



P-ISSN: 2394-1685  
E-ISSN: 2394-1693  
Impact Factor (ISRA): 5.38  
IJPESH 2018; 5(2): 327-329  
© 2018 IJPESH  
www.kheljournal.com  
Received: 01-01-2018  
Accepted: 03-02-2018

**Dr. S Ezhilarasi**  
PhD Assistant Director of  
Physical Education,  
Tamil Nadu Veterinary and  
Animal Sciences University  
Veterinary College and Research  
Institute, Orathanadu  
Tamil Nadu, India

**Correspondence**  
**Dr. S Ezhilarasi**  
PhD Assistant Director of  
Physical Education,  
Tamil Nadu Veterinary and  
Animal Sciences University  
Veterinary College and Research  
Institute, Orathanadu  
Tamil Nadu, India

## Isolated and combined effects of yogic practices and aerobic exercise on dribbling among college women basketball players

**Dr. S Ezhilarasi**

### Abstract

To achieve the purpose of this study the investigator selected sixty 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 four groups of which one group served as yogic practice group, second group served as aerobic exercises group, third group served as combined yogic practices and aerobic exercises group and the fourth group acted as control group. The experimental groups participated their respective training programmes for period of six weeks and the control group was not given any training except of their routine. The selected subjects were measured of their dribbling by Johnson basketball test before and after the training period of six weeks. The differences between the initial and final scores of Dribbling were subjected to statistical treatment using Analysis of Covariance (ANCOVA). The results of this study proved that comparing with control group the experimental group's significantly improved dribbling. The results further revealed that comparing with other groups combined group significantly improved dribbling. It was concluded that combined group was better than Yogic practices group, aerobic exercise group and control group.

**Keywords:** yogic practices, aerobic exercises, dribbling.

### Introduction

Yoga is 'training in the technique of harmony and is a preparation for the total integration of human personality'. It is accepted that the influence of the body is far more profound than that of the mind.

Patanjali states that "the aim of yoga is the complete control or arrest of the fluctuations and modification of the mind" It is a complete process of perfection of man by developing his personalities so that he may reach his ultimate goals, thereby fulfilling the purpose of his birth". (Yogairaj, 1994).

Aerobic training increases both number of capillaries per muscles fiber and number of capillaries for a given cross sectional area of muscles. Both of these changes improve blood profusion through the muscles, thereby enhancing the exchange of gases, water and nutrients between the blood and muscle fibers. The effects of doing regular aerobic training are Strengthening the muscles involves in respiration, to facilitate the flow of air in and out of the lungs. Strengthening and enlarging the heart muscle, to improve its function efficiency and reducing the resting heart note, known as aerobic conditioning.

Basketball is a team sport which involves two teams of 5 active players each trying to score points against one another by placing a ball through a 10 foot (3.048 m) high hoop (the goal) under organized rules. Points are scored by throwing (shooting) the ball through the basket from above. The team with more points at the end of the game wins. The ball can be advanced on the court by bouncing it (dribbling) or passing it between teammates. Disruptive physical contact (foul) is penalized and there are restrictions on how the ball can be handled (violations). Through times, basketball has developed to involve common techniques of shooting, passing and dribbling, as well as player's positions and offensive and defensive structures.

**Objectives of the Study**

1. To find out the isolated effect of yogic practice on Dribbling among college women Basketball players.
2. To find out the isolated effect of aerobic exercise on Dribbling among college Women Basketball players.
3. To find out the combined effect of yogic practice and aerobic exercise on Dribbling among College women Basketball players.

**Materials and methods**

The study was formulated as a true random group design, consisting of pre-test and post-test. The subjects (N=60) were randomly assigned into four equal homogeneous groups of 15 basketball players each. Among the four groups, the control group was strictly under control, without undergoing any specific activity. The experimental groups were undergone with the experimental treatments. The groups were assigned as Experimental Groups I, II, III and control group respectively. Pre tests were conducted for all the selected subjects on Dribbling by Johnson basketball test. The experimental groups participated in their respective yogic

practice, aerobic exercise, and combined aerobic exercise and yogic practice 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 Dribbling 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 dribbling**

The skill performance variable, dribbling was measured through Dribble test. The results on the effect of yogic practices, aerobic exercises, combined (yogic practices and aerobic exercises) groups and control group were presented in Table 1.

**Table 1:** Computation of Analysis of Covariance of Dribbling (Scores in Seconds)

Test	Yogic practices group	Aerobic exercises group	Combined (yogic practices and aerobic exercises) group	Control group	Source of Variance	Sum of Squares	DF	Mean squares	F Ratio
Pre-test Mean	17.86	17.60	17.60	17.73	between	0.73	3	0.24	0.07
STD	1.84	2.02	1.72	1.66	within	185.90	56	3.32	
Post-test Mean	23.33	20.86	23.73	18.40	between	324.18	3	108.06	34.78*
STD	1.95	1.72	1.79	1.68	within	174	56	3.11	
Adjusted Mean	14.21	17.48	20.28	17.12	between	344.40	3	114.8	112.23*
					within	56.28	55	1.02	
Mean gain	5.47	3.27	6.13	0.67					

Table F-ratio at 0.05 level of confidence for 3 and 55(df), 3 and 56(df) was 2.78. \* Significant.

Table 1 showed the pre test mean scores of skill performance of dribbling of yogic practices group was 17.86, aerobic exercises group was 17.60, combined (yogic practices and aerobic exercises) group was 17.60 and control group 17.73. The post test means showed differences due to experimental training and mean values recorded were 23.33, 20.86, 23.73 and 18.40 respectively.

As shown in table 1 the obtained F value on the scores of pre test means 0.07 was less than the required value 2.78, which proved that the random assignment of the subjects were successful and their scores in dribbling before the training were equal and there was no significant differences.

The post test scores analysis proved that there was a significant difference between the groups, as the obtained F

value 34.78 was greater than the required F value of 2.78. This proved that the differences between the post test means of the subjects were significant.

Taking into consideration the pre and post test scores among the group’s adjusted mean scores were calculated and subjected to statistical treatment. The obtained F value of 112.23 was greater than the required F value of 2.78. This showed that there were significant differences among the adjusted means on the women basketball players.

Since the significant improvements were recorded, the results were subjected to post hoc analysis using Scheffe’s Confidence Interval test. The results were presented in table-2.

**Table 2:** Scheffe’s Confidence Interval Test Scores on Dribbling (Scores in Seconds)

Control group	Yogic practices group	Aerobic exercises Group	Combined (yogic practices and aerobic exercises) group	Mean Difference	CD at 5% Level
17.12	14.21			2.91*	0.94
17.12		17.48		0.36	
17.12			20.28	3.16*	
	14.21	17.48		3.59*	
	14.21		20.28	6.07*	
		17.48	20.28	2.80*	

\* Significant at 0.05 level.

The post hoc analysis of obtained ordered adjusted means proved that there were significant differences between control group and yogic practices group, control group and combined (yogic practices and aerobic exercises) group, yogic practices group and aerobic exercises group, yogic practices group and

combined (yogic practices and aerobic exercises) group, aerobic exercises group and combined (yogic practices and aerobic exercises) group. As the confidence interval required to be significant at 0.05 level was 0.94 and the obtained values were greater than the required value, it was observed

that the significant differences were found to be existed. It was further seen that there was no significant difference between control group and aerobic exercises group. The ordered adjusted means were presented through bar diagram for better understanding of the results of this study in Figure -1.

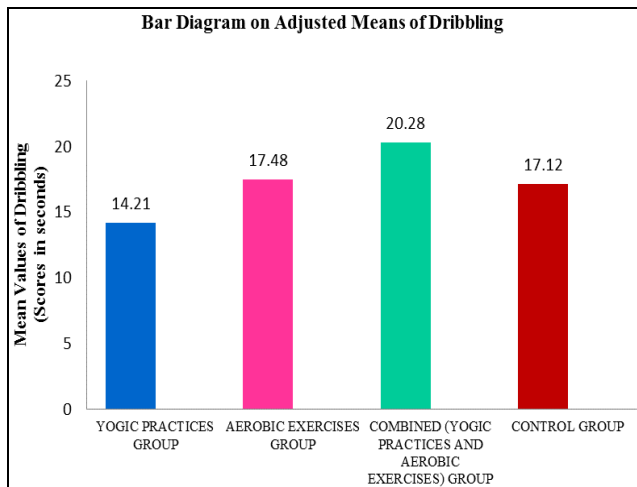


Fig 1:

### Discussion on Findings of Dribbling

The results presented in table 1 showed the obtained adjusted means on dribbling among yogic practices group was 14.21, aerobic exercises group was 17.48 and combined (yogic practices and aerobic exercises) group was 20.28 and followed by control group with a mean value of 17.12. The differences among pre test scores, post test scores and adjusted mean scores of the subjects were statistically treated using ANCOVA and the obtained F values were 0.07, 34.78 and 112.23. It was found that obtained F value on pre test scores were not significant and the obtained F values on post test and adjusted means were significant at 0.05 level of confidence, as these were greater than the required F value of 2.78.

The post hoc analysis of obtained ordered adjusted means proved that there were significant differences between control group and yogic practices group, control group and combined (yogic practices and aerobic exercises) group, yogic practices group and aerobic exercises group, yogic practices group and combined (yogic practices and aerobic exercises) group, aerobic exercises group and combined (yogic practices and aerobic exercises) group.

It was further found that there was no significant difference existed between control group and aerobic exercises group.

Further the post hoc analyses showed that there was significant difference among the experimental groups in comparison to the control group, which clearly indicating that combined (yogic practices and aerobic exercises) group and aerobic exercises group had significantly produced better performance followed by aerobic exercises than yogic practices in enhancing the dribbling performance of women basketball players. The findings of the study are in favour of the study undertaken by Ahmed and El- Aal (2012) Karkare and Awasare (2012) and Sisodiya and Abhinav (2012) [6].

### Conclusions

1. It was also concluded that yogic practices group is significantly better than the control group in improving the dribbling among college women basketball players.
2. It is concluded that aerobic exercises group was

significantly better than the control group in improving the dribbling among college women basketball players.

3. It was also concluded that aerobic exercises group is significantly better than the yogic practices in improving the dribbling among college women basketball players.
4. It is further concluded that combined (yogic practices and aerobic exercises) groups was significantly better than aerobic exercises group and yogic practices group in improving the dribbling as measured through Johnson basketball test.

### Recommendations

1. It is recommended that the coaches, physical educationists and sportspersons may include aerobic exercises and yogic practices 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 practice yoga and aerobic exercise, to enhance their fitness level to lead a healthy life.

### Reference

1. Balasundari, Pushparajan. Effect of varied modalities of high intensity interval training on physical fitness variables and skill performance of male basketball players", International Journal of Advanced Life Sciences. 2013; 6(1):51-53.
2. Delextrat, Martinez. Small-Sided Game Training Improves Aerobic Capacity and Technical Skills in Basketball Players." International Journal of Sports Medicine, DOI: 10.1055/s-0033-1349107.2013.
3. Ezhilarasi. Isolated and Combined Effects of Yogic Practices and Aerobic Exercise on Anxiety among College Women Basketball Players" Star International Research Journal of physical education. 2014; 2(4):8-14.
4. Oudejans Karamat, Stolk. Effects of Actions Preceding the Jump Shot on Gaze Behavior and Shooting Performance in Elite Female Basketball Players", International Journals of Sports Science & Coaching. 2012; 7(2):255-267.
5. Parimlam, pushparajan. Effect of specific basketball training program on physical fitness and skill performance variables of inter collegiate women basketball players, International Journal of Advanced Life Sciences. 2013; 6(1):33-35.
6. Singh Aman Sisodiya, Abhinav. Effect of Plyometric Exercise, Circuit Training and their Combined Effect on the Basketball Playing Ability", International Journal of Health, Sports and Physical Education. 2012; 1(1):28-33.