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COMPARISON OF VOLLEYBALL AND FOOTBALL INTER-UNIVERSITY PLAYERS ON SELECTED PHYSICAL AND PHYSIOLOGICAL VARIABLES

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ABSTRACT:

The study was to compare the selected physical and physiological variables of volleyball and football inter-university players. The subject selected for the study was Thirty in which Fifteen students were volleyball players and Fifteen students were football players. The entire subject selected for the study was from Lucknow Christian College, Lucknow and their age ranged from 21-25 years. The students were pursuing B.P.Ed and M.P.Ed course and they were randomly selected for the study. The physical variables were flexibility, endurance, agility and explosive strength. The physiological variables were heart rate, body composition, vital capacity and cardio-vascular endurance. From the result it was found that there was significant difference in selected physical variables such as flexibility and explosive strength and physiological variables such as fat percentage, vital capacity and cardio-

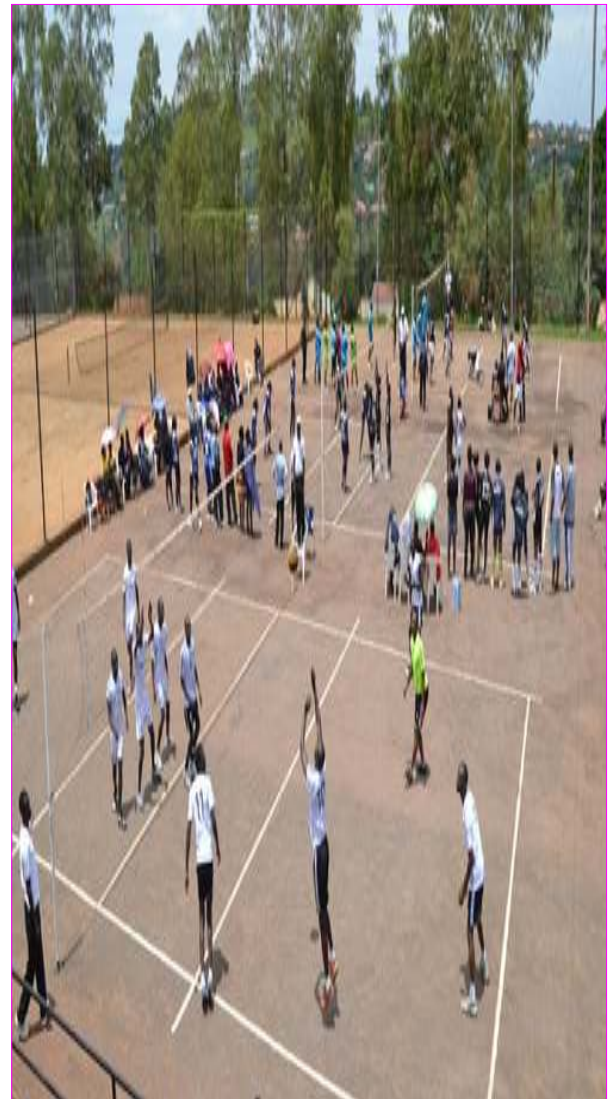
vascular endurance. The statistical technique was employed was t-ratio.

KEYWORDS: Football Inter-University Players, Physiological Variables, flexibility and explosive strength.

INTRODUCTION:

Volleyball has been developed into highly competitive sports which require a high level of physical and physiological fitness. The game itself, at a high level of competition requires quick and sudden movements in varied direction and fast reaction. Successful play volleyball is not the outcome of power along but it is the sum of power, modern game of volleyball is characterised by accuracy and differentiation which can be facilitates by absolute self control, maximum concentration a highly developed ability of anticipation along with physical pursuits.

Soccer has become very popular game in the world. Almost all the nations play the soccer game both for enjoyment and competition. Modern soccer is very fast by its very nature the spectators and players enjoy



the game of soccer with a great amount of merit. Soccer is a team game which calls for strenuous continuous thrilling action and therefore appeals to the natural and yet is highly stimulation and satisfying to anyone who participate in the game. The skills include kicking, running, jumping, throwing, dodging etc.

METHODOLOGY:-

The subject selected for the study was Thirty in which Fifteen students were volleyball players and Fifteen students were football players and they all have represented the inter-university tournament. The entire subject selected for the study was from Lucknow Christian College, Lucknow and their age ranged from 21-25 years. The students were pursuing B.P.Ed and M.P.Ed course and they were randomly selected for the study. The physical variables were flexibility, endurance, agility and explosive strength. The physiological variables were heart rate, body composition, vital capacity and cardio-vascular endurance. The flexibility was measured by forward bending and it was recorded by centimetre, endurance was measured by 12-min run/walk test and it was recorded by meter, agility was measured by 4x10m shuttle run and it was recorded by 1/10th of seconds, explosive strength was measured by vertical jump and it was recorded by centimetre, hart rate was measured by resting pulse rate and was measured by counts, body composition was measured by skin fold callipers in four parts i.e Biceps, Triceps, Sub-scapular and Suprailliac and it was recorded in millimetre, vital capacity was measured by Dry-spirometer and was recorded by liters, cardio-vascular endurance was measured by modified Harvard step test and it was recorded by number of seconds completed x 100/5.6 x pulse count. The statistical technique employed in the study was 't' test and the level of significance was set at 0.05 level of confidence.

TABLE-1
MEAN AND STANDARD DEVIATION OF PHYSICAL VARIABLES OF FOOTBALL AND VOLLEYBALL PLAYERS

Variables	Volleyball players		Football players	
	Mean	SD	Mean	SD
Flexibility	15.73	5.43	19.2	3.12
Endurance	2156.66	313.27	2312.3	417.89
Agility	10.6	0.6572	10.4	0.4573
Explosive strength	49	10.95	38	4.25

TABLE-2
MEAN AND STANDARD DEVIATION OF PHYSIOLOGICAL VARIABLES OF FOOTBALL AND VOLLEYBALL PLAYERS

Variables	Volleyball players		Football players	
	Mean	SD	Mean	SD
Heart rate	72	5.20	68	5.41
Fat % of body weight	14.6	4.45	11.3	2.26
Vital capacity	2940	467.3	3440	468.3
Cardio-vascular endurance	60	3.90	64	5.44

TABLE-3
SIGNIFICANCE DIFFERENCE OF MEAN ON SELECTED PHYSICAL VARIABLES OF VOLLEYBALL AND FOOTBALL PLAYERS

Variables	Mean difference	Standard error	t-ratio
Flexibility	4.58	1.65	2.10*
Endurance	382.2	137.6	1.06
Agility	0.5860	0.2109	0.95
Explosive strength	8.60	3.1	3.54*

* Significant at 0.05 level of confidence (29) = 2.04

TABLE-4
SIGNIFICANCE DIFFERENCE OF MEAN ON SELECTED PHYSIOLOGICAL VARIABLES OF VOLLEYBALL AND FOOTBALL PLAYERS

Variables	Mean difference	Standard error	t-ratio
Heart rate	5.49	1.97	2.03
Fat % of body weight	3.65	1.314	2.64*
Vital capacity	484.25	648.3	2.86*
Cardio-vascular endurance	4.90	1.76	2.27*

* Significant at 0.05 level of confidence (29) = 2.04

FINDINGS:-

The mean, standard deviation and 't'-ratio of physical and physiological variables of volleyball players were presented in Table-1, 2, 3, and 4.

DISCUSSION OF FINDINGS:-

It is revealed from the Table-1 that the mean value of flexibility and endurance of football players is better than the volleyball players, but in the case of explosive strength volleyball players were found better in comparison to football players. Similarly in the case of agility it was found the same. Thus the result indicates that football players had more flexibility and endurance in the comparison of volleyball players. Similarly in the case of agility the mean of volleyball and football players are almost the same it shows that volleyball and football players both have same ability as agility is concerned. As far as the explosive strength is concerned the volleyball players found better in comparison to football players.

It is evident from the Table-2 that the mean of heart rate, vital capacity and cardio-vascular endurance of football players is better than the volleyball players and in the case of body composition it is found that the mean of volleyball players is better than heart rate, vital capacity and cardio-vascular endurance in comparison to volleyball players. Similarly in the case of body composition the volleyball players found better in comparison to football players.

It is evident from the Table-3 that the mean difference of volleyball and football players in the physical variables 4.58, 382.2, 0.5860 and 8.60 respectively. The 't' value 2.10 for flexibility and 3.54 for explosive strength was significant may be due to the fact that the game like volleyball required flexibility and explosive strength to cover maximum space in the court and also to receive the ball from the attackers. Hence the result indicates that volleyball players had better explosive strength in comparison to the football players. The 't' value 1.06 for endurance and 0.95 for agility has shown insignificant may be the reason that the sample size chosen for the study was small, that is why it has not shown significant difference in the study.

It is evident from the Table-4 that the mean difference of volleyball and football players in the physiological variables is 5.49, 3.65, 484.25 and 4.90 respectively. The 't' value 2.64 for fat % of body weight in comparison of football players. The vital capacity 2.86 and cardio-vascular endurance 2.27 shows significant difference as the football players have better vital capacity and cardio-vascular endurance in comparison to volleyball players. Similarly the heart rate 2.03 was found not to be significant may be the subjected selected for the study was highly trained players and may be due to the socio-economic condition and the weather condition it may have not shown any significant relation as well as the sample size chosen was also small.

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