

Impact of Six-Week SAQ Training on Selected Motor Abilities of College Basketball Players

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Abstract

This research was conducted to analyse the effect of SAQ training on selected motor ability variables among college basketball players. The purpose was to compare and analyse the data collected from each selected variables. For the purpose of the study, twenty players of 18 to 25 years old were selected as subjects for the investigation. These students were started SAQ training in Aquinas College, Edakochi, Kerala. The pre-test was administered by researcher during their first day of training and post-test were administered after six weeks of training. The selected variables for the study were Speed, Agility and Quickness. The pre-test and post-test score of the experimental group and controlled group were statistically analysed and to find out the significant difference between pre-test and post-test score of the experimental group and controlled group, the t-ratio was employed.

KEYWORDS: SAQ training, handball, motor abilities.

INTRODUCTION

The fitness requirements for Basketball depend on the level of performance, positional role and styles of play. They vary also with age groups, between men and women, and at different stages of the playing scenarios. Re-acquiring desirable fitness levels is especially important after injury, prior to returning to competitive play. Otherwise the individual is vulnerable to re-injury. The uncorrected weaknesses in muscle strength, for example, are carried into a game. Bio motor abilities are the foundations of ability of an individual to perform an exercise – speed, agility and quickness. The contribution of the bio motor abilities to the attainment of high performance are determined by 2 factors; the ratio between them as a reflection of the specifics of the sport and, by the level of development of each ability according to its degree of participation in performing the sport/event.

For Basketball we see speed as the ability to accelerate quickly. The ability is reacting quickly to situations able to twist, turn and change direction, ability to produce bursts of fast running throughout the game; and the ability to read a situation and anticipate. The ability to move the ball and use the ball at speed; the first five elements are areas that we can improve upon in specific speed training. The last two are specific to handball training with a ball. The speed of play in today's game is said to be quicker than ever. While elite handball players are by no means Olympic

sprinters, all other things being equal, faster players have a marked competitive edge. Basketball, like any sport, places a lot of uneven demands on the body. Basketball is the total sport, and a well-thought-out handball training program must reflect that. Basketball is one of the few sports demands speed and other speed factors.

Speed endurance training significantly improves your recovery after a bout of repetitive sprints. Your body's ability to remove lactic acid increases which can make such a difference to your game. Thirdly, a Basketball speed training program should improve agility, foot speed and reaction time. Exercises to improve agility don't tend to be physically taxing. The emphasis is on short, sharp movements of a high quality. Explosive power is not always the predominant goal of the strength training program. For events such as distance running, cycling, swimming and rowing, strength endurance is a major limiting factor.

Agility is the ability to change direction without the loss of speed, strength, balance, or body control. The performances of athletes who compete today have raised the level of agility. The physical conditioning of athletes has led to a number of changes in teaching, coaching, and training. These changes have allowed for a planned and implemented process that leads to improved performance through greater agility, balance and timing. This new emphasis leads to the evolution of faster, stronger and better conditioned athletes and to elite performances by athletes. Agility for sport teaches the athlete the best method and techniques to move with the greatest speed and the greatest quickness, with the least amount of wasted movements and actions. There is a direct correlation between improved agility and the development of athletic timing, rhythm, and movement. Agility is the ability to change direction without the loss of speed, strength, balance, or body control. So many athletes and coaches search for improvement and look for methods to improve their agility in their particular sport. Three components of Basketball that can be improved through plyometric training are speed, agility, and quickness (SAQ). If coaches are using these kind of exercises they could improve their teams' performance by easily adding some simple exercises at the appropriate time.

DELIMITATIONS&LIMITATIONS

The study was delimited totwentycollege Basketball players were only selected as subject for this study.The subject's ages ranged from 18 to 24 years and were selected (N=20) fromAquinas College, Edakochi, Kerala. Ten playerswere selected as control group and other ten was selected as SAQ training group.The duration of the training period was restricted to six weeks. The bio motor abilities such as speed, agility and quickness are selecting as criterion variables for this study.

The uncontrollable factors associated with the study were accounted as limitations of this study. The previous experience of the subjects in the field of sports and games which might be influencing on the training and data collection, were not considered.The investigator did not put any effort to control or assess the quality and quantity of food ingested separately for each individual. And the subjects were motivated verbally, no attempt was made to differentiate the motivation level during the period of training and testing.

SELECTION OF VARIABLES

The desirable development of a Basketball player basically depends upon with the bio-motor ability. The combination of bio motor ability and skill ability will help the team to achieve the optimum performance in the game of Basketball. Taking into consideration of all these factors, a set of variables was selected to test on the subjects, for observing the variations in their levels due to training. The variables selected and tested were:

Bio motor abilities

1. Speed
2. Agility
3. Quickness

SELECTION OF TESTS

The present study was undertaken primarily to assess the impact of SAQ training on bio motor abilities. The investigator analyzed various available literatures, had consulted the experts in the field of physical education and selected the following standardized test items to collect relevant data on the selected dependent variables and they are presented in table-I.

Sl. No	Criterion variables	Test items	Unit of Measurement
1	Speed	50meters dash	Seconds
2	Agility	Shuttle run	Seconds
3	Quickness	Choice-responsetest.	Seconds

TRAINING SESSION

Each work out session was lasted for 60-75 minutes.

SAQ TRAINING EXERCISES

Sl. No	EXERCISES		
	Low intensity	Medium intensity	High intensity
1	Hop Scotch Drill	High knee forward	Ladder speed run
2	High knee forward	High knee side ward	Partner resisted run
3	High knee side ward	Ladder speed run	Ladder zigzag cross over
4	In-Out Drill	Five Count Drill	Double Trouble
5	Five Count Drill	Ladder zigzag cross over	----- -----

6	Carioca	Double Trouble	Cross lateral skaters
7	Centipede	Cross lateral skaters	----- -----
8	Scissors jump	Scissors jump	Single leg hop

FINDINGS

Speed

The data on speed of the pre-test score and post-test were statistical analysis by t-test and the results are presented in Table.

PRE AND POST TEST SCORE OF SPEED

Control	Pre test		Post test		df	t value
Factors	N	SD	N	SD		
Experimental	10	0.321	10	0.292	18	5.751*
Control	10	0.139	10	0.137	18	0.559

* Significant at 0.05 level of confidence. The table value result for significance is 2.101.

Table above shows the number of subjects, standard deviation and 't' value of speed of experimental and control group. The mean values of experimental group pre and post test were 6.18 and 5.92 and that of control group pre and post were 6.145 and 6.137. The standard deviation of experimental and control group pre and post were 0.321, 0.293 and 0.139, 0.137 respectively. The above table indicates that, there was a significant difference between the pre and posttest performance on speed of experimental group, since the calculated 't' value of 5.751 is higher than tabulated 't' value of 2.101 at 0.05 level of significance. In the case of control group, there was no significant difference were shown.

Agility

The data on agility of the pre-test score and post-test were statistical analysis by t-test and presented in the table.

PRE AND POST TEST SCORE OF AGILITY

Control	Pre test		Post test		df	t value
Factors	N	SD	N	SD		
Experimental	10	0.466	10	0.423	18	5.009*
Control	10	0.230	10	0.170	18	1.220

* Significant at 0.05 level of confidence. The table value result for significance is 2.101.

Table shows the number of subjects, standard deviation and 't' value of agility of experimental and control group. The mean values of experimental group pre and posttest were 12.247 and 11.936 and that of control group pre and post were 12.253 and 12.234. The standard deviation of experimental and control group pre and post were 0.466, 0.423 and 0.230, 0.170 respectively. The above table indicates that, there was a significant difference between the pre and post test performance on agility of experimental group, since the calculated 't' value of 5.009 is higher than tabulated 't' value of 2.101 at 0.05 level of significance. Here control group shown no significant difference.

Quickness

The data on quickness of the pre-test score and post-test were statistical analysis by t-test and presented in the table.

PRE AND POST TEST SCORE OF QUICKNESS						
Control	Pre test		Post test		df	t value
Factors	N	SD	N	SD		
Experimental	10	0.088	10	0.074	18	5.4*
Control	10	0.080	10	0.087	18	1.280

* Significant at 0.05 level of confidence. The table value result for significance is 2.101.

Table shows the mean values of experimental group pre and post test were 1.746 and 1.684 and that of control group pre and post were 1.71 and 1.724. The standard deviation of experimental and control group pre and post were 0.088, 0.074 and 0.080, 0.087 respectively.

The above table indicates that, there was a significant difference between the pre and post test performance on abdominal strength of experimental group, since the calculated 't' value of 5.4 is higher than tabulated 't' value of 2.101 at 0.05 level of significance with 18 degrees of freedom. No significant difference were noted from the results on control group.

DISCUSSION OF FINDINGS

The finding of the study revealed that the experimental group (SAQ trainees), improved significantly on the selected variables of speed, agility and quickness, whereas no significant difference was found in control group. Scientifically and systematically monitored SAQ training programs are expected to improve overall development of individuals in general and improve speed, agility and quickness in specific. The six week SAQ training involved exercises namely hop scotch drill, high knee forward, ladder speed run, in-out drill, high knee side ward, partner resisted run, five count drill, carioca, centipede, ladder zigzag cross over, scissors jump, double trouble, lateral skaters, cross lateral skaters, single leg hop. Hence it can be concluded as the SAQ training program can significantly increase the motor abilities such as speed, agility and quickness in college Basketball players and it will helps in better performances. So inclusion of SAQ training in workout schedule of Basketball players will helps coaches and trainers to drawn best result from their trainees.

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