International Journal of Physical Education and Sports Sciences
Vol. 14, Issue No. 2, April-2019, ISSN 2231-3745

Comparative Study of Dynamic Balance, Agility and Anxiety of Volleyball and Football Players

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Abstract – The purpose of the study is to compare the dynamic balance and agility and Sports Competition Anxiety of Volleyball and Football players. One hundred male state level players of Uttar Pradesh (Sultanpur, Pratapgarh, Jaunpur and Allahabad districts) were selected as participants. For this study two Physical Components namely dynamic balance and agility and one Psychological Components sports competition anxiety were used for comparison between football and volleyball players. To find out the significant difference between the state level volleyball and football players on each of the selected physical and psychological variables, the test of significance (independent't'-test) was employed and the hypothesis was tested at 0.05 level of significance. The findings of the study in relation to dynamic balance and sports competition anxiety showed significant difference between football players and volleyball players whereas in case of agility showed insignificant difference between football players and volleyball players

Keywords: Anxiety, Dynamic Balance, Agility.

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INTRODUCTION

Today the preparation of an athlete for top achievement is a completely dynamic state characterized by a high level of physical and physiological efficiency and degree of perfection of the necessary skills and knowledge, technique and tactical preparation. An athlete arrives at this stage only as a result of appropriate training. Thus, athletes training today are a multisided process of expedient use of aggregate factor so as to influence the development of an athlete and ensure the necessary level of participation. (Dey, 1985)

The game of Volleyball offers opportunities for the development of Strength, endurance, speed, agility, and neuro-muscular skills and immediate action along with many precise educational outcomes. The game of Volleyball requires a training programme, which develops muscle flexibility, strength, power and agility all of which must be integrated to achieve the best skill performance from each player. (Olson, 2005)

Football is the most universal and popular sport across the world. It is actively played and watched by great number of people with close interest in all countries around the world. Fitness training of a soccer player is a psychophysical adaptation process, on the basis of which one can start to perform activities with a ball. Frequent repetitions of tasks which emerge during trainings and competitions lead not only to developing motor abilities or mastering energetic processes, but also to establishing particular bonds between them. A characteristic feature of physical activities involved in football during a game is that a player performs efforts which often reach their maximum psychophysical abilities. (Rethacker, 1984

For performance excellence, in any activity, specific fitness is very important besides psychological soundness, technical & tactical efficiency and intellectual soundness. The level and types of fitness is different according to the demand and nature of sports. The fitness quality required in large area games like football, rugby, and hockey differed from that of the small area games like Volleyball, Basketball, Handball, kho-kho etc. Now the question arises that, is there any difference in physical and psychological parameters between the players of volleyball and football games? To get the answer the researchers planned the present project. They were interested to compare two specific physical fitness parameters agility and dynamic balance separately for two games viz. Volleyball and Football. Football and Hockey are two very popular wide area games in the world today. Though the games (Football and Volleyball) are different from the stand point of playing area i.e. ground size required for laying out the fields but the movements executed by the players in each game required high degree of motor potentialities. It's true that the movement pattern executed by the volley balers' is somehow different than the Football players. But both the games

required high degree of motor fitness and psychological stability. The researchers were interested to compare the difference in few motor (agility, dynamic balance) and psychological qualities (anxiety) between state level players of the said games.

METHODOLOGY

Purpose: The purpose of the study is to compare the Dynamic balance and Agility and Anxiety of Volleyball and Football players.

Selection of Participants: One hundred male subjects in Uttar Pradesh (Sultanpur, Pratapgarh, Jaunpur and Allahabad) were selected as participants for the purpose of study. Keeping in view the objectives, the players were categorized into two groups namely Volleyball players (50 male) and football players (50 male). The state level player comprised of those who had represented in Senior state competitions held in India only were selected as subjects for purpose of the study who were true representative to the population of Indian player.

Selection of Variables

For this study the following physical and physiological variables was chosen:

1. **Physical Components**

(a) Dynamic Balance

(b) Agility

2. **Psychological Components**

(a) Sports Competition Anxiety

Administration of Tests

The research scholar put in the maximum effort and meticulous care to attain precision and accuracy in the measurements. Sophisticated instruments and standard procedures were used to assess the performance on different variables.

Dynamic Balance Test (Modified Bass Test) (Nelson and Jonshon, 1988)

Test objective - To assess the dynamic balance of the subject.

Equipment and marking- Stop watch, ¾ inch marking tape and yard stick the marking of the floor was done as per figure-8.

Procedure- To subject stood with right foot on the starting mark the performer then leaped to the first tape to hold a standing position on the ball of his left foot for as many seconds as possible up to five seconds then she leaped to the second tape mark with from tape mark completely covered with the ball of the foot so that it could not be seen.

Scoring- The score for each mark successfully landed was five point in addition, one point was awarded for each second the balance was leap up to 5 seconds per mark. Thus a performer could score 10 points per mark or a total of 100 point for the test.

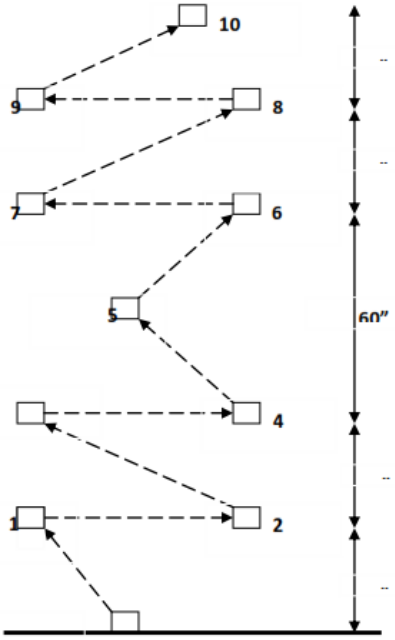

Figure 1- modify bass test

Shuttle Run (Mcgee and Barrow, 1979)

Test objective – To measure agility while running and changing directions

Equipments – stopwatch, measuring tape, marking tape, and two blocks of wood (2× 2× 4")

Administration and directions – lines are placed 30 feet apart with marking tape. The two blocks are placed adjacent to and outside of the line not being used as the starting line. On the signal "Go" the test performer (1) runs from the starting line to the blocks and picks one up; (2) returns to the starting line and places the block behind the line'; (3) runs to pick up the second block; and (4) returns to the starting line and places the second block behind the line.

Scoring – two trials are permitted. The better time to the nearest one-tenth second is accepted as the score. Rest should be allowed between trials

Sports Competition Anxiety Test

Purpose: The purpose of test will be to measure the sports competition anxiety level.

Procedure:

1. The sports competition anxiety test (SCAT) will be administered few hours before the competition.

2. Instruction also given specially to answer all the items then questionnaire distributed to groups.

3. 10 minute time will be given to answer the question.

4. Questionnaire will be taken back after it was duly completed.

Scoring:

1. The questionnaire has 15 items. For each item in the questionnaire one of three responses are possible:

a) Hardly Ever

b) Some times

c) Often

2. The 10 test items are 2, 3, 5, 6, 8, 9, 11, 12, 14 and 15. The spurious items: 1, 4, 7, 10 and 13 are not scored. Items 23, 5, 8, 9, 12, 14 and 15 are worded and are scored as according to following key:

a) Hardly Ever – 1

b) Sometimes – 2

c) Often - 3

3. Items 6 and 11 are scored according following key:

a) Often - 1

b) Sometimes – 2

c) Hardly Ever – 3

Statistical Analysis Used for Analysis of Data: To find out the significant difference between the state level volleyball and football players on each of the selected physical and psychological variables, the test of significance (independent't'-test) was employed and the hypothesis was tested at .05 level of significance.

RESULTS AND DISCUSSION

The mean difference between Volleyball player and Football player in relation to speed has been presented in Table 1

Table - 1

Significance of Difference between Volleyball and Football Players on Dynamic Balance

Groups	Mean	SD	SE Mean	DM	"t" ratio
Volleyball Players	77.10	11.48	1.62	14.70	2.152*
Football Players	62.40	14.08	1.99		

*Significant at 0.05 level

$t_{.05}(98) = 1.98$

Table-1 reveals the descriptive analysis of volleyball and football players in Dynamic Balance. In case of volleyball players shows value of mean and standard deviation (77.10 ± .11.48) respectively and Football Players shows value of mean and standard deviation (62.40 ± 14.08) respectively.

It is evident from Table-1 that there was a significant difference between the means of the volleyball player and football Players on Dynamic Balance (modified bass test) since the obtained value of 't' (2.152) was higher than the tabulated value of 't' (1.98) which was required to be significant at (98) degree of freedom with 0.05 level of confidence.

The graphical representation of mean and SD of volleyball and football Players on Dynamic Balance has been presented in Figure 2.

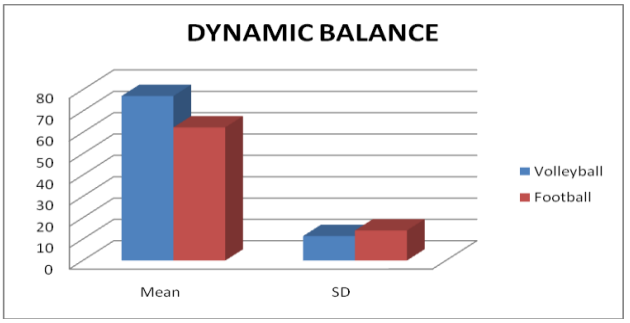

Figure 2- Comparison of Mean and SD Scores in volleyball player and football players on Dynamic Balance

Table - 2

Significance of Difference between Volleyball and Football Players on Agility

Groups	Mean	SD	SE Mean	DM	"t" ratio
Volleyball Players	9.76	1.32	.186	.437	.253
Football Players	9.33	1.65	.233		

*Significant at 0.05 level

$t_{.05}(98) = 1.98$

Table-2 reveals the descriptive analysis of volleyball and football players in Agility. In case of volleyball players shows value of mean and standard deviation (9.76 ± 1.32) respectively and Football Players shows value of mean and standard deviation (9.33 ± 1.65) respectively.

It is evident from Table-2 that there was no significant difference between the means of the volleyball player and football Players on agility (Shuttle Run) since the obtained value of 't' (.253) was less than the tabulated value of 't' (1.98) which was required to be significant at (98) degree of freedom with 0.05 level of confidence.

The graphical representation of mean and SD of volleyball and football Players on agility has been presented in Figure 3.

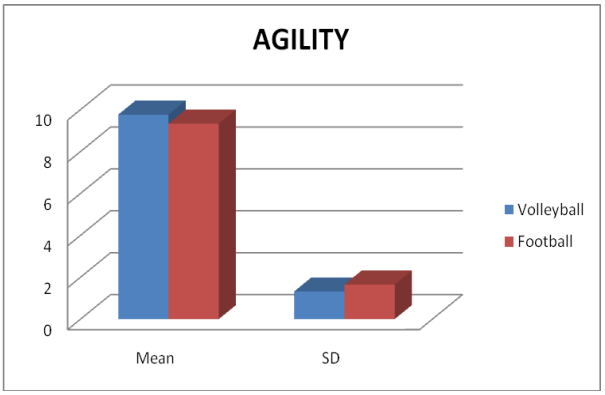

Figure 3- Comparison of Mean and SD Scores in volleyball player and football players on Agility

Table - 3

Significance of Difference between Volleyball Playetr and Football Players on Sports Competition Anxiety Test

Groups	Mean	SD	SE Mean	DM	"t" ratio
Volleyball Players	22.38	2.27	.320	2.72	5.05*
Football Players	19.66	2.98	.421		

*Significant at 0.05 level

$t_{.05}(98) = 1.98$

Table-3 reveals the descriptive analysis of volleyball and football players in Sports Competition Anxiety Test. In case of volleyball players shows value of mean and standard deviation (22.38 ± 2.27) respectively and Football Players shows value of mean and standard deviation (19.66 ± 2.98) respectively.

It is evident from Table-3 that there was a significant difference between the means of the volleyball player and football Players on Sports Competition Anxiety Test since the obtained value of 't' (5.05) was higher than the tabulated value of 't' (1.98) which was required to be significant at (98) degree of freedom with 0.05 level of confidence.

The graphical representation of mean and SD of volleyball and football Players on Sports Competition Anxiety Test has been presented in Figure 4

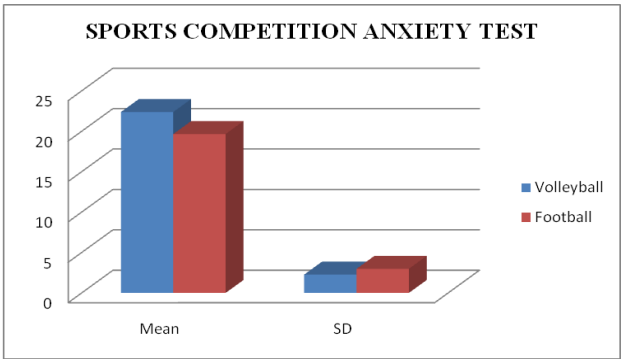

Figure 4- Comparison of Mean and SD Scores in volleyball player and football players on Sports Competition Anxiety Test

DISCUSSION

The findings of present study indicate significant difference among Football and Volley players in respect of dynamic balance. The reason might be because of the fact that sports like football requires dynamic balance at greater level. Complex activity performed simultaneously by football players, like

running with the ball with high speed and also dodging the opponents and control over the ball, all required more balance than sports like volleyball.

The analysis of data revealed that both football and volleyball players shown insignificant difference. The reason might be because of the fact football players and volleyball players both are more agile as their nature of activity and body movement is sudden and fast. This makes their agility level same and therefore no significance difference found between them.

The study shows significant difference in sports competition anxiety test between state football and volleyball players. This may be attributed to the fact that football is a body contact game and can be won by one or two goals difference only. A little mistake can change the result of the entire match. Whereas in volleyball, there is lot of scope to recover the lead (difference) of score points and in five set match they have enough times to have control over the match. In addition, players have been coached by specialist coaches who must have played a significant role by imparting psychological aspects in the coaching which might have been a contributing factor in not finding out the significant difference.

Further, it is generally seen that sportsmen engage in sports merely for the sake of love for the sports as they derive pleasure and satisfaction. The selected sportsmen at the state level were of a moderate level of performance because usually at this stage they are not very calculative in terms of creation of records or aspiring for a vocation through sports.

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