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## Effect of SAQ and Hill training on breath holding time among men kabaddi players living at moderate altitude

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### Abstract

The purpose of the study was to investigate the effect of SAQ and Hill training on breath holding time, among men kabaddi players living at moderate altitude. To achieve the purpose of the study, thirty six men kabaddi players from government degree college Kulgam and government degree college larnoo Anantanag, Jammu and Kashmir, state was selected as subjects. The selected subjects were divided into three equal group, SAQ training group (N=12), Hill training group (N=12) and control group (N=12). The age of the subjects was ranged from 19-23 years which was confirmed from school record. All the subjects were selected from moderate altitude. The SAQ training group goes through SAQ training, three days per week for the period of 12 weeks, Hill training group attended training programme three days per week for the period of 12 weeks and Control group did not attended any training apart from their daily activities as per their curriculum. The analysis of covariance (ANCOVA) was used to find the significant difference among the groups. The scheffe's post hoc test was used to find out the paired mean difference if any. The level of confidence was fixed at 0.05. It was concluded that there was a significant improvement on breath holding time among men kabaddi players, due to SAQ and Hill training of 12 weeks.

**Keywords:** SAQ training, Hill training, breathe holding time, moderate altitude and kabaddi players

### Introduction

The world is on wheels, moving faster day by day even though it is always regular 24 hours for a day. We do not allocate time for outdoor activities as it used to be in the olden days. Practice makes it a habit. Encouraging family members to participate in games and sports are greater ways towards a healthy life.

Training means various physical exercises and other objects methods and procedures, which are used for the improvement maintenance and recovery of performance capacity and performance readiness (Singh. H. 1991) [4].

The word training is used in the broad sense and its meaning varies with the field of application. In sports the word training is generally understood to be a synonym of doing physical exercises. In its narrow sense, training is doing synonyms of physical exercises for the improvement of performances. Edward L. Fox (1994) [1] the word training has been a part of human language since ancient times. This process invariably extends to a number of days and even months and years. Bompa (1994) [2] training is not a recent discovery. In ancient times, people systematically trained for military and Olympic endeavors. Today athletes prepare themselves for a goal through training.

The concept of living and training at altitude to improve athletic performance has a number of implications for athletes. A great deal of research has been performed in this area, to examine whether such practices are worthwhile or not. In an era where winners are decided by the smallest of margins, altitude training may be effective method of legal performance enhancement.

Speed is defined as the ability to move the body in one direction as fast as possible, Agility is the ability to accelerate, decelerate and quickly change directions with proper posture. Quickness is the ability to react and change body position with a maximum rate of force production. All three components will enhance the client workout experience, satisfy the need for cardio respiratory work and provide variety in movement direction and position.

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Hill training has strengthening effect as well as boosting athletes' power and is ideal for those athletes who depend on high running speeds, football, rugby, basketball cricket players, kabaddi players and even runners. To reduce the possibility of injury hill training should be conducted once the athlete has a good soiled base of strength and endurance.

### Game of Kabaddi

Kabaddi is a team contact sport that originated in south Asia BCE, as a form of recreational combat training. Two teams occupy opposite halves of a field and take turns sending a "raider" into the other half, in order to win points by tagging or wrestling members of the opposing team, the rider then tries to return to his own court, holding his breath and chanting "kabaddi, kabaddi, kabaddi" during the whole raid (O.P.Sharma). Kabaddi is basically a combative sport, with seven players on each side; played for a period of 40 minutes with a 5 minutes break (20-5-20). The core idea of the game is to score points by raiding into the opponent's court and touching as many defense players as possible without getting caught on a single breath.

### Methodology

The purpose of the study was to find out the, relative effect of 12 weeks SAQ and Hill training on breath holding time among men kabaddi players living at moderate altitude. To achieve the purpose of the study, thirty six male kabaddi players from government degree college kulgam and government degree college larnoo Anantanag Jammu and Kashmir were selected as subjects. The age of the subjects

was ranged from 19-23 years and all the subjects were selected from moderate altitude level only. The selected subjects were divided into three equal groups of 12 each, such as SAQ training group (N=12) Hill training group (N=12) and control group (N=12). The SAQ training group and Hill training group underwent respective trainings for three days per week for twelve weeks in which the control did not participate in any special training programme apart from the regular activities as per their curriculum. All the subjects of three groups were tested on selected dependent variables at prior to and immediately after the training programme. The analysis of covariance (ANCOVA) was used to analyze the significant difference, if any, among the groups. Three groups were compared, whenever obtained "F" ratio for adjusted post test was found to be significant, the scheffe's test was used to find out the paired mean differences, if any. The 0.05 level of confidence was fixed as the level of significance to test the "F" ratio obtained by the analysis of covariance, which was considered as an appropriate.

### Analysis of data

The effect of SAQ and Hill training on breath holding time, among men kabaddi players living at moderate altitude were analyzed and presented below.

### Breath holding time

The analysis of covariance of the data obtained for pre and post scores on breath holding time of SAQ training group, Hill training group and control group have been presented in the table 1.

**Table 1:** Analysis of covariance for the pre and post tests on breath holding time Of SAQ training, Hill training and control groups

Test	Saq Group	Hill Group	Control Group	SOV	SS	DF	MS	F
Pre test Mean SD(±)	50.33 1.43	51.00 1.70	51.25 2.26	BG	2.38	2	2.69	0.80
				WG	110.91	33	3.36	
Posttest Mean SD(±)	59.33 2.34	64.83 1.80	50.41 2.23	BG	1270.38	2	635.19	138.58*
				WG	151.25	33	4.58	
Adjusted Post test Mean	59.77	64.71	50.08	BG	1317.10	2	658.55	290.38*
				WG	72.57	32	2.26	

(The table values required for significance at 0.05 level of confidence for 2 and 33 and 2 and 32 are 3.29 and 30.30 respectively).

Table 1 showed that the pre test values of breathe holding time for SAQ training group, Hill training group and control group were 50.33, 51.00 and 51.25 respectively. The obtained "F" ratio of 0.80 for pre test score of SAQ training, Hill training and control group on breathe holding time was less than the requires table value 3.29 for significant with df 2 and 33 at 0.05 level of confidence.

Table 1 showed that the post test values of breathe holding time for SAQ training group, Hill training group and control group were 59.33, 64.83 and 50.41 respectively. The obtained "F" ratio of 138.58 for post test score of SAQ training, Hill training and control group on breathe holding time was greater than the requires table value 3.29 for significant with

df 2 and 33 at 0.05 level of confidence.

The adjusted post test mean values of breathe holding time for SAQ training group, Hill training group and control group 59.77, 64.71 and 50.08 respectively. The obtained "F" ratio values 290.38 is greater than the required table value 3.30 for significant with df 2 and 32 at 0.05 level of confidence.

The results of the study indicated that there was a significant difference among the adjusted post test mean of SAQ training group, Hill training group and control groups on breath holding time. To determine the significance difference among the three paired means. The scheffe's test was applied and the results are presented in tables 2.

**Table 2:** The scheffe's test for the difference between paired means on breath holding time

Saq Group	Hill Group	Control Group	Mean Difference	CI
59.77	64.71		4.94*	1.57
59.77		50.08	9.69*	1.57
	64.71	50.08	14.63*	1.57

As examination of the table 2, which indicates that the adjusted post test mean difference on breath holding time between SAQ training group and Hill training group and between SAQ training group and control group and Hill training group and control training group are 4.94, 9.69 and 14.63 respectively, which are higher than the confidence interval value of 1.57 at 0.05 level of significance.

It is inferred that the twelve training of SAQ training and Hill training have significantly improved breathe holding time in two experimental groups as compared to the control group.

Table – 2 also shows the mean difference between SAQ training group and Hill training group is 4.94 which are more than the confidence interval value 0.03 at 0.05 level of significance. Those results reveals that the hill training has show more significant improvement on breathe holding time as compared to the SAQ training.

The pre, post and adjusted post test of SAQ training group, Hill training group and Control training group on Speed were graphically represented to the figure I.

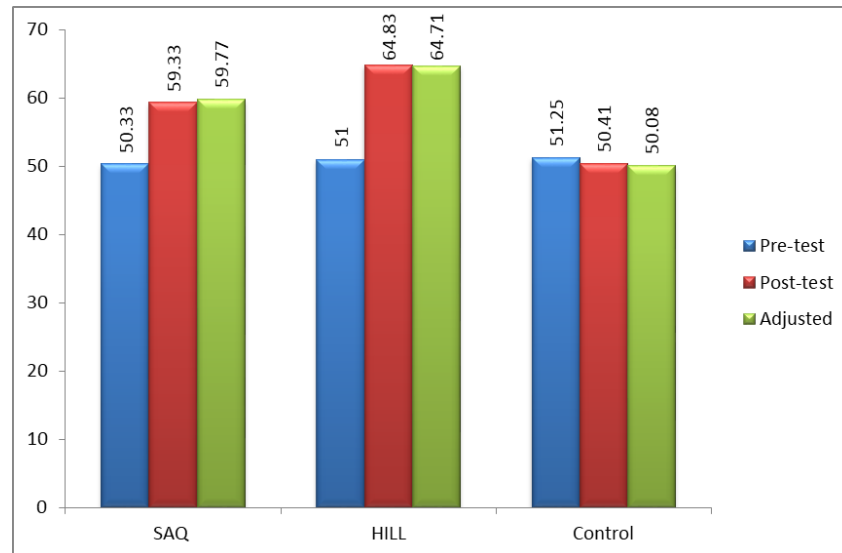


Fig 1

### Discussion on Findings

The result of the study indicates that there was significant improvement on selected dependent variable namely breath holding time due to 12 weeks of SAQ training and Hill training among men kabaddi players. The result which is achieved through 12 weeks training programme shows significant improvement in two experimental groups when they compared with the control group. The result of the study also indicates that there was a significant difference among two experimental groups when they compared to each other. The result of the study shows that Hill training is better than SAQ training in improving the breath holding time of men kabaddi players.

It is inferred from the literature and from the result of the present study, that systematically designed training develops dependent variable are very important quilts foe better performance in almost all sports and games. Hence, it is concluded that systematically designed training may be given due recognition and implemented properly in the training programmes of all the discipline in order to achieve maximum performance.

### Conclusion

1. There was a significant difference among SAQ training group, Hill training group and control group in improving the breath holding time among men kabaddi players.
2. There was a significant difference in SAQ training group and Hill training group in improving the breath holding time among men kabaddi players when they compared to each other.
3. Hill training is better than SAQ training in improving the breath holding time among men kabaddi players.

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