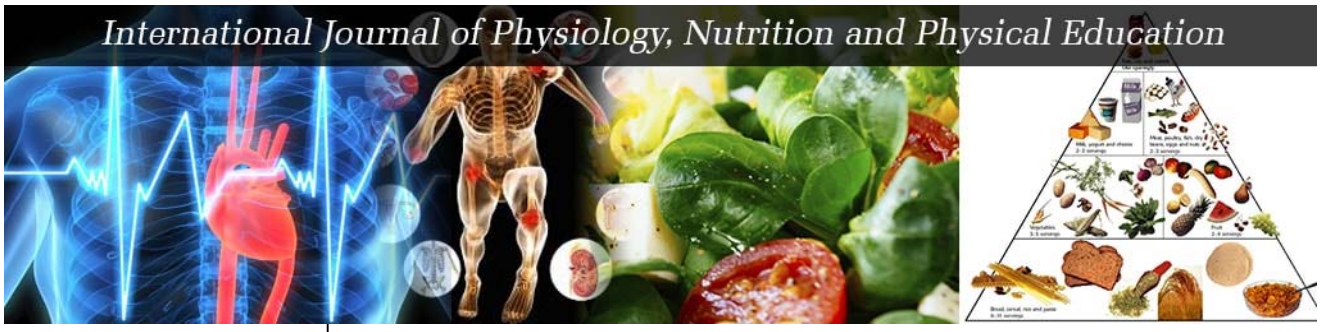

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Comparative study of agility, reaction time, strength and flexibility measures of volleyball and basketball players

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Abstract
The purpose of the study was to compare the agility, reaction time, strength and flexibility of basketball and volleyball player to fulfill the objectives of the study, 150 basketball and 150 volleyball players were selected from Rajasthan state. Who were participated in inter college tournament of basketball and volleyball. The data were collected in inter college tournament the age of selected subjects arranged from 18-25 years. Test used for semo agility test, nelson foot reaction time test, vertical jump for strength test and flexibility (modified sit and reach test) were used to measure the selected physical fitness variables of players in order to analyze the data and significant different between basketball and volley ball players of Rajasthan. The mean, SD, MD, SE-IND and‘t’ values were calculated to find out the significant of differences between male basketball and volleyball players. Significant level is found out by the application of ‘t’ test at 0.05 level.
After comparing of the present data. It is concluded that the reaction time of volley ball players and basketball players contains slight difference and agility of basketball players is better than the volley ball players. As the scores of agility is measured in seconds mean performance of explosives strength of volley ball players have more than basketball players. Which shows that explosives strength volleyball players in better than the basketball players and the flexibility of volleyball players is better than the basketball players. This study also helpful to guideline for player’s student’s teachers and researchers.

Keywords: Agility, recreation time, strength, flexibility, players, basketball, volley ball

Introduction
For all sport of activity physical fitness is very essential. It is related to the ability to meet the demands of the environment specially to preserve, to with stand stress to resist fatigue and to possess the energy for an abundant life physical condition is one’s richest ownership, it cannot survive acquisitioned, along with it have to be earn from beginning to end every day schedule of physical work out. The same as strength is approved because the aptitude toward bring elsewhere each day behavior (employment or else participate) lacking redundant weariness along with sufficient power treasury meant for urgent situation. Physical strength is the competence of sensitivity, blood, vessels, lung and physique to occupation at best possible good organization physiological variables be the not anything excluding single to facilitate is accountable meant for strength In the skill training video by the ‘cologne’ (Germany) showed that how much stress is given on training of the goal-keeper to improve their agility and reaction time.

Methodology
The following procedures including information regarding research design, source of data, sampling method, selection of subjects, criterion measures, selection of test, description of test and collection of data etc.

Sample
The data pertaining to this study was collected by administrating the appropriate tests described below on the inter-collegiate players of University of Rajasthan, who participated at least inter-collegiate tournaments held in University of Rajasthan.150 male Volley ball players and 150 male Basketball players, who had participated in inter college tournament be preferred

as matters used for this learning. The period of the subject is range beginning eighty (18) years to twenty-five (25) years. The design of the study was random group design, as 150 players from volleyball and 150 players from Basketball of field ground. Were select randomly for the purpose of the study.

Tools

The test were conducted for testing the following measures are below:

- Agility: SEMO Agility Test
- Reaction Time: Nelson Foot Reaction Test
- Strength: Leg Strength (Vertical Jump)
- Flexibility: Trunk Flexibility (Modified Sit and Reach Test)

Analysis of Data

Statistical procedures constitute the means by which quantitative data – such as test scores from any individuals are organized, analyzed, and interpreted. Significant level is found out by the application of‘t’ test.The mean, SD, MD, SE- IND and ‘t’ values were calculated to find out the significant of differences between male basketball and volleyball players. Significant level is found out by the application of‘t’ test at 0.05 level.

Table 1: Comparison of agility between volley ball and basketball players

Agility									
	Number	**Mean**	**SD**	**SE-IND**	**SE**	**MD**	**OT**	**TT**	**LS**
Volley Ball	150	13.57	1.04	0.0072	0.11	0.61	5.43*	1.96	0.05
Basketball	150	12.96	0.90	0.0054					

It is seen from the table no. 1 that there is a difference in the mean performance of volleyball (13.57) and basketball (12.96). The value of ‘t’ to be significant at 0.05 level at 298 degree of freedom is 1.986. As theobtained value of t’ was above 1.986 that is 5.439 which shows that there is a significant difference in agility of volley ball and basketball players.

Table 2: Comparison of Reaction Time of Right Leg between Volley Ball and basketball players

Reaction Time Of Right Leg									
	Number	**Mean**	**SD**	**SE-IND**	**SE**	**MD**	**OT**	**TT**	**LS**
Volley Ball	150	10.28	2.25	0.03	0.27	0.37	1.34*	1.96	0.05
Basketball	150	10.65	2.53	0.04					

Insignificant at 0.05 level with 298 degree of freedom tab t = 1.96

It is seen from the table no. 2 that there is much similarity in the mean performance of volley ball (10.28) and basketball (10.65).The value of ‘t’ to be significant at 0.05 level at 298 degree of freedom is 1.986. As the obtained value of‘t’ is below 1.986 that is 1.349 which shows that there is insignificant difference in reaction time of right leg of volley ball and asketball players.

Table 3: Comparison of Reaction Time of left Leg between volley ball and basketball players

Reaction Time Of Left Leg									
	Number	**Mean**	**SD**	**SE-IND**	**SE**	**MD**	**OT**	**TT**	**LS**
Volley Ball	150	9.82	2.13	0.03	0.24	0.15	0.62*	1.96	0.05
Basketball	150	9.67	2.21	0.03					

Insignificant at 0.05 level with 298 degree of freedom tab t = 1.96

It is seen from the table no. 2 that there is much similarity in the mean performance of volley ball (9.526) and basketball (9.673).The value of ‘t’ to be significant at 0.05 level at 298 degree of freedom is 1.986. As the obtained value of‘t’ is below 1.986 that is 0.624 which shows that there is insignificant difference in reaction time of left leg of volley ball and basketball players.

Table 4: Comparison of Strength between volley ball and basketball players

Strength									
	Number	**Mean**	**SD**	**SE-IND**	**SE**	**MD**	**OT**	**TT**	**LS**
Volley Ball	150	50.02	10.65	0.75	1.22	6.63	5.41*	1.96	0.05
Basketball	150	43.39	10.57	0.74					

*Significant at 0.05 level with 298 degree of freedom tab t = 1.96

It is seen from the table no. 4 that there is a difference in the mean performance of volley ball (50.02) and basketball (43.39).

The value of‘t’ to be significant at 0.05 level at 298 degree of freedom is 1.986. As the obtained value of‘t’ is above 1.986 that is 5.410 which shows that there is a significant difference in strength of volley ball and basketball players.

Table 5: Comparison of Flexibility between Volley Ball and Basketball Players

Flexibility									
	Number	**Mean**	**SD**	**SE-IND**	**SE**	**MD**	**OT**	**TT**	**LS**
Volley Ball	150	15.56	4.17	0.11	0.41	3.3	7.93*	1.96	0.05
Basketball	150	12.26	2.91	0.056					

*Significant at 0.05 level with 298 degree of freedom tab t = 1.96

It is seen from the table no. 4 that there is a difference in the mean performance of volley ball (15.56) and basketball (12.26).

The value of 't' to be significant at 0.05 level at 298 degree of freedom is 1.96. As the obtained value of't' is above 1.96 that is less than 7.93, which shows that there is a significant difference in flexibility of volleyball and basketball players.

Findings and Conclusions

- Volley ball and Basketball players having great strength, agility, reaction time and flexibility, requires a high degree of maneuverability.
- Through analysis and interpretation of data, similar reaction time of both legs is found in volley ball and Basketball players.
- The reaction time of Volley ball players and Basketball players contains slight difference. Logically it is conclude that reaction time of both legs and both volley ball and Basketball players are more probably same the reason for this finding may be because of regular practice.
- Mean performance of agility of Basketball players (12.96) which is lesser than the mean performance of volley ball players (13.57) which shows that the agility of Basketball players is better than the volley ball players. As the scores of agility is measured in seconds.
- Mean performance of explosive strength of volley ball players (50.02) have more (6.63) than Basketball players (43.39) which shows that the explosive strength volley ball players is better than the Basketball players.
- Mean performance of flexibility of volley ball players (15.56) have little more (3.3) than Basketball players (12.26) which shows that the flexibility of volley ball players is better than the Basketball players.

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