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Influence of Psychological Skills Training on Selected Psychomotor and Game Skills Variables Among Basketball Players

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Abstract: The purpose of the present study was to find out the influence of psychological skills training on selected psychomotor and game skills variables among basketball players. To achieve the purpose of the present study, twenty women basketball players from the Providence women's college, Calicut were selected as subjects at random and their age ranged between 18 and 23 years. The subjects were randomly divided in to two equal groups namely experimental (Psychological Skills Training) and control group (CG). The experimental group underwent psychological skills training for three days a week for a period of 6 weeks in addition to their regular training program. The control group was not exposed to any experimental training. Before the training pre test was conducted to assess the psychomotor variables namely agility, explosive power, differentiation ability, orientation ability and reaction ability and game skill variables namely passing, shooting and dribbling. Agility was assessed using 4x10m shuttle run, explosive power was assessed using sergeant vertical jump, differentiation ability measured using medicine ball throw, orientation ability assessed using numbered medicine ball test reaction and reaction ability was measured using ball reaction exercise test. The game skills variables were assessed using AAHPERD Basketball skills test battery for females for both the groups. After the experimental training period of 6 weeks, the post test was conducted. To find out the significant improvement suitable statistical tool was applied and the level of signifance was tested at 0.05 level. It was concluded that there was significant improvement on selected psychomotor variables namely agility, explosive power, differentiation ability, orientation ability and reaction ability also it was concluded that the game skill variables passing, shooting and dribbling had significant improvement due to the effects of psychological skills training.

Keywords: Psychological Skills Training, shooting, dribbling and reaction ability.

INTRODUCTION

Basketball is a competitive sport that is performed at a high altitude. Basketball is one of the most popular and widely played sports in the world. In basketball, a game is won or lost by the result of scoring, a rule provision that makes shooting percentage a decisive factor in winning or losing the game (chen et.al 2018). However, many reasons affect shooting accuracy, among which psychological factors are the most important factor. To enhance the shooting accuracy and win the game, it is important to analyze and research the psychological factors that influence it (Bali, 2015). The modern basketball game is not only a competition to test both players in terms of physical quality, technique, and tactics but also a competition of mental quality and willpower (Attene, 2015 & Omez, 2017)

Player-based psychological skills are an important factor that any coach should understand. Unfortunately, up to date there has not been any study that deals with the disclosure of player-based psychological skills especially for basketball athletes (Nanda and Dimyati, 2019). The success of an athlete is influenced by several factors. In general, the factors that have been considered to influence the success of an athlete are physical, technical, tactical and psychological skills. In accordance to the statement about that the success of an athlete is influenced by the psychological factors, Weinberg & Gould (2011) explain that not less than 50% of the success in sports is defined by the mental factors; in fact, within the sports such as golf, tennis and figure skating, the influence of the mental factors might achieve 90%. Similarly, Middelkamp, van Rooijen, Wolfhagen, and Steenbergen (2017) explain that there is a rapid and very dramatic developing on the use of self-efficacy intervention toward the achievement that should be achieved among the members of a fitness club. Other psychological skill, such as motivation, has significant influence on anxiety and tactical performance indicators. As a result, psychological skills are considered important to be included into the training program for achieving the success among the athletes (Menegassi *et al.,* 2018).

For basketball athletes, every playing position has different characteristics. In relation to the different characteristics of the playing position, the aspects of psychological skills that might have been identified are namely motivation, selfconfidence, self-efficacy and imagery. Then, the significant psychological skills are observed based on the playing position on the aspects of aggressiveness, pudency, interpersonal passiveness, low positive emotion and inefficiency (Tayari, Kamkary, Roohi, & Shokrzade, 2012). Delextrat and Kraiem (2013) explain that the presence of anxiety among the basketball players might be assessed based on the heart rate in relation to their playing position. Similarly, te Wierike, Elferink-Gemser, Tromp, Vaeyens, and

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Visscher (2015) explains that every position has differences in performing the ball arrangement and the self-regulation during a game. Sood (2017) further asserts that there have been significant differences on the psychological skills of the basketball players based on the playing position. Specific to the case of the study, the intended playing position is guard, forward and centre. During the development of a basketball game, there are three positions that should be given special position namely guard, forward and center (Kryeziu & Asllani, 2016). Departing from the review in the previous studies toward the athlete psychology and the playing position in basketball, the researchers have found that every position that a basketball player occupies display differences in terms of psychological skills.

Psychomotor variables act as the medium for the realization of cognitive and affective domains of learning and motor behavior. All these domains of learning are inseparable identities and work in perfect harmony and unison with one another. The psychomotor variables are primarily concerned with muscular contraction. Performance of motor skills involves neural, physiological and psychological aspects and is a continuum that runs the gamut from physical to cognitive and there is always integration between these aspects of human behavior. Basketball is a fast-paced game that requires the knowledge and instinct to perform quickly and properly. The sport of basketball requires five basic skills. While some players might be more experienced with some skills than others, it is best to have at least some ability in all five areas namely dribbling, running, passing, shooting and jumping.

Hence, through the study the researcher would like to identify the influence of psychological skills training on selected psychomotor and game skills variables among the women basketball players. The findings and the differences that have been found in the study will be disclosed more comprehensively and the disclosure later will include the different aspects of psychomotor variables in the basketball game.

Statement of the Problem:

The purpose of the present study was to find out the influence of *psychological skills training* on selected psychomotor and game skills variables among basketball players.

METHODS

To achieve the purpose of the present study, twenty women basketball players from the Providence women's college, Calicut were selected as subjects at random and their age ranged between 18 and 23 years. The subjects were randomly divided in to two equal groups namely experimental (*Psychological Skills Training*) and control group (CG). The experimental group underwent *psychological skills training*s for three days a week for a period of 6 weeks in addition to their regular training program. Experimental treatment was given only in the evening between 4.30p.m. and 5.30.p.m. The control group was not exposed to any experimental training. Before the training pre test was conducted to assess the psychomotor variables namely agility, explosive power, differentiation ability, orientation ability and reaction ability and game skill variables namely passing, shooting and dribbling. Agility was assessed using 4x10m shuttle run, explosive power was assessed using sergeant vertical jump, differentiation ability measured using medicine ball throw, orientation ability assessed using numbered medicine ball test and reaction ability was measured using ball reaction exercise test. The game skills variables were assessed using AAHPERD Basketball skills test battery for females for both the groups. After the experimental training period of 6 weeks, the post test was conducted. To find out the significant improvement suitable statistical tool was applied and the level of signifance was tested at 0.05 level.

Analysis of Data

The data collected from the basketball players on selected criterion variables were statistically examined by using analysis of covariance (ANCOVA) to determine the effect of psychological skills training on selected psychomotor and game skills variables among basketball players. The level of significance was tested at 0.05 level.

Table 1: Computation of Mean and Dependent 't' Test of Experimental and Control Group on Selected Psychomotor and Game Skills Variables among Basketball Players

S.No	Variable	Test	Psychological Skills Training Group	Control Group
1.	Agility	Pretest Mean	11.42	11.59
		Posttest Mean	10.48	11.57
		't' test	72.08*	1.70
2.	Explosive Power	Pretest Mean	34.4	33.8
		Posttest Mean	38.1	34.1
		't' test	24.22*	1.15
3.	Differentiation	Pretest Mean	15	14.6

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	Ability	Posttest Mean	17.3	14.5
		't' test	15.06*	1.00
4.	Orientation Ability	Pretest Mean	10.24	10.41
		Posttest Mean	9.39	10.42
		't' test	18.41*	0.79
5.	Reaction Ability	Pretest Mean	3.52	3.32
		Posttest Mean	2.54	3.31
		't' test	12.05*	1.30
6.	Passing	Pretest Mean	34.2	32.9
		Posttest Mean	37.5	33.3
		't' test	21.60*	1.81
7.	Shooting	Pretest Mean	16	15
		Posttest Mean	18.1	14.9
		't' test	6.68*	0.32
8.	Dribbling	Pretest Mean	10.84	10.88
		Posttest Mean	9.87	10.86
		't' test	20.27*	1.74

*significant at 0.05 level

Table - I shows that the pre-test mean value of psychomotor and game skill variables namely on agility, explosive power, differentiation ability, orientation ability, reaction ability, passing, shooting and dribbling of psychological skills training and control groups are 11.42, 34.4, 15, 10.24, 3.52, 34.2, 16 & 10.84 and 11.59, 33.8, 14.6, 10.41, 3.32, 32.9, 15 & 10.88 respectively. The Post-test means are 10.48, 38.1, 17.3, 9.39, 2.54, 37.5, 18.1 & 9.87 and 11.57, 34.1, 14.5, 10.42, 3.31, 33.3, 14.9 & 10.86 respectively. The obtained dependent t-ratio values of psychological skills training group on agility, explosive power, differentiation ability, orientation ability, reaction ability, passing, shooting and dribbling are 72.08, 24.22, 15.06, 18.41, 12.05, 21.60, 6.68 & 20.27 which was found to be greater than the required table value of 2.13 with df 14 at 0.05 level of significance. The obtained dependent t-ratio values of control group on agility, explosive power, differentiation ability, orientation ability, reaction ability, passing, shooting and dribbling are 1.70, 1.15, 1.00, 0.79, 1.30, 1.81, 0.32 and 1.74 respectively which was found to be less than the required table value of 2.13 with df 14 at 0.05 level of significance.

Table 2: Analysis of Covariance of Experimental and Control Groups on Selected Psychomotor and Game Skills Variables among Basketball Players

S.No	Variable	Adjusted Post Test Means		Source of Variance	Sum of Squares	df	Mean Squares	F
		Ex.Group	Control Group					
1.	Agility	10.57	11.49	B	4.135	1	4.1347	2951.88*
				W	0.024	17	0.0014	
2.	Explosive Power	38.45	34.15	B	56.732	1	56.73	117.97*
				W	8.175	17	0.481	
3.	Differentiation Ability	17.11	14.68	B	29.235	1	29.235	195.92*
				W	2.537	17	0.149215	
4.	Orientation Ability	9.47	10.34	B	3.694	1	3.694	425.05*
				W	0.148	17	0.00869	
5.	Reaction Ability	2.45	3.39	B	4.288	1	4.288	142.04*
				W	0.513	17	0.03019	
6.	Passing	36.89	33.91	B	42.774	1	42.774	129.34*
				W	5.622	17	0.3307	
7.	Shooting	17.6	15.4	B	21.511	1	21.511	20.54*
				W	17.800	17	1.047	
8.	Dribbling	9.89	10.85	B	4.598	1	4.598	435.77*
				W	0.179	17	0.0105	

*P < 0.05 Table F, df (1, 17) at (0.05) = 4.45

Table –II shows that the adjusted post test means of psychological skills training and control group on agility, explosive power, differentiation ability, orientation ability, reaction ability, passing, shooting and dribbling are 10.57, 38.45, 17.11, 9.47, 2.45, 36.89, 17.6 & 9.89 and 11.49, 34.15, 14.68, 10.34, 3.39, 33.91, 15.4 & 10.85 respectively. The obtained 'F' ratio values of agility, explosive power, differentiation ability, orientation ability, reaction ability, passing, shooting and dribbling are 2951.88,

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117.97, 195.92, 425.05, 142.04, 129.34, 20.54 and 435.77 respectively which are higher than the table value of 4.45 with df (1, 27) at 0.05 level of significance. Since, the obtained F value found to be higher than the required table value; it indicates that there is significant difference among the adjusted post test means of psychological skills training and control group on selected psychomotor and game Skills variables among basketball Players.

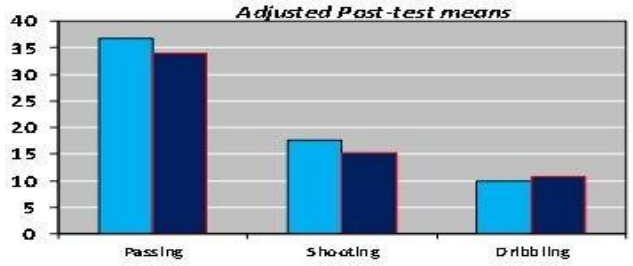

Fig.2 Game Skills Variables

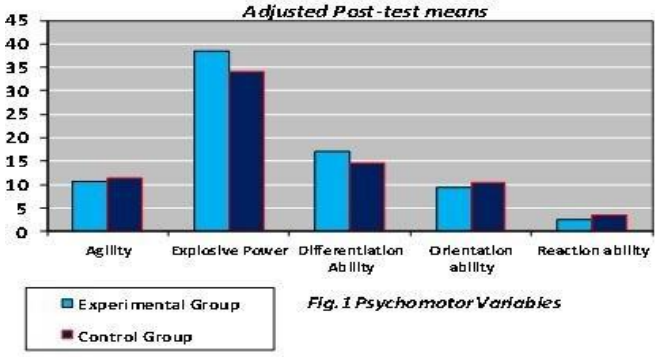

Fig. 1 Psychomotor Variables

DISCUSSION

The current study investigated the effect of psychological skills training on selected psychomotor and game skills variables among basketball players, and the findings are being compared to similar and closely related studies. The findings of this study indicate that psychological skills training significantly improved selected psychomotor and game skills variables among basketball players.

The results of this study were supported by the available literature conducted by Ramesh and Madan (2019) on the effect of a 12-week Psychological Skills Training program on selected skill performance variables of youth basketball players. It was strongly revealed that psychological skills training had a significant effect on performance variables dribbling and passing ability.

CONCLUSION

According to the study's findings, there was a significant improvement in selected psychomotor variables such as agility, explosive power, differentiation ability, orientation ability, and reaction ability. Additionally, the game skill variables passing, shooting, and dribbling showed significant improvement as a result of psychological skills training.

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