

ISOLATED AND COMBINED EFFECTS OF CIRCUIT TRAINING AND SKILL TRAINING ON SHOOTING AMONG COLLEGE WOMEN BASKETBALL PLAYERS

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ABSTRACT

To achieve the purpose of this study the investigator selected forty five college women Basketball players from affiliated colleges of University of Madras, Chennai, Tamilnadu. The subjects were selected randomly and their age was ranged from 18 to 21 years. They were assigned into Three groups of which one group served as Circuit training group, second group served as Skill training group, third group served as combined Circuit training and Skill training group. The experimental groups participated their respective training programmes for period of six weeks. The selected subjects were measured of their Shooting by free throw shooting test before and after the training period of six weeks. The differences between the initial and final scores of Shooting were subjected to statistical treatment using Analysis of Covariance (ANCOVA). The results further revealed that comparing with other groups combined group significantly improved Shooting. It was concluded that combined group was better than Circuit training group and Skill training group.

Keyword: Circuit training group, Skill Training, Shooting.

INTRODUCTION

Circuit Training

Circuit training is a method of physical conditioning that employs both apparatus resistance training and calisthenics' conditioning exercises. It provides a means of achieving optional fitness in a systemized controlled fashion. The intensity and vigor of circuit training are indeed challenging and enjoyable to the performer. The system produces positive changes in motor performance, general fitness, muscular power, endurance and speed (Aruheim, 1987).

Skill Training

A Skill is the learnt capacity or talent to carry out pre-determined results often with the minimum outplay of time energy or both.

Exploring one's own capabilities, a game or sport allows a player to look at, understand, and experience the various expected and unexpected requirements and demands of the game or sport because the performance and situations of the game is largely depended on the on ground reality.

OBJECTIVES OF THE STUDY

1. To find out the isolated effect of Circuit training on Shooting among college women Basketball players.
2. To find out the isolated effect of Skill training on Shooting among college Women Basketball players.
3. To find out the combined effects of Circuit training and Skill training on Shooting among College women Basketball players.

METHODOLOGY

The study was formulated as a true random group design, consisting of pre-test and post-test. The subjects (N=45) were randomly assigned into three equal homogeneous groups of 15 basketball players each. Among the three groups, The experimental groups were undergone with the experimental treatments. The groups were assigned as Experimental Groups I, II and III. Pre tests were conducted for all the selected subjects on Shooting by free throw shooting. The experimental groups participated in their respective Circuit training, Skill Training, and combined

(Circuit training and Skill Training) for a period of six weeks. The training programme was scheduled at 6.30 a.m. to 7.30 a.m. on all week days except Sundays. The posts were done on the selected dependent variable after six weeks.
STATISTICAL ANALYSIS

The differences between the initial and final test scores on Shooting were subjected to statistical treatment using Analysis of Covariance (ANCOVA) to find out whether the mean differences were significant or not. The Scheffe's post hoc test was used to find out the paired means significant differences.

RESULTS ON SHOOTING

The analysis of covariance on Shooting of the pre, post and adjusted test scores of Circuit Training, Skill Training and Combined training have been analyzed and presented in Table - I.

TABLE - I

COMPUTATION OF ANALYSIS OF COVARIANCE ON SHOOTING

Test	Circuit Training Group (Group-I) Expt. Group 'A'	Skill Training Group (Group-II) Expt. Group 'B'	Combined Training Group (Group-III) Expt. Group 'C'	Source of Variance	Sum of Squares	df	Mean Squares	F-ratio
Pre-Test Mean	6.33	6.20	6.07	Between Groups	0.53	2	0.27	7.63
SD	±1.54	±1.42	±1.33	Within Groups	86.67	42	2.06	
Post-Test Mean	8.53	9.07	10.07	Between Groups	18.18	2	9.09	7.70*
SD	±1.13	±1.03	±1.10	Within Groups	49.60	42	1.18	
Adjusted Post-Test Mean	8.47	9.07	10.13	Between Sets	20.93	2	10.46	13.41*
				Within Sets	31.99	42	0.78	

* Significant at 0.05 level of confidence

Table value for df (42, 2) at 0.05 level = 19.47, Table value for df (2, 42) at 0.05 level = 3.22 Table value for df (2, 41) at 0.05 level = 3.23

The above table shows that the pre-test mean and standard deviation values on Shooting of Circuit training group, Skill training group and combined training group were 6.33, 6.20 and 6.07 and ±1.54, ±1.42 and ±1.33 respectively. In the pre-test, the F value was calculated by dividing the greater variance (2.06) by lesser variance (0.27). The obtained 'F' ratio of 7.63 for pre-test score was lesser than the table value of 19.47 for df 42 and 2 required for significance at 0.05 level of confidence on Shooting.

The post test mean and standard deviation values on Shooting of Circuit training group, Skill training group and Combined training group were 8.53, 9.07 and 10.07 and ±1.13, ±1.03 and ±1.10 respectively. The obtained 'F'

ratio of 7.70 for post-test score was greater than the table value of 3.22 for df 2 and 42 required for significance at 0.05 level of confidence on Shooting.

The adjusted post-test means on Shooting of Circuit training group, Skill training group and Combined training group were 8.47, 9.07 and 10.13 respectively. The obtained 'F' ratio of 13.41 for adjusted post-test mean was greater than the table value of 3.23 for df 2 and 41 required for significance at 0.05 level of confidence on Shooting.

The results of the study indicated that there was a significant difference between the adjusted post-test means of Circuit training group, Skill training group and Combined training group on Shooting.

Since, three groups were compared, whenever the obtained 'F' ratio for adjusted post test was found to be significant, the Scheffe's test was used to found out the paired mean difference and it was presented in Table-X.

TABLE - II
SCHEFFE'S TEST FOR THE DIFFERENCE BETWEEN PAIRED MEANS ON SHOOTING

Circuit Training Group-I	Skill Training (Group-II)	Combined Training (Group-III)	Mean Difference	Confident Interval Value
8.47	9.07	---	0.60	0.82
8.47	---	10.13	1.66*	
---	9.07	10.13	1.06*	

***Significant at 0.05 level of confidence.**

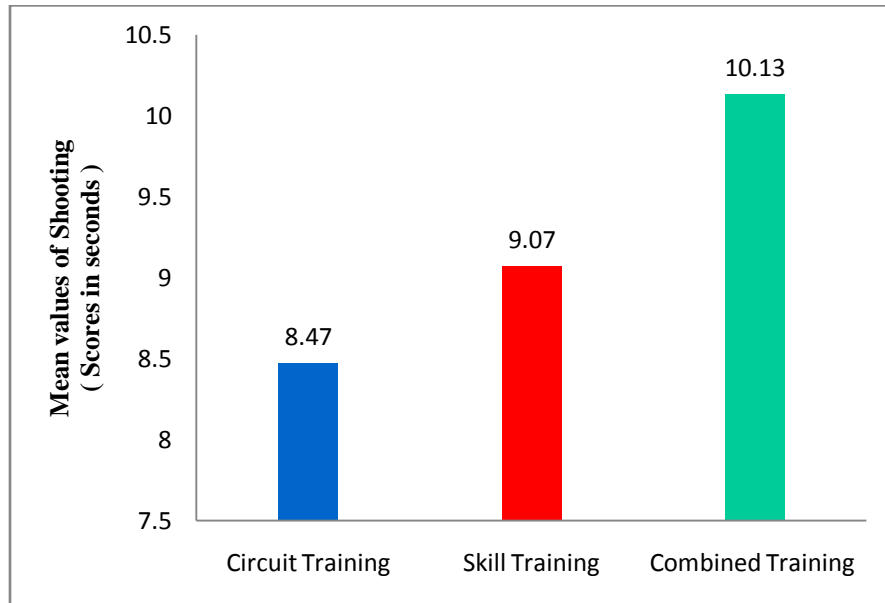
The above table shows that the mean difference values of Circuit training and Combined training, and Skill training and Combined training were 1.66 and 1.06 respectively, which were greater than the confidence interval value of 0.82 on Shooting at 0.05 level of confidence. The results of the study showed that there was a significant difference between Circuit training and Combined training, and Skill training and Combined training.

The mean difference values between of Circuit training and Skill training were 0.60, which was lesser than the confidence interval value of 0.82 at 0.05 level of confidence which shows insignificant differences.

The above data also reveals that combined training group had registered better performance of Shooting.

The pre, post and adjusted mean values of Circuit training, Skill training and combined training on Shooting were graphically represented in the figure - 1.

Figure: 1
ADJUSTED POST TEST MEAN FOR SHOOTING



DISCUSSIONS ON FINDINGS OF SHOOTING

The post hoc analysis of obtained ordered adjusted means prove that there are significant differences between combined (Circuit training and Skill Training group) and Circuit training group, Skill Training group and combined group (Circuit training and Skill Training group), Clearly indicating that combined (Circuit training and Skill Training) group were considered significantly better than isolated Circuit training and Skill Training group in improving Shooting performance of women basketball players.

CONCLUSIONS

1. It was also concluded that Skill Training group is significantly better than the Circuit training in improving the Shooting performance among college women basketball players.
2. It is concluded that combined (Circuit training and Skill Training) group was significantly better than the Skill Training group in improving the Shooting performance among college women basketball players.
3. It is further concluded that combined (Circuit training and Skill Training) group was significantly better than Circuit training group in improving Shooting performance as measured Free throw test.

RECOMMENDATIONS

- 1 It is recommended that the coaches, physical educationists and sportspersons may include Circuit training and Skill Training in their training schedule to improve the fitness and physiological preparations for better performance.
2. It was recommended that people with irrespective of age may be practice Circuit training and Skill Training to enhance their fitness level to lead a healthy life.

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