent variables

1. Isolated and combined training.
2. SAQ Training

3. Plyometric Training

Dependent variables

Breath holding time

Design and methods

The data collected from these four groups pre and post completion of the training period as pre and post-test on selected variables which were statistically examined for significant differences if any, by applying a Analysis of covariance (ANACOVA).

Whenever the "F" ratio for adjusted mean was found to be significant, to determine which of the four paired means significantly differed, the Scheffe's test was applied as post hoc test. In this statistical analysis, following four steps were involved and the means were tested for significance at each step.

- The pretest means of effect of control, SAQ, plyometric and combined groups were tested for significance by applying ANACOVA.
- The posttest means of CG SAQTG, PTG, SAQ, were tested for significance by using ANCOVA
- After eliminating the influence of pre-test, the adjusted post-test means of CG, SAQTG, PTG and SAQ TG were tested for significance by using ANCOVA.
- In all the cases, to test the significance 0.05 level of confidence was utilized. Analysis of covariance was calculated as suggested by Clarke and Clarke (1972).

ANALYSIS OF COVARIANCE OF DATA ON BREATH HOLDING TIME BETWEEN PRE AND POSTTEST OF CG SAQTG PTG COMTG GROUPS

Test	CG	SAQTG	PTG	COMTG	Sov	Sos	df	MS	Obtained 'F' ratio
Pre test Mean	35.20	35.21	35.18	35.17	B	0.24	3	0.01	1.43
SD	064	0.88	0.79	0.72	W	0.31	56	0.01	
Posttest Mean	35.19	38.72	38.53	39.18	B	150.83	3	50.28	19.25*
SD	0.65	2.14	2.41	0.17	W	141.03	56	2.61	
Adjusted Post Mean	35.19	38.80	38.57	39.24	B	152.228	3	50.74	19.30*
					W	144.61	55	2.63	

*The table value required for significance at 0.05 levels with df 3 and 56 are 2.78 and 3 and 55 are 2.78 respectively.

The table 4.5 shows that the pretest mean value on breath holding time for CG, SAQTG, PTG, COM TG were 35.20, 35.21,35.18 and 35.17 respectively. The obtained 'F' ratio value 1.43 for pretest scores on breath holding time which lesser than the table value 2.776 for significance with df 3 and 56 at 0.05 level of confidence. The posttest mean values on breath holding time for CG, SAQTG, PTG,

COM TG were 35.19, 38.72, 38.53 and 39.18 respectively. The obtained 'F' ratio value 19.25 for post test scores on breath holding time, which was greater than the table value 2.77 for significance with df 3 and 56 at 0.05 level of confidence. The adjusted posttest mean values on breath holding time CG, SAQTG, PTG, COM TG were 35.19, 38.80, 38.57 and 39.24 respectively. The obtained 'F' ratio value

19.30 for adjusted post test scores on breath holding time, which was greater than the table for significance with df 3 and 55 at 0.05 level of confidence.

The results of the study showed that there was a significance difference among CG, SAQTG, PTG, COM TG on breath holding time. However, the improvement was in favor of COM TG.

Since four groups were involved the Scheffe's post hoc test was applied to find out the paired mean difference if any, and it is presented in the table

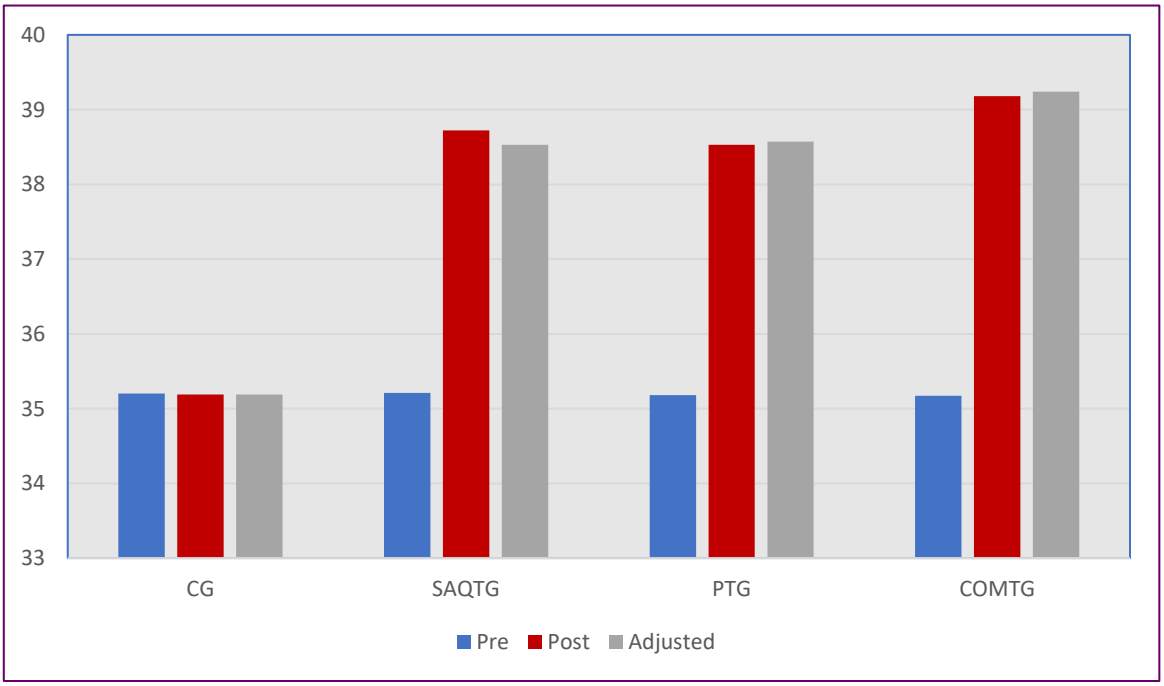
TABLE – 4.6

SCHEFEE'S POST HOC TEST FOR THE DIFFERENCE BETWEEN THREE PAIRED ADJUSTED POSTTEST MEANS OF BREATH HOLDING TIME

Adjusted Posttest Mean Test				Mean difference	Confidence interval
CG	SAQTG	PTG	COM TG		
35.19	38.80	-	-	3.61	1.70
35.19	-	38.57	-	3.38	1.70
35.19	-	-	39.24	4.05	1.70
-	38.80	38.57	-	0.23	1.70
-	38.80	-	39.24	0.44	1.70
-	-	38.57	39.24	0.67	1.70

The table shows that the adjusted posttest means difference of breath holding time CG, SAQTG, PTG, COM TG and were 35.19, 38.80, 38.57 and 39.24 respectively. They were greater than the confidence interval value 1.70 at 0.05 level, which indicates that there was a significant increase on breath holding time among all of CG, SAQTG, PTG and COM TG.

THE ADJUSTED POSTTEST MEAN VALUES ON BREATH HOLDING TIME FOR ALL THE GROUPS



Conclusion

The consecutive significant improvements in all the training on breath holding time. There was a significant difference in experimental groups on breath holding time when comparatively with control group, even there was a significant improvement between experimental groups. But in most significant difference in combined training group.

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