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Effect of SAQ training programme on playing ability of basketball players

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Abstract

The purpose of present study was to investigate the effect of SAQ training programme on playing ability of basketball players. Twenty male basketball players were selected and the nature of sampling was purposive and on random basis from Guru Ghasidas Vishwavidyalaya, Bilaspur (C.G.) and their age ranged between 18-25 years. The basketball playing ability was graded (out of 50 points) by a panel of three qualified experts during actual competition and the average of three grades were considered as subject's playing ability. The subjects were divided into two equal groups on random basis consisting of ten subjects in each group. The first group was administered with Speed Agility Quickness (SAQ) training with equipment and was designated as Speed Agility Quickness Experimental (SAQE) group and the second group was administered with Speed Agility Quickness (SAQ) training without equipment and was designated as Speed Agility Quickness Control (SAQC) group. SAQ training was considered as an independent variable and basketball playing ability was considered as a dependent variable. The one-way analysis of co-variance (ANCOVA) and the significant level at 0.05 was used to find out the effect of SAQ training programme on playing ability of basketball players. All the statistical calculation was carried out using SPSS version 16.0. The finding of the study shows that there was significant difference between Speed Agility Quickness Experimental (SAQE) group and Speed Agility Quickness Control (SAQC) group basketball players of Guru Ghasidas Vishwavidyalaya, Bilaspur (C.G.).

Keywords: Speed Agility Quickness (SAQ), Basketball and Training

Introduction

Physical adaptation of the player to perform the sports activities is one of the practical functions of the training which improve the training of the player to reach to higher levels in the sports activities. The skillful performance is relevantly associated with the special physical motor abilities as the perfection of the skillful performance depends on the range of the development of the special physical abilities to perform such requirements, such as muscular power, endurance, agility and others. The skillful performance is often measured by the level of the player to acquire physical abilities (Shallaby, 2010) [10]. Speed Agility Quickness (SAQ) is used in basketball games to improve a player's ability to perform various ranges of movement, better coordinating the body and the brain. Speed Agility Quickness (SAQ) training is different kind of training method, which aims to maximise each individual potential in his/her genetically inherited abilities. Speed, agility and quickness are undoubtedly highly desirable in both team and individual sports specifically in intermittent games like 2 Basketball which is about 20% aerobic and 80% anaerobic in nature (Brittenham, 1996) [1]. Several researches were conducted a study on Speed Agility Quickness (SAQ) training among different team game players but there are less studies were conducted on effect of SAQ training programme on playing ability of basketball players. Therefore, research scholar is paying attention to conduct this study.

Statement of the problem

The statement of the problem was stated as to examine the effect of SAQ training programme on playing ability of basketball players.

Hypothesis of the study

It was hypothesised that the S.A.Q. training programme could have positive effect on playing ability of basketball players.

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Objectives of the study

1. To study the effectiveness of S.A.Q. training on playing abilities of basketball players.
2. To suggest effective training programme for basketball players.

Methodology**Selection of Subjects**

Twenty male basketball players were selected and the nature of sampling was purposive and on random basis from Guru Ghasidas Vishwavidyalaya, Bilaspur (C.G.) and their age ranged between 18-25 years. The subjects were divided into two equal groups on random basis consisting of ten subjects in each group. The first group was administered with Speed Agility Quickness (SAQ) training with equipment and was designated as Speed Agility Quickness Experimental (SAQE) group and the second group was administered with Speed Agility Quickness (SAQ) training without equipment and was designated as Speed Agility Quickness Control (SAQC) group.

Selection of Variables

Keeping the feasibility criterion in mind, the researcher selected the following variables for the study:

1. SAQ drill training (Independent variables).
2. Basketball playing ability (Dependent variable).

Criterion Measure

The basketball playing ability was graded (out of 50 points)

by a panel of three qualified experts during actual competition and the average of three grades were considered as subject's playing ability.

Experimental Design of the study

For this study pre-test – post-test randomized group design (Thomas, Nelson & Silverman, 2005) [14]. Consisting of one experimental group (n=10) and one control group (n=10) was used.

Collection of data

Prior to the administration of SAQ training pretest was conducted to collect the data and after the completion of eight weeks of SAQ training it was repeated for collecting the post training data.

Administration of SAQ Drills Training

The experimental group was trained five days per week for the period of eight weeks. As the per session of training was of 50-60 minutes. Each experimental session was of 50-60 minutes. The load intensity was kept low to moderate in first week and increased progressively in proceeding week moderate too high and repetition and sets were increased respectively. The members of control group were not given any SAQ training during this period.

Schedule of S.A.Q. drills training programme

Training	Weeks Days/ Intensity	Drill (Sets & Repetitions)				
		Monday	Tuesday	Wednesday	Thursday	Friday
S.A.Q. Drills	1 st (60-70)	'A' march walk (1x4)	Figure eight (1x4)	In place ankle jump (1x4)	Butt kickers (1x4)	Z-pattern run (1x4)
		High knee run (1x4)	Carioca (1x4)	Bunny jumps (1x4)	Flying's 30 (1x4)	15-yard turn drill (1x4)
	2 nd (70-80)	Bunny jumps (2x3)	Plyo to sprint (2x3)	Z-pattern run (2x3)	Icky shuffle (2x3)	Ladder speed run (2x3)
		In place ankle jump (2x3)	Speed running (2x3)	Ladder speed run (2x3)	Plyo to sprint (2x3)	20-yard shuttle (pro agility) (2x3)
	3 rd (70-80)	Icky shuffle (2x4)	20-yard square (2x4)	Hop-scotch drill (2x4)	20-yard shuttle (pro agility) (2x4)	Hop-scotch drill (2x4)
		Squirm (2x4)	Plyo to sprint (2x4)	Z-pattern run (2x4)	Squirm (2x4)	Lateral skaters (2x4)
	4 th (80-100)	Vertical jump to sprint (3x3)	T-drill (3x3)	Hop-scotch drill (3x3)	Partner assisted let go's (3x3)	The triangle (3x3)
		Ladder speed run (3x3)	X-over zig zag (3x3)	Plyo to sprint (3x3)	Bounding (3x3)	X-over zig zag (3x3)
	5 th (80-100)	5-dot drill (3x3)	Side shuffle to sprint (3x3)	Snake jump (3x3)	5-dot drill (3x3)	Hop-scotch drill (3x3)
		Forward roll to lateral skaters (3x3)	Lateral skaters to sprint (3x3)	In in Out out (3x3)	Hexagon drill (3x3)	8-point star drill (3x3)
	6 th (70-80)	Lateral skaters to sprint (3x4)	Sprint and cut on command (3x4)	Hop-scotch drill (3x4)	T-drill (3x4)	X-pattern multi skill (3x4)
		In in Out out (3x4)	Back roll to squirm (3x4)	Side shuffle to speed run (3x4)	Icky shuffle to sprint (3x4)	5-dot drill (3x4)
	7 th (80-100)	Hop-Scotch drill to speed run (4x3)	Snake jump to speed run (4x3)	Backward roll to squirm (4x3)	Repeated vertical jump to sprint (4x3)	In out shuffle to sprint (4x3)
		Sprint and cut on command (4x3)	180 degree turn to sprint (4x3)	Hexagon drill (4x3)	Hop-Scotch drill to speed run (4x3)	Snake jump to speed run (4x3)
	8 th (70-80)	30-yard square (v) (4x3)	Vertical jump to speed run (4x3)	Snake jump to sprint (4x3)	Backward roll to squirm (4x3)	Sprint and cut on command (4x3)
		5-Dot drill (4x3)	Hop-scotch drill to speed run (4x3)	X-pattern multi skill (4x3)	30-yard square (4x3)	8-point star drill (4x3)

*Note: - Recovery (between repetitions) – Partial; Recovery (between next drill)– 03 minutes (1st to 6th weeks) and 05 minutes (7th to 8th).

Statistical Technique

The one-way analysis of co-variance (ANCOVA) and the significant level at 0.05 was used to find out the effect of SAQ training programme on playing ability of basketball players. All the statistical calculation was carried out using SPSS version 16.0.

Result and finding of the study

The statistical analysis of data of the basketball group i.e. the Speed Agility Quickness Experimental (SAQE) group and Speed Agility Quickness Control (SAQC) group on basketball playing ability for pre-test and post-test have been presented (mean, standard deviation, standard error, minimum and maximum scores) are shown in table 1.

Table 1: Descriptive Statistics of Basketball Players In Relation To Playing Ability

Variable	Group	Test	N	Mean	Std. Deviation	Std. Error	Min.	Max.
Playing Ability	Basketball Group	Pre	10	86.5500	5.52494	1.74714	81.00	94.50
		Post		91.5000	8.58293	2.71416	82.50	105.50
	Control Group	Pre	10	83.0500	3.63967	1.15097	80.00	92.00
		Post		83.5000	4.17000	1.31867	79.00	93.00
	Total	Pre	20	84.8000	4.89468	1.09448	80.00	94.50
		Post		87.5000	7.74427	1.73167	79.00	105.50

Table 2: Analysis of Co-Variance of the Means of Experimental Groups and Control Group In Relation To Basketball Playing Ability

Test	Mean		ANCOVA Table					
	Basketball Group	Control Group	Sum of Variance	Sum of Square	df	Mean Sum of Square	F-ratio	Sig.
Pre Test	86.55	83.050	B	61.25	1	61.25	2.799	.112
			W	393.95	18	21.89		
Post Test	91.50	83.500	B	320.00	1	320.00	7.029*	.016
			W	819.50	18	45.53		
Adjusted Post Test	89.06	85.942	B	42.01	1	42.01	13.646*	.002
			W	52.33	17	3.08		

*significant at 0.05 level, B = between group variance, W = within group variance, df = degree of freedom. $F_{0.05}(1, 18) = 4.41$, $F_{0.05}(1, 17) = 4.45$

Table 2 shows that the f-ratio after implementing analysis of co-variance (ANCOVA) is 7.029, as the tabulated value is 4.41 which is less than calculated f-ratio.

Hence, there is significant difference between the basketball playing abilities of the experimental group and control group often imparting the eight weeks SAQ training to the experimental group at 0.05 level of significance.

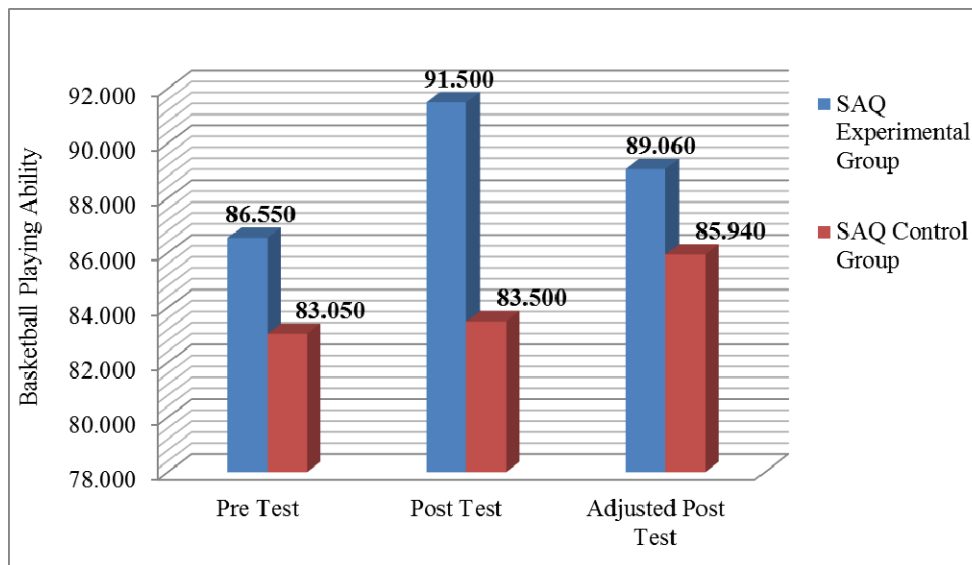


Fig 1: Graphical Representation Means of Basketball Playing Ability of Experimental Groups and Control Group

Discussion of the study

The finding of the study shows that there was significant difference between Speed Agility Quickness Experimental (SAQE) group and Speed Agility Quickness Control (SAQC) group basketball players of Guru Ghasidas Vishwavidyalaya, Bilaspur (C.G.). The finding of the study is supported by Diswar, Choudhary, & Mitra, (2016) [3]. they have conducted a study on comparative effect of SAQ and circuit training programme on selected physical fitness variables of school level basketball players and the finding of their study showed

that SAQ training program was better than circuit training program for developing speed and agility. Some more study also supported my findings Sharma, & Dhapola, (2015) [11]. studied to determine the effect of speed, agility, quickness (SAQ) training programme on selected physical fitness variables and playing abilities in basketball University players and the SAQ training programme were imparted a total period of six weeks. The result of the study showed significant effect on speed, agility and quickness and the playing abilities of basketball players. Sudha, Premkumar, & Chittibabu, (2012)

[13]. Studied the effect of SAQ training given for six week on selected bio motor abilities (speed, agility and power) of male handball players and the study indicated that SAQ training significantly improved the speed, power and agility of handball players in compared to Control group.

Conclusion of the study

On the basis of findings following conclusions have been drawn –

- Significant difference found between Speed Agility Quickness Experimental (SAQE) group and Speed Agility Quickness Control (SAQC) group of Guru Ghasidas Vishwavidyalaya, Bilaspur (C.G.) in relation to basketball playing ability (Post Test, $F = 7.029$, and Adjusted post-test, $F = 13.646$).

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