



ISSN: 2456-0057
IJPNPE 2018; 3(2): 759-761
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www.journalofsports.com
Received: 24-05-2018
Accepted: 25-06-2018

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Effect of SAQ training and ladder training on selected performance related fitness variables among women players

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Abstract

The purpose of the study was to find out the effect of SAQ training and ladder on selected physical fitness components among women players. Forty-five (hockey-15, football-15, athlete-10, kabaddi-5) women players from Sri Sarada College of Physical Education for Women were randomly selected as subjects. Their age ranged from 18 to 25 years. The selected subjects were divided into three equal groups (N-15) Group-I was subjected with SAQ training, Group-II involved with ladder training for three days per week and Group-III acted as control group who did not participate in any special training and underwent their regular activities and academic curriculum. Speed was measured by using 50 meters' dash and agility was measured by shuttle run. The collected data were analyzed by applying Analysis of (ANCOVA). The level of significance was fixed as 0.05. The result of the study indicated that SAQ training and ladder training considerably increased speed and agility when compared to control group.

Keywords: SAQ training, Ladder training speed and agility

Introduction

A sports is one of the powerful and a popular medium that helps everyone live sane and sanity. Man's life span is being determined by many factors among which physical activities stand a top, social status, economical status and health status have been improved through taking part in various competition being ordained by recognized bodies, sports bind people. Fitness is the capacity of the individual to live and function effectively and zestfully in order to meet the problems and crises which are among life's expectations. A fit person is free from disease and posse's adequate strength and endurance agility and skill to live a productive and happy life.

SAQ drills provide a mechanism and method to train for the optimum relationship between speed and leg strength. Improving playing speed depends on a complete approach to conditioning including strength training. For athlete perform at their best, speed, strength and endurance need to be developed to optimal levels.

The ladder is a time-tested and proven effective tool for improving our footwork. The training effect is similar to jump rope, but with several advantages. Ladder training is a multidirectional agility training. In sports, we are not staying in one spot. We are moving forward, sideward and sometimes backwards. Second our feet are also allowed to move independently in more complex patterns than a jump rope allows. And third, the cycle time can be increased greatly, because we are not limited by the speed of the rope turn.

Physical fitness is necessary for success in all games and sports without a high level of physical fitness, an individual will not be able to withstand the stress and strain caused on the body by various games and sports. Physical fitness is addition to bring about better performance in games and sports also help in prevention of injuries in the long run (Uppal, 2004) Speed is defined as the capacity of the individual to perform successive in minimum of time. Agility is the ability to change the direction of body or its parts rapidly is dependent on strength, reaction time, speed of movement and muscular contraction. Quick start and stops and quick changes in direction are fundamental to good performance in football.

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Materials and methods

For the purpose of the study thirty (N=45) women football players from sri sarada college of physical education were randomly selected as subjects. Their age ranged from 18 to 25 years. The selected subjects were equally (N-15) divided into three equal groups, in which Group-1 was subjected with SAQ training, Group-II involved with ladder training for three days per weeks and Group-III acted as control group who did not participate in any special training and underwent their regular activities and academic curriculum. Speed was measure by using 50 meters’ dash and agility was measured by shuttle run. The collected data were analyzed by applying

Analysis of (ANCOVA). The level of significance was fixed as 0.05. The result of the study indicated that SAQ training and ladder training considerably increased speed and agility when compared to control group.

Analysis of data

The experimental design of this study was random group design. Adjusted posttest means of experimental and control groups were tested for significance by applying ANCOVA. in all the cases to test the significance 0.05 level of confidence was used.

Table 1: Computation of Analysis of covariance on speed (scores in seconds)

Speed	SAQ Training Group	Ladder Training	Control Group	SOV	Sum of Squares	DF	Mean Square	F
Pre-Test Mean	7.78	7.78	7.81	BG	0.01	2	0.005	1.00
				WG	0.22	42	0.005	
Post-Test Mean	7.59	7.67	7.80	BG	0.46	2	0.23	46.0*
				WG	0.19	42	0.005	
Adj.Post- Test Mean	7.64	7.66	7.80	BG	0.75	2	0.23	19.0*
				WG	0.67	41	0.02	

*significant at.05 level of confidence.

(The table value required for significance at.05 level of confidence with df 2 and 42 and 2 and 41 were 3.222 and 3.226 respectively)

The table-1 shows that the pre-test mean values on speed of SAQ training group, and control group are 7.78, 7.78 and 7.81 respectively. The obtained “f” ratio of 1.00 for pre test scores is lesser than the table value of 3.22 for df 2 and 42 required for significant at.05 level of confidence. The post-test means values on speed of SAQ training group, ladder training and control group are 7.59, 7.67 & 7.80 respectively. The obtained “F” ratio of 46.0* for post test scores is greater than the table value of 3.22 for df 2 and 42required for significant at.05 level of confidence. The adjusted post-test means values on speed of SAQ training group, Ladder training and control

group are 7.64, 7.66 & 7.80 respectively. the obtained “F” ratio of 19.0* for adjusted posttest scores is greater than the table value of 3.220 for df 2 and 42 required for significant at.05 level of confidence.

The result of the study indicated that there was a significant difference existed between the adjusted posttest means of speed. Since three groups are compared, whenever the obtained ‘F’ ratio for adjusted posttest is found to be significant, the scheffe’s post hoc’s test is applied to find out the paired mean differences if any and it is presented in table-2.

Table 2

SAQ training Group	Ladder training Group	Control Group	Mean difference	Confidence interval
7.64	7.66	-	0.02	0.13
7.64	-	7.80	0.16*	0.13
-	7.66	7.80	0.14*	0.13

The table 2 shows that the mean difference values between SAQ training and control groups, ladder training group and control groups are 0.16 and 0.14 respectively on speed which is greater than the required confidence interval 0.13 for

significance. The mean difference value between SAQ training and ladder training group 0.02 on speed which is lesser than the required confidence interval value 0.13 for significance.

Table 3: Computation of Analysis of covariance on Agility (scores in seconds)

Agility	SAQ Training Group	Ladder Training Group	Control Group	SOV	Sum of Squares	DF	Mean Square	F
Pre-Test Mean	10.67	10.36	10.57	BG	0.07	2	0.32	1.39
				WG	11.60	42	0.28	
Post-Test Mean	10.08	9.74	10.40	BG	3.20	2	1.60	6.51*
				WG	10.32	42	0.25	
Adj. Post –Test Mean	9.97	9.89	10.38	BG	1.96	2	0.98	16.34*
				WG	2.46	41	0.06	

*significant at.05 level of confidence.

(The table value required for significance at.05 level of confidence with df 2 and 42 and 2 and 41 were 3.222 and 3.226 respectively)

The table-3 shows that the pre-test means values on agility of SAQ training group, and control group are 10.67, 10.36 & 10.57 and 7.81 respectively. The obtained “P” ratio of 1.39 for pre test scores is lesser than the table value of 3.22 for df 2 and 42 required for significant at.05 level of confidence. The

post-test means values on agility of SAQ training group, ladder training and control group are 10.08, 9.74& 10.47 respectively. The obtained “f” ratio of 6.51* for post test scores is greater than the table value of 3.22 for df 2 and 42required for significant at.05 level of confidence. The

adjusted post-test means values on speed of SAQ training group, Ladder training and control group are 9.97, 9.90 & 10.38 respectively. The obtained "F" ratio of 16.34* for adjusted posttest scores is greater than the table value of 3.220 for df 2 and 42 required for significant at .05 level of confidence.

The result of the study indicated that there was a significant

difference existed between the adjusted posttest means of agility. Since three groups are compared, whenever the obtained 'F' ratio for adjusted posttest is found to be significant, the Scheffe's post hoc's test is applied to find out the paired mean differences if any and it is presented in table-4.

Table 4

SAQ training Group	Ladder training Group	Control Group	Mean difference	Confidence interval
9.97	9.90	-	0.07	0.22
9.97	-	10.38	0.41*	0.22
-	9.90	10.38	0.48*	0.22

The table ii shows that the mean difference values between SAQ training and control groups, ladder training group and control groups are 0.41 and 0.48 respectively on speed which is greater than the required confidence interval 0.13 for significance. The mean difference value between SAQ training and ladder training group 0.07 on speed which is lesser than the required confidence interval value 0.22 for significance.

The result of the study indicated that there was a significant difference on agility of intercollegiate women players due to eight weeks of SAQ training and Ladder training when compared to control group.

Discussion on findings

The results of the study indicated that there was a significant improvement on speed and agility due to saq training and ladder training for eight weeks when compared to control group among intercollegiate women players. The following researchers supporting the present study there was a significant improvement in speed and agility after saq training and ladder training. Zoran Milanovic, Goran Sporis found that there was a significant improvement in speed and agility after the physical exercise.

Conclusion

It was concluded from the analysis of the data that the eight weeks saq training and ladder training was significantly improvement in the speed and agility of intercollegiate women players.

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