



Effect of Complex Training with and Without Interval Training on Selected Performance Variables among Inter Collegiate Basketball Players

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ABSTRACT

Basketball is a popular team sport that is played and enjoyed by millions of people around the world. It is known for its fast-paced and dynamic nature, requiring a combination of physical skills, strategy, and teamwork. Basketball is an athletic sport, that can be played both indoors and outdoors. Because of its continuous action and frequent scoring, basketball is one of the most popular spectator as well as participant sports in the world. Basketball, extremely popular around the world, is a court game played by two teams of five players each. The object is to put a ball through a basket, and thus score more points than the opposing team. Training programmed for improving skill performance dribbling, passing and shooting. The idea of the study was to find out the enhancing performance variables among inter collegiate basketball players through complex training with and without interval training. To achieve the purpose of the study, 60 inter collegiate basketball players would randomly selected from Coimbatore district and their age ranged between 18 and 25year. All skill performance variables were assessed by standard tests; dribbling by zig zag dribble, passing by throw accuracy and shooting by speed goal shoot test through john basketball test. Complex training with interval training group, Interval training group and Control group (n = 60) would undergone for a period of 12 weeks. The results revealed that there was a significant difference found on the criterion variables. The difference was found by complex training with interval training and interval training given to the experimental group I, experimental group II and control group on Dribbling, Passing and Shooting of inter collegiate basketball players.

Keywords: Complex training with interval training, Interval training, Dribbling, Passing, Shooting and Basketball Players.

INTRODUCTION

Basketball is one of the quickest games, and to perform each skill at the desired or necessary level, high level conditioning, coordination, and technical and tactical potential are vital. A programmed called particular circuit and cross training comprises performance training created expressly to improve athletic performance. Training programmed for improving game performance may target skills like dribbling, passing, shooting, and other game-specific skills Complex training with basketball can be an effective way to develop the physical attributes and skills required to excel in the sport. It's essential to maintain consistency, stay focused on your goals, and listen to your body to avoid overtraining or injuries. complex training program can be a great way to develop a well-rounded skill set while improving your physical conditioning. Complex training combines strength training exercises with sports-specific drills or movements to enhance sports performance. Basketball can be an excellent choice for interval training due to its fast-paced and stop-and-start nature **Freitas T.T(2019)**. Interval training involves alternating between short bursts of high-intensity activity and periods of rest or lower-intensity activity. Incorporating basketball into your interval training routine can help improve your cardiovascular fitness, agility, speed, and endurance. Interval training with basketball can be an engaging and effective way to improve your overall fitness while honing your basketball skills. It's essential to tailor the workout to your fitness level and gradually progress to avoid overexertion and reduce the risk of injuries **Rodrigo Ramirez Campillo(2022)**. a player needs this kind of particular Complex training with interval training, Interval training for success in sports. Thus, the present studies has been carries out to study the Effect of complex training with and without interval training on selected performance variables among inter collegiate basketball players. Both Complex training with interval training, Interval training can be effective components of a well-rounded fitness program. However, it's important to tailor your training approach to your specific fitness goals and individual preferences. Always consult with a fitness professional or trainer to ensure that your workouts are safe and effective.

METHODOLOGY

The idea of the study was to find out the complex training with and without interval training on selected performance variables among inter collegiate basketball players. To achieve the purpose of the study, twenty inter collegiate basketball players would randomly selected from affiliated collegiate from Bharathiar University , Coimbatore district and their age ranged between 18 and 25year.All skill performance variables were assessed by standard tests;

skill performance variables were assessed by standard tests; dribbling by zig zag dribble, passing by throw accuracy and shooting by speed goal shoot test through john basketball test. Total number of subject 60 divided into three equal group complex training with interval training group and interval training group and control group (n = 20) would undergone for a period of twelve weeks.

CRITERION MEASURES

The subjects of complex training with interval training group and interval training group and control group would assessed on the selected variables by the standardized test items before and after the training period of twelve weeks.

Table –I

S.NO.	VARIABLES	TESTS	UNIT OF MEASUREMENT
PERFORMANCE VARIABLES			
1	Dribbling	Zig zag dribbling Johnson basketball ability test	Seconds
2	Passing	Throw for accuracy Johnson basketball ability test	Points
3	Shooting	Field goal speed test Johnson basketball ability test	Counts

TRAINING PROGRAMME

The total duration of complex training with interval training and interval training for three alternative days. During the training period 90 min the subject were treated with complex training with interval training group(Monday, Wednesday, Friday) and interval training group (Tuesday, Thursday, Saturday) for three alternative days per week.

Experimental Group I Complex Training With Interval Training Group (CTWIT), Experimental Group II Interval Training Group (IT), Control Group III Not engaged in any specific training program .Training Duration One and Half Hours (90 minutes), Preparation / warm-up -10 minutes, Training for specific components -30 minutes, Distributed rests -10 minutes, Relaxation / Cool-down -10 minutes .Training session Per week three alternative days a week only in the morning total length of training twelve weeks training load progression every four weeks.

STATISTICAL TECHNIQUES

The present study were mainly on testing the significant of mean differences among the groups and secondarily with the increase of means in each group from baseline to post test for various measures. The statistical tool used for the criterion measures were tested for significance by applying paired 't' test. All of the statistical analysis tests were computed at 0.05 level of significance (P<0.05).

RESULTS

Table-II

SIGNIFICANCE OF MEAN GAINS /LOSSES BETWEEN PRE AND POST TEST OF CYWITG, ITG , CG OF INTER COLLEGIATE BASKETBALL PLAYERS ON DRIBBLING

Variables	GROUP	Pre test Mean and SD	Post test Mean and SD	Mean Diff.	SE	't'- ratio
DRIBBLING	CTWITG	18.65±2.58	20.25±1.97	1.60	0.36	4.37*
	ITG	19.05±3.47	20.40±3.34	1.35	0.40	3.32*
	CG	18.10±2.67	17.60±3.26	0.50	0.32	1.56*

*Significant at 0.05 level of confidence

Table-II reveals that the obtained mean values of pre test and post test scores of Dribbling on Complex Training With Interval Training Group were 18.65 and 20.25, Interval Training Group 19.05 and 20.40, Control Group 18.10 and 17.60 respectively; the obtained t ratio was Complex Training With Interval Training Group 4.37, Interval Training Group 3.32 and Control Group 1.56. The required table value is 2.09 at 0.05 level of confidence for the degree of freedom 1 and 19. The obtained t ratio was greater than the table value. It is found to be significant changes in Dribbling of the basketball

players. The mean values on Complex Training With Interval Training Group, Interval Training Group and control group are graphically represented in figure-1.

Figure-1

FIGURE-1: BAR DIAGRAM SHOWING THE PRE-TEST& POST-TEST CYWITG, ITG , CG OF INTER COLLEGIATE BASKETBALL PLAYERS ON DRIBBLING

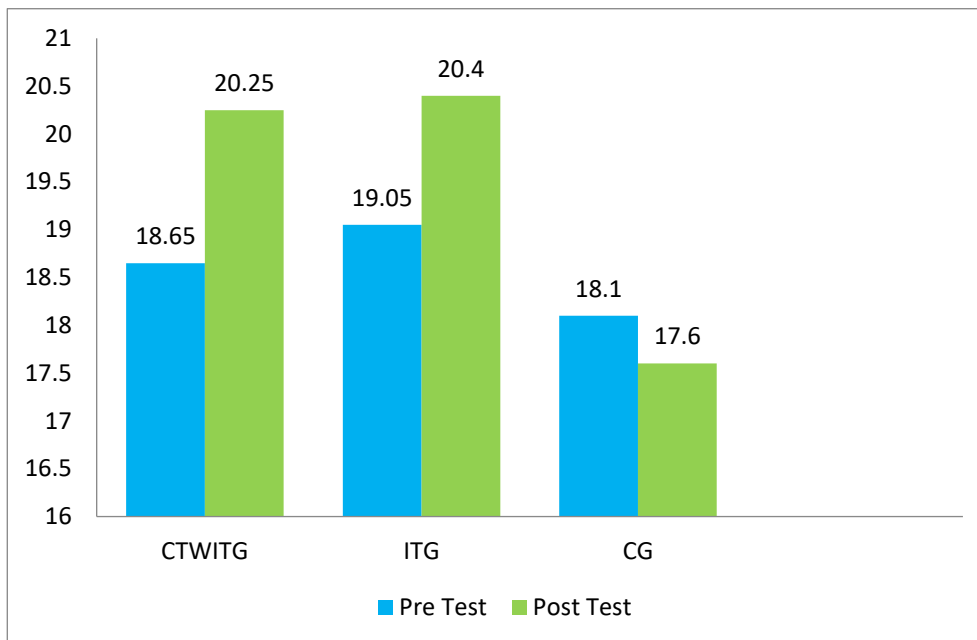


Table-III

SIGNIFICANCE OF MEAN GAINS /LOSSES BETWEEN PRE AND POST TEST OF CYWITG, ITG , CG OF INTER COLLEGIATE BASKETBALL PLAYERS ON PASSING

Variables	GROUP	Pre test Mean and SD	Post test Mean and SD	Mean Diff.	SE	't'- ratio
PASSING	CTWITG	11.95±2.99	13.90±2.46	1.95	0.38	5.03*
	ITG	11.65±2.03	15.03±2.74	3.40	0.61	5.50*
	CG	12.35±2.56	11.40±1.87	.950	0.55	1.69*

*Significant at 0.05 level of confidence

Table-III reveals that the obtained mean values of pre test and post test scores of Dribbling on Complex Training With Interval Training Group were 11.95 and 13.90, Interval Training Group 11.65 and 15.03, Control Group 12.35 and 11.40 respectively; the obtained t ratio was Complex Training With Interval Training Group 5.03, Interval Training Group 5.50 and Control Group 1.69. The required table value is 2.09 at 0.05 level of confidence for the degree of freedom 1 and 19. The obtained t ratio was greater than the table value. It is found to be significant changes in Passing of the basketball players. The mean values on Complex Training With Interval Training Group, Interval Training Group and control group are graphically represented in figure-2

Figure-2

FIGURE-2: BAR DIAGRAM SHOWING THE PRE-TEST& POST-TEST CYWITG, ITG , CG OF INTER COLLEGIATE BASKETBALL PLAYERS ON PASSING

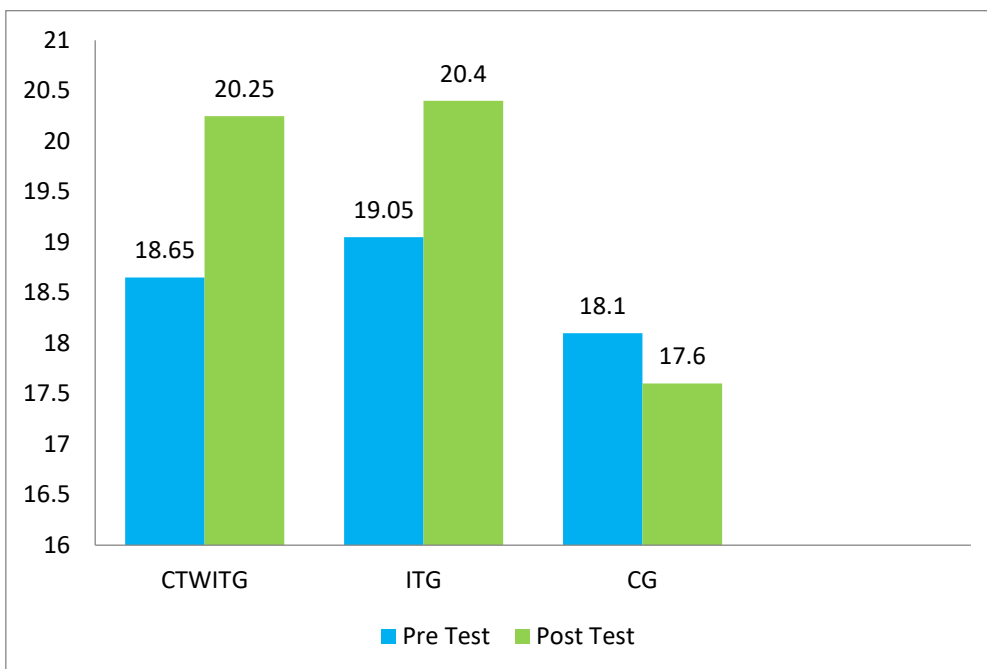


Table-IV

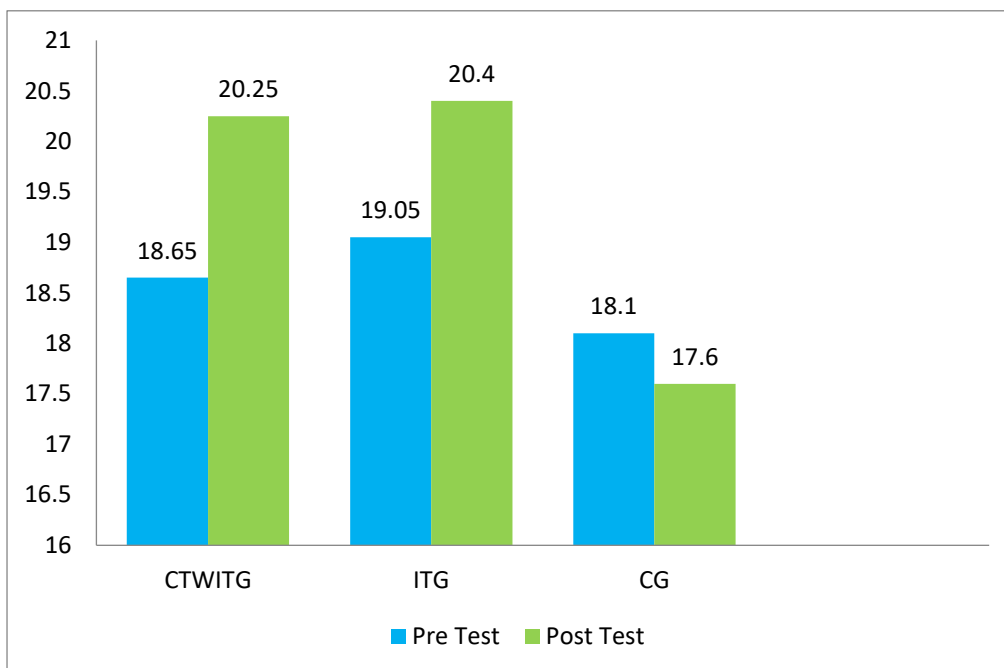
SIGNIFICANCE OF MEAN GAINS /LOSSES BETWEEN PRE AND POST TEST OF CYWITG, ITG , CG OF INTER COLLEGIATE BASKETBALL PLAYERS ON SHOOTING

Variables	GROUP	Pre test Mean and SD	Post test Mean and SD	Mean Diff.	SE	't'- ratio
SHOOTING	CTWITG	11.80±2.04	14.95±1.73	3.15	0.32	9.64*
	ITG	11.50±2.16	13.15±2.05	1.65	0.31	5.18*
	CG	12.05±1.84	11.55±1.66	0.50	0.41	1.20*

*Significant at 0.05 level of confidence

Table-IV reveals that the obtained mean values of pre test and post test scores of Dribbling on Complex Training With Interval Training Group were 11.80 and 14.95, Interval Training Group 11.50 and 13.15, Control Group 12.05 and 11.55 respectively; the obtained t ratio was Complex Training With Interval Training Group 9.64, Interval Training Group 5.18 and Control Group 1.20. The required table value is 2.09 at 0.05 level of confidence for the degree of freedom 1 and 19. The obtained t ratio was greater than the table value. It is found to be significant changes in Shooting of the basketball players. The mean values on Complex Training With Interval Training Group, Interval Training Group and control group are graphically represented in figure-3

Figure-3

FIGURE-3: BAR DIAGRAM SHOWING THE PRE-TEST& POST-TEST CYWITG, ITG, CG OF INTER COLLEGIATE BASKETBALL PLAYERS ON SHOOTING

DISCUSSION ON FINDINGS

The data analysis shows that a twelve-weeks Complex Training With Interval Training program combined with Interval Training significantly improved performance variables for Dribbling, Passing and shooting. This could be explained by the development of Shooting during Complex Training with Interval Training. Interval Training increases Dribbling and Passing. Regular participation in complex training requires dedication, consistency, and a thoughtful approach to balancing strength development with sports-specific skills. By continually refining and optimizing your program, you can enhance your athletic performance in your chosen sport, such as basketball. Interval training involves making strategic adjustments to your workout routine to continuously challenge your body and enhance your fitness gains. Here are some key strategies to help you improve your interval training. The findings of the present study are in consonance with the results arrived at by **Rodrigo Ramirez Campillo et.al., (2022)**, **P Kumaravelu (2018)** **Katushabe E.T et.al.,(2020)**.

CONCLUSIONS

Based on the findings and within the limitation of the study it is noticed that practice of Complex Training with Interval Training helped to improve Shooting and Interval Training helped to improve Dribbling and Passing of intercollegiate basketball players. It was also seen that there is progressive enhancement in the selected criterion variables of Complex Training with Interval Training and Interval Training after twelve weeks of training programmed. Further, it also helps to improve Dribbling, Passing and Shooting.

It was concluded that individualized effects of Complex Training with Interval Training Group showed a statistically significant positive sign over the course of the treatment period on Shooting of intercollegiate basketball players.

It was concluded that individualized effects of Interval Training Group showed a statistically significant positive sign over the course of the treatment period on Dribbling and Passing of intercollegiate basketball players.

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