

EFFECTS OF SAQ TRAINING ON AGILITYBALANCE AND CO-ORDINATIONAMONG COLLEGE LEVEL MEN STUDENTS

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ABSTRACT

The purpose of the study was to find out the effects of SAQ training on agility balance co-ordination among college level men students the study was conformed to 24 male students selected from Bharathidasan University, Tiruchirappalli, Tamil Nadu and their age ranged from 21 to 24 years. They were divided in to two equal groups each group consisted of 12 students' namely experimental group SAQ training group and control group The SAQ training is selected as independent variable and agility, balance and co-ordination were selected as dependent variables. All the participants were tested two days before and immediately after the experimental period on the selected dependent variables. The obtained data from the experimental and control group before and after the experimental period were statistically analyzed with dependent 't'-test and analysis of covariance (ANCOVA). The level of confidence was fixed at 0.05 levels for all the cases to test the hypothesis. Compared to control group the SAQ training group has achieved significant improvement on agility, balance, and co-ordination due to effect of 12 weeks of training.

Key words - SAQ Training, Agility, Balance, Co-ordination

INTRODUCTION

TRAINING

The word "training" has been a part of human language since ancient times. It denotes the process of preparation for some task. This process invariably extends to a number of days and even months and years. Systematic nature of the training process is reflected adequately by the fact that the various means and methods, load dynamics, training tasks etc. are planned in order to achieve short or long term goals, keeping in view the inter-relations of various training elements and cyclic nature of performance development.

The general training strategy is the main methodological concept, which determines the priorities in the organization of all the phases of the training process. It should provide for the organization of two points of development, with distinct intermediate targets namely; to improve the athletes motor potential (special physical preparation), to improve athlete efficiency in using this potential for the competition exercise (Target is technique, tactic and speed of execution). Each coach must formulate a methodological conception of the athlete's preparation and outline the training strategy for the year (**Juriverchoshanskij, 1999**).

SAQ TRAINING

The agility SAQ training is a time-tested and proven effective tool for improving your footwork. The training effect is similar to jump rope, but with several advantages. First, agility SAQ training is multi-directional. In most sports, you are not staying in one spot. You are moving forward, sideways and sometimes backwards. Second, your 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 you are not limited by the speed of the rope turn. The end result is that you can train your feet to move quickly through complex footwork patterns. The benefits to any ground-based sport are huge. Agility SAQ training will improve your speed, co-ordination, timing and balance. Plus, it will set your calves on fire. I'm not a muscle isolationist, but this is seriously effective calf training because it engages the fast twitch muscles. Olympic lifts, sprinting and other power training will help you move large distances quickly and that is a very important component of sports movement. Agility SAQ training will add precision to those last few steps that get your body into perfect position. The importance of quick adjustment steps cannot be understated. They are like putting in golf.

STATEMENT OF THE PROBLEM

The purpose of this study was to determine the effects of SAQ training on agility, balance and co-ordination among college level men students.

METHODOLOGY

To achieve the purpose of the study, twenty four (n=24) male students studying department of Physical Education, Bharathidasan University, Tiruchirappalli were selected randomly as participants. The age of the participants was ranged from 21 to 24 years. The selected participants were divided into two groups such as Group A underwent SAQ training and Group B acted as control group. Since agility, balance and co-ordination can play an important role in almost all games and sports. So, the agility, balance and co-ordination were selected as dependent variables for this study. SAQ training also helps in improving speed, agility, quickness, balance, muscle endurance, reaction time and co-ordination between the various parts

of the body. Other than these physical benefits, agility SAQ exercises also help in improving the nervous system and related muscle groups. Hence, SAQ training was selected as independent variables. The present study was to find out the effects of a six weeks SAQ training program on agility, balance and co-ordination. As per the available literature, the following standardized tests were used to collect relevant data on the selected dependent variables and they were presented in Table I.

TABLE - I
TESTS SELECTION

Sl. No.	Criterion Variables	Test	Unit of Measurement
1.	Agility	Shuttle Run	In Seconds
2.	Balance	Stroke Stand	In Second
3.	Co-ordination	Hand Wall Toss Test	In Second

TRAINING PROGRAMME

During the training period, the experimental groups underwent their respective training programmes in addition to their regular routine. Group A underwent SAQ training for three days per week for six weeks. The duration of training session in all the days one hour approximately, this included warm-up and warm-down. Group B acted as control that did not participate in any specific training on par with experimental groups. All the men participants involved in this study were carefully monitored throughout the training programme to be away from injuries. They were questioned about their health status throughout the training programme. None of them reported with any injuries. However, muscle soreness appeared in the earlier period of the training programme and was reduced in due course. The data on selected dependent variables namely agility, balance and co-ordination were collected by using standardized test items. Pre-test data were collected two days before the training programme and post-test data were collected two days after the training programme. In both cases, the data were collected in two consecutive days. On the first day agility and balance was conducted whereas co-ordination was conducted on the second day.

ANALYSIS OF THE DATA

The analysis of data and detailed results of the study have been discussed in this chapter. This study was designed to find out the effects of SAQ training on agility, balance and co-ordination among college men students. For this purpose, twenty four (n=24) men students studying in department of Physical Education, Bharathidasan University, Tiruchirappalli were

selected as participants at randomly and the selected participants were divided randomly into two groups namely experimental and control groups of twelve (n=12) participants each. The training period was limited to six weeks and for three days per week. The SAQ training is selected as independent variable and agility, balance and co-ordination were selected as dependent variables. All the participants were tested two days before and immediately after the experimental period on the selected dependent variables. The obtained data from the experimental and control group before and after the experimental period were statistically analyzed with dependent ‘t’-test and analysis of covariance (ANCOVA). The level of confidence was fixed at 0.05 levels for all the cases to test the hypothesis.

TABLE - II
THE SUMMARY OF MEAN AND DEPENDENT ‘t’ TEST FOR THE PRE AND POST TESTS ON AGILITY OF EXPERIMENTAL AND CONTROL GROUPS

Mean	Experimental Group	Control Group
Pre test Mean	18.20	18.50
PosttestMean	16.44	18.38
‘t’ test	4.12*	0.22

*Significant at 0.05 level of confidence. Agility scores in Seconds (Table value required for significance at 0.05 level for ‘t’ test with df 11 is 2.201)

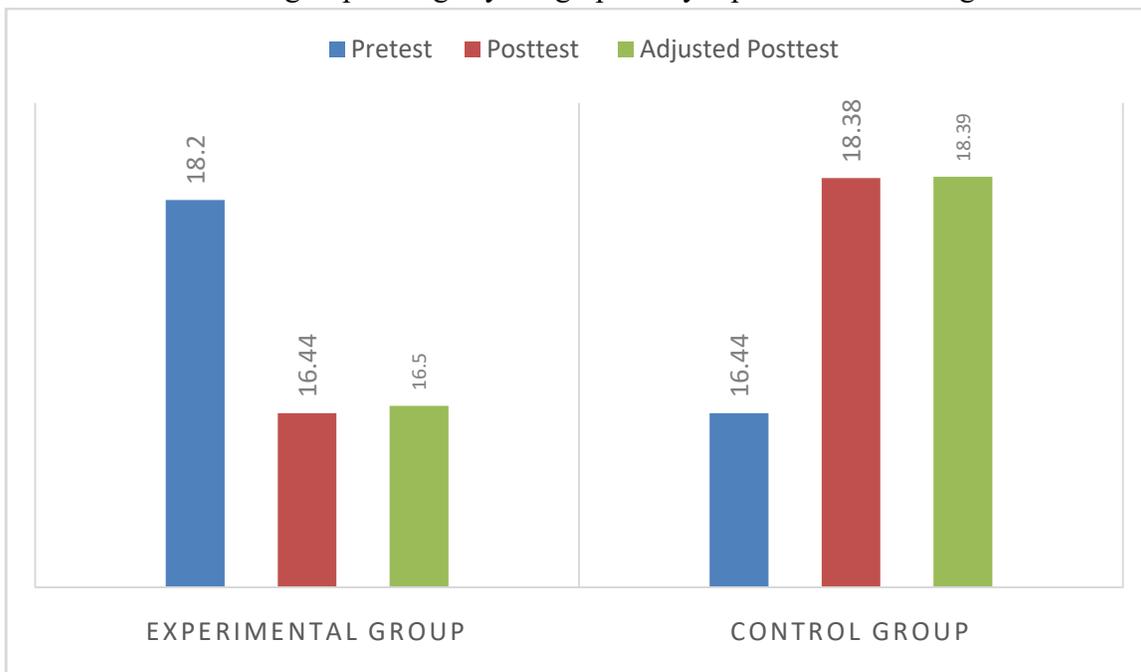
From the table II, the dependent ‘t’-test values between the pre and post tests means of experimental and control groups were 4.12 and 0.22 respectively. Since the obtained ‘t’-test value of experimental group was greater than the table value 2.201 with df 11 at 0.05 level of confidence, it is concluded that experimental group had significant improvement in the performance of agility. However, control group has no significant improvement in the performance of agility. The analysis of covariance (ANCOVA) on agility of experimental and control groups have been analyzed and presented in table III.

TABLE-III
ANALYSIS OF COVARIANCE ON AGILITY OF EXPERIMENTAL AND CONTROL GROUPS

Adjusted Post Test Means		Source of Variance	Sum of Squares	df	Mean Squares	‘F’-Ratio
SAQ Training	Control					
16.50	18.39	Between	2.12	1	2.12	6.24*
		Within	7.23	21	0.34	

*Significant at .05 level of confidence. Agility scores in Seconds(The table value required for significance at 0.05 level with df 1 and 21 is 4.32).

From the table III, the adjusted post test mean values of agility for experimental and control groups are 16.50 and 18.39 respectively. The obtained F-ratio of 6.24 for adjusted post test mean is more than the table value of 4.32 for df 1 and 21 required for significance at 0.05 level of confidence. The results of the study indicate that there was significant difference between the adjusted post test means of experimental and control groups on the development of agility. The pre and post test mean values of experimental and control groups on agility are graphically represented in the figure-1. The adjusted post test mean values of experimental and control groups on agility are graphically represented in the figure-2.



Pretest, posttest and adjusted posttest means value of experimental and control group on agility

TABLE-IV

THE SUMMARY OF MEAN AND DEPENDENT ‘t’ TEST FOR THE PRE AND POST TESTS ON BALANCE OF EXPERIMENTAL AND CONTROL GROUPS

Mean	Experimental Group	Control Group
Pre Test Mean	25.13	24.94
Post Test Mean	33.40	25.02
‘t’ test	6.17*	0.29

*Significant at 0.05 level of confidence. Balance scores in Seconds(Table value required for significance at 0.05 level for ‘t’ test with df 11 is 2.201)

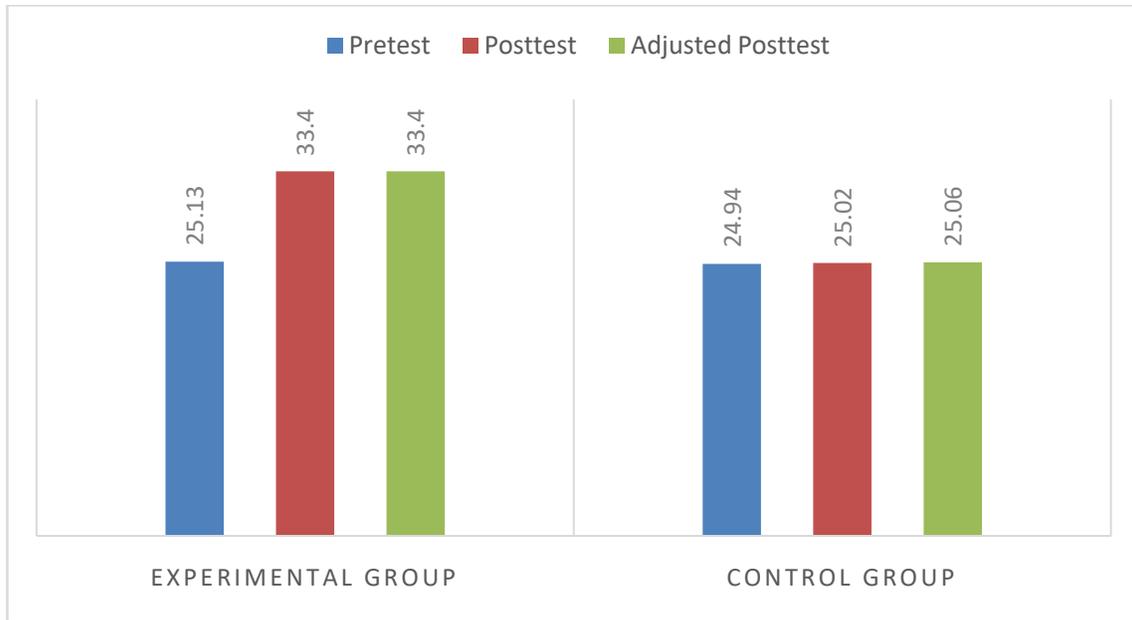
From the table IV, the dependent ‘t’-test values between the pre and post tests means of experimental and control groups were 6.17 and 0.29 respectively. Since the obtained ‘t’-test value of experimental group was greater than the table value 2.201 with df 11 at 0.05 level of confidence, it is concluded that experimental group had significant improvement in the performance of balance. However, control group has no significant improvement in the performance of balance.The analysis of covariance (ANCOVA) on balance of experimental and control groups have been analyzed and presented in table V.

TABLE-V
ANALYSIS OF COVARIANCE ON BALANCE OF EXPERIMENTAL AND CONTROL GROUPS

Adjusted Post Test Means		Source of Variance	Sum of Squares	df	Mean Squares	‘F’-Ratio
SAQ Training	Control					
33.41	25.06	Between	123.15	1	123.15	5.66*
		Within	457.21	21	21.77	

*Significant at .05 level of confidence. Balance scores in Seconds(The table value required for significance at 0.05 level with df 1 and 21 is 4.32)

From the table V, the adjusted post test mean values of balance for experimental and control groups are 33.41 and 25.06 respectively. The obtained F-ratio of 5.66 for adjusted post test mean is more than the table value of 4.32 for df 1 and 21 required for significance at 0.05 level of confidence. The results of the study indicate that there was significant difference between the adjusted post test means of experimental and control groups on the development of balance.The pre and post test mean values of experimental and control groups on balance are graphically represented in the figure 3.The adjusted post test mean values of experimental and control groups on balance are graphically represented in the figure 4.



Pretest, posttest and adjusted posttest means value of experimental and control group on balance

Table VI
THE SUMMARY OF MEAN AND DEPENDENT ‘t’ TEST FOR THE PRE AND POST TESTS ON CO-ORDINATION OF EXPERIMENTAL AND CONTROL GROUPS

Mean	Experimental Group	Control Group
Pre Test Mean	27.12	26.75
Post Test Mean	32.13	26.85
‘t’ test	5.33*	0.10

*Significant at 0.05 level of confidence. Co-ordination scores in numbers
 (Table value required for significance at 0.05 level for ‘t’ test with df 11 is 2.201)

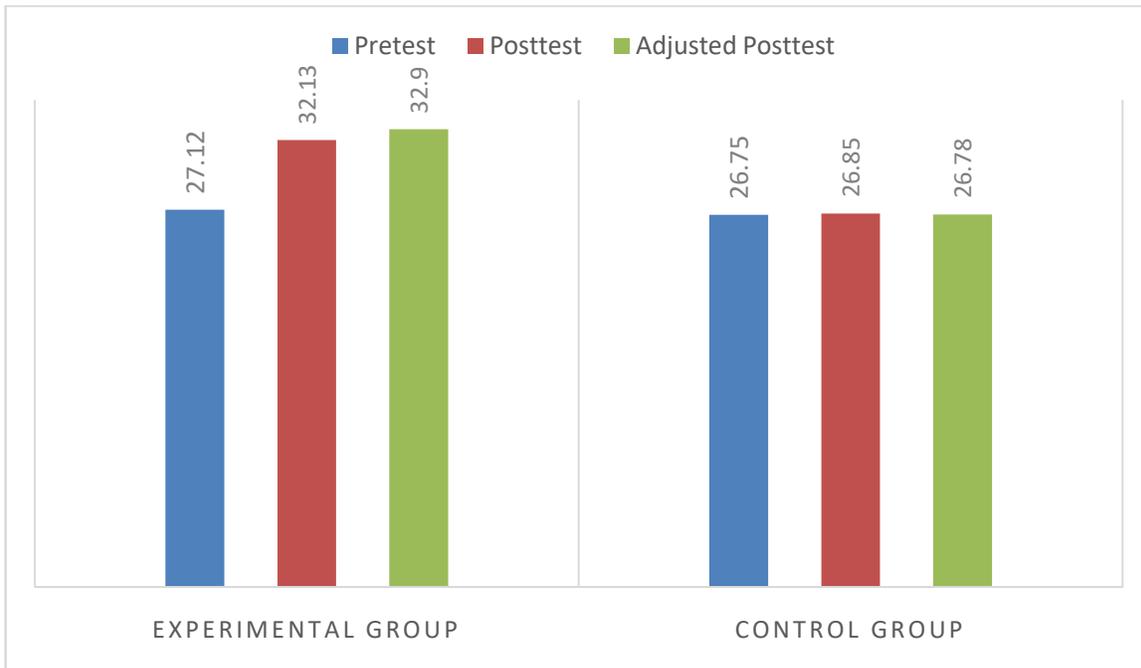
From the table VI, the dependent ‘t’-test values between the pre and post tests means of experimental and control groups were 5.33 and 0.10 respectively. Since the obtained ‘t’-test value of experimental group was greater than the table value 2.201 with df 11 at 0.05 level of confidence, it is concluded that experimental group had significant improvement in the performance of co-ordination. However, control group has no significant improvement in the performance of co-ordination. The analysis of covariance (ANCOVA) on co-ordination of experimental and control groups have been analyzed and presented in table VII.

TABLE-VII
ANALYSIS OF COVARIANCE ON CO-ORDINATION OF
EXPERIMENTAL AND CONTROL GROUPS

Adjusted Post Test Means		Source of Variance	Sum of Squares	df	Mean Squares	‘F’-Ratio
SAQ Training	Control					
32.90	26.78	Between	204.40	1	204.40	7.31*
		Within	587.54	21	27.98	

*Significant at .05 level of confidence. Co-ordination scores in number(The table value required for significance at 0.05 level with df 1 and 21 is 4.32)

From the table VIII, the adjusted post test mean values of co-ordination for experimental and control groups are 32.90 and 26.78 respectively. The obtained F-ratio of 7.31 for adjusted post test mean is more than the table value of 4.32 for df 1 and 21 required for significance at 0.05 level of confidence. The results of the study indicate that there was significant difference between the adjusted post test means of experimental and control groups on the development of co-ordination. The pre and post test mean values of experimental and control groups on co-ordination are graphically represented in the figure 5. The adjusted post test mean values of experimental and control groups on co-ordination are graphically represented in the figure 6.



Pretest, posttest and adjusted posttest means value of experimental and control group on co ordination

DISCUSSION ON FINDINGS

The results of the study indicates that the experimental group namely SAQ training group had significantly improved the selected dependent variables namely agility, balance and coordination when compared to the control group. It is also found that the improvement caused by SAQ training when compared to the control group. This result is in line with the studies of **Muthu Kumaran (1993)**, **Sajilal (1992)**, **Salonikidis and Zafeiridis (2008)**. From the result of the present investigation, it is also concluded that significant difference exists between experimental group and control group in developing all the dependent variables.

CONCLUSIONS

From the analysis of the data, the following conclusion are drawn.

- The SAQ training group has achieved significant improvement on agility, balance, and co-ordination.

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