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A COMPARATIVE STUDY OF ORIENTATION ABILITY AND DIFFERENTIATION ABILITY BETWEEN BASKETBALL AND VOLLEYBALL VARSITY LEVEL FEMALE PLAYERS

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Abstract

A study was conducted to piece of information of a “A Comparative Study of Orientation Ability and Differentiation Ability Between Basketball and Volleyball Varsity Level Female Players”. The purpose of the study was to compare the orientation and differentiation ability of female varsity-level basketball and volleyball players in West Bengal. A population of total thirty subjects (30) were selected randomly from different university in West Bengal. To collect data Hexagon Modified Test and Backward Medicine Ball Throw Test was administrated to the sampled players corresponding to the Orientation Ability and Differentiation Ability. The collected data was analyzed using descriptive Statistics and independent t-Test to find out the significant difference between the orientation and differentiation ability of female volleyball and basketball players.

Keywords: *Orientation Ability and Differentiation Ability*

Introduction

The majority of people have always done some kind of physical activity. Movement was the first step in human evolution. Muscle movement played a significant role in the evolution of homo sapiens. It is important to note that the primitive man was physically active because he was constantly looking for food, clothing, shelter, or protection from the argumentative environment. As sports and games are taken from everyday activities and recognized as a way to improve strength, speed, skill, and other qualities that are not just necessary for survival, it becomes a means of preparing youth for a future life. The skills that stabilize and generalize the pattern of motor control are called coordinates. The ability to perform challenging spatio-temporal movement structures quickly and firmly is known as coordination ability, and it has been shown to assist athletes in performing a group of movements with improved quality, efficiency, and effect. In this context, coordination skills are understood to be an externally visible expression of the control and dictation processes of the central nervous system's motor activity. A group of fundamental coordination skills make up the complex of coordination abilities. The human person combines the mind and body. He flourishes as a result of the combination of both components. The whole man's mechanism is beautifully intertwined with the mental process and the physical expression, and separating the two should never compromise his wholeness (Kamlesh, 1988).

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Man's life is a never-ending stream of activity. Each second, he is following through with something, and all his exercises is the aftereffect of the joint endeavors of the body and psyche; more incorporated endeavors yield more accomplishment to the person. Things in this world, outside us, denounce body (a few organs) into our brain and things to us arrive at the world external through the body (Sushil Chandra Gupta 1983). The concept of performance-related fitness is a baffling one that has been the subject of extensive research over the past few years. Some experts have categorized it as a component of physical fitness. One of the most frequently cited aspects of performance-related fitness is balance, coordination, agility, speed of movement, and power (Ali, 2005). When a competitor is just starting out in a sport, coordination and motor skills are especially important.

Actual schooling has wonder significant. Physical activity is not the only aspect of physical education that can be studied. It enhances intellectual ability, attitude toward life, and the art of learning. Physical activity is regarded as a necessary component for improving and preserving quality of life. Today actual instruction has turned into the fourth fundamental prerequisite after three essential fundamentals like oxygen, water, and food. People used to think that physical education was just a collection of indigenous activities like Malkhamb, wrestling, drill, and marching. Be that as it may, this idea has totally changed today. In present days' players are ready by most recent strategies for training and new methods preparing. In terms of total performance, fitness, and athletic ability, there are numerous factors to consider. Our physical fitness for performance, such as speed, power, agility, reaction time, and coordination, improves with practice. Wellness is a singular quality that varies from one individual to another. Age, sex, heredity, body composition, personal habits, exercise, diet, attitude toward life, anxiety, tension, and stress, and so on all have an impact.

1. Statement of the problem: The study under investigation was intended to Compare the orientation and differentiation ability of Basketball and Volleyball Female Players of West Bengal at University Level.

2. Delimitation of the study

The present study was delimited to

1. University level players of West Bengal only.
2. Subjects Age range 18 to 25years.

3. Limitations of the study: The study had a limited sample size, which could affect the generalizability of the findings. A small sample size may not accurately represent the entire population of university level basketball and volleyball players in West Bengal.

4. Hypothesis

On the basis of literature gone through, research findings and the understanding of the problem, following hypotheses were formulated with regard to the present investigation.

- There will be a difference in 'Orientation Ability' exercise motive among different modes of exercises.
- There will be a difference in 'Differentiation Ability' exercise motive among different modes of exercises.

5. Definition & Explanation

- **Orientation ability:** This involves the players' ability to understand and respond to their position and surroundings on the court or field.
- **Differentiation ability:** This refers to the players' capability to distinguish between different movements, actions, or stimuli and respond accordingly.

6. Significance of the study: Coordination ability is a very important component of any types of game. Orientation and Differentiation ability is the part of the coordination ability. Finding of this study may help to determine the level of orientation and differentiation ability among female university level basketball and volleyball players.

7. Material and Methodology

The methodology adopted in the present study has been described.

7.1 Selection of the Subject

A total of 30 university level female athletes will be the subjects of this study out of which 15 players from Basketball and 15 from Volleyball as sample for the study.

7.2 Selection of variables

Following variables were selected for the study

- Orientation ability
- Differentiation ability

7.3 Criterion Measure

1.Orientation ability: Hexagon modified reaction ability test.

2. Differentiation ability: Backward medicine ball throw test.

7.4 Data Interpretation and Analysis

The data of the selected variables were analyzed using Descriptive statistics and independent t-test. The data were collected and analyzed in order to draw a conclusion on the orientation and differentiation ability between volleyball and basketball female players. The results of the present study with discussion and presented in the tabular form.

Analysis of Orientation Ability

VARIABLE	GROUP	N	Mean	Std. Deviation	Std. Error Mean
Orientation Ability	Volleyball	15	3.72	0.64	0.17
	Basketball	15	3.32	0.38	0.10

The mean and SD of the two groups of Volleyball and Basketball University level female players has been presented in Table 1. The mean and standard deviation of orientation ability between Volleyball and Basketball university level female players were 3.72 ± 0.64 and 3.32 ± 0.38 respectively. Among 30 subjects 15 subjects were Volleyball and 15 were Basketball University level female players. The mean scores of orientation ability between Volleyball and Basketball University level female players have been represented graphically in figure no 2.

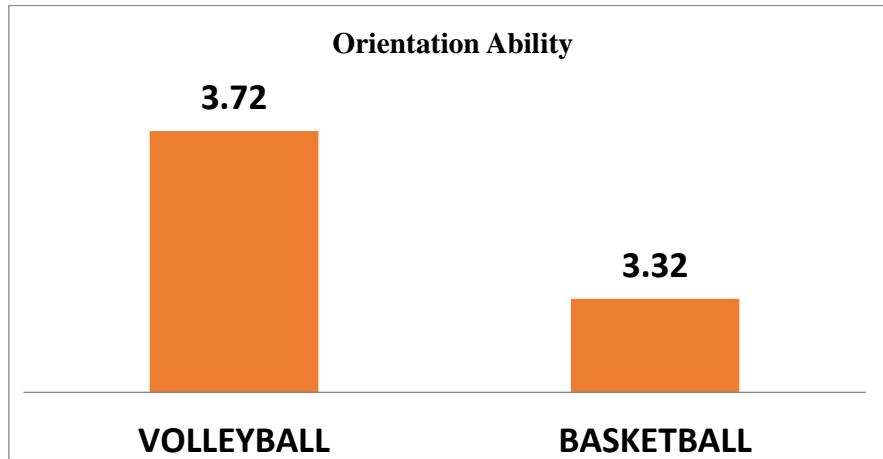


Figure 1: Means of Orientation ability of Basketball and Volleyball University level female players

Table-2: Independent Samples t-Test for the means of Orientation ability between Basketball and Volleyball University level female players

		t	df	P value	Mean Difference	Std. Error Difference
Orientation Ability	Equal variances assumed	2.069	28	.048	.39800	.19232
	Equal variances not assumed	2.069	22.537	.050	.39800	.19232

Independent samples t-tests were conducted for the means of orientation ability between Basketball and Volleyball University level female players. Results have been shown in Table 2. The independent t test has shown a significant difference in the orientation ability between Basketball and Volleyball University level female players, as the p value .048(<0.05).

Analysis of Differentiation Ability

Table 3: Descriptive Statistics of Differentiation ability between Basketball and volleyball University level female players

Variable	Group	N	Mean	Std. Deviation	Std. Error Mean
Differentiation Ability	Volleyball	15	3.00	1.20	0.31
	Basketball	15	2.67	1.45	0.37

The mean and SD of the two groups of Volleyball and Basketball University level female players has been presented in Table 3. The mean and standard deviation of differentiation ability between Volleyball and Basketball university level female players were 3.00 ± 1.20 and 2.67 ± 1.45 respectively. Among 30 subjects 15 subjects were Volleyball and 15 were Basketball University level female players. The mean scores of differentiation ability between Volleyball and Basketball University level female players have been represented graphically in figure no 5.

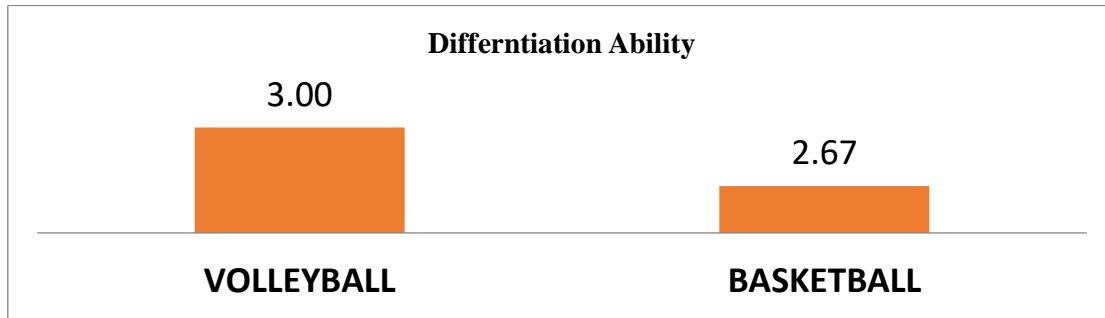


Figure 2: Mean Differentiation ability between Basketball and Volleyball University level female players

Table 4: Independent Samples t-Test for the means of Differentiation ability between Basketball and Volleyball University level female players

		t	df	P value	Mean Difference	Std. Error Difference
Differentiation ability	Equal variances assumed	.688	28	.497	.33333	.48469
	Equal variances not assumed	.688	27.032	.497	.33333	.48469

Independent samples t-tests were conducted for the means of differentiation ability between Basketball and Volleyball University level female players. Results have been shown in Table 4. The independent t test has shown a non-significant difference in the differentiation ability between Basketball and Volleyball University level female players, as the p value 0.497(>0.05).

8. Discussions

The purpose of the study was to investigate of orientation and differentiation ability between Basketball and Volleyball University level female players.

This study revealed that, Basketball players were significantly better than Volleyball University level female players in orientation ability.

This study also revealed that, Volleyball players were significantly better than Basketball University level female players in differentiation ability

Very few studies compared Coordinative abilities of Volleyball and Basketball players. Sen (2019) was one of the researchers who made comparative study involving Volleyball and Basketball players and found Orientation Ability of Basketball players were higher than volleyball players.

Kerketta et al. (2017) found football players have better orientation ability and rhythm ability than basketball players. Dubey and Choudhary (2022) compared orientation ability and differentiation ability of Volleyball and Basketball players and found a significant difference in differentiation ability but no significant different difference in orientation ability between Volleyball and Basketball players.

9. Discussions of Hypothesis

On the basis of literature gone through, research findings and understanding of the problem, following hypothesis were formulated with regard to the present investigation.

1. It was hypothesized that, there will be a difference in 'Orientation Ability' exercise motive among different modes of exercises.
 - Results of the study revealed that there is a significant difference in 'Orientation Ability' between basketball and volleyball players.
2. It was hypothesized that, there will be a difference in 'Differentiation Ability' exercise motive among different modes of exercises.
 - Results of the study revealed that there is no difference in 'Differentiation Ability' between basketball and volleyball players.

10. Conclusions

On the basis of obtained result the following conclusions were drawn in this study

1. There was a difference in 'Orientation Ability' exercise motive among different modes of exercises.
2. There will be a difference in 'Differentiation Ability' exercise motive among different modes of exercises.

11. Recommendations

Based on the findings of this study the following recommendations were made –

1. Same research can be done with large sample to more accurately finding.
2. Further research can examine the influence of different training methods or interventions on the development of coordination abilities in basketball and volleyball.

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