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A comparative study on physical and physiological parameters difference between district men volleyball and Kho-Kho players

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Abstract
The purpose of the study was to compare the physical and physiological fitness among District level Volleyball and Kho-kho players. A total of thirty (N=30) subjects were randomly chosen for this study. Out of 30 players, 15 players were from Volleyball and 15 from Kho-Kho. The age of the players ranged between 18-26 years. The variable undertake for the study are: physical fitness test namely Cardio-vascular efficiency, Leg Explosive strength, Speed. All the fitness variables were measured by Harvard Step Test and AAPHER Youth Fitness Test. Mean and standard deviation of each variable were calculated and't' test was computed to analyze the significance of difference between the means. All statistical calculation was done by standard statistical procedure. Statistical significance was tested at 0.01 level of confidence. It is concluded from the result that significant difference was observed between the male Volleyball and Kho-Kho players.

Keywords: volleyball, kho-kho, physical fitness

1. Introduction
Physical fitness is a general concept defined in many ways by differing physical educationist as One's ability to perform daily task with efficiency, without undue fatigue and reserve ample energy to enjoy vigorous leisure time activities and unforced emergency. Hare two major categories are considered: Health Related Fitness associated with disease prevention and functional health, and Skill Related Fitness is the ability to perform during games and sports. Physical fitness is generally achieved through correct nutrition, exercise, hygiene and rest. The degree to which people have these attributes can be measured with specific test. Fitness is a product of exercise, and exercise and training have been shown through research to possess important implication in general health of people. Proper nutrition adequate rest, relaxation, health appraisal and good health habits are all facts of implementation. Physical fitness is a simple term with a wide meaning. Physical fitness is more than the possession of strength and endurance. It is means having the best possible health with the capacity to do one's everyday task to engage in recreational pursuits and to meet emergencies, when they arise. As a matter of fact, Physical fitness possess by the individual, who retains enthusiastic, works cheerfully and does the emergency work with vigor.

2. Methodology
To achieve the purpose of this study, thirty (N=30) subjects were randomly selected from Hoogly and Nadia District for this project. Out of 30 players, 15 players were from Volleyball and 15 from Kho-Kho. The age limit of the players ranged between 18-26 years. The minimum achievement of the subjects was District level. Criterion measures in the present study were cardio vascular efficiency, explosive strength and speed. Physical fitness components were measured by Harvard Step Test and AAHPER Youth Fitness Test (Standing Broad Jump and 50mts Dash). All statistical calculation was done by standard procedure. Test were analyze by't' test and significant was set at 0.01 level of confidence.

3. Results and Discussion
In this part of the report collected data and analysis of data using statistical techniques and the results obtain have been presented in tabular form and related discussion have been started.

Table 1: Mean and SD of Age, Height and weight of the subjects

Parameter		Age (yrs)	Height (cms)	Weight (kgs)
Volleyball	Mean	20.4	179.8	64.87
	SD	2.26	7.76	10.25
Kho-kho	Mean	23.93	164.07	58.27
	SD	1.12	4.93	3.40

From table no 1 it is clear that the volleyball group Mean and SD of age, height and weight were 20.04, 179.8, 64.87, and 2.26, 7.76, 10.25 respectively kho-kho group Mean and SD were 23.93, 164.07, 58.27 and 1.12, 4.93, 3.40.

Table 2: Represent the Mean, SD and t value of 50mts ash of volleyball and kho-kho groups

parameter	Group	Mean	SD	sed	t
50 mts dash	Volleyball	6.95	0.32	0.10	**2.80
	Kho-kho	6.67	0.23		

Df- 28, ** Significant at 0.01 level

The Mean value of 50 meter dash of volleyball and Kho-Kho groups was 6.95 and 6.67 and SD was 0.32 and 0.23. To observed the significant different between two means t- value was calculated and found to be 2.80 which was significant at 0.01 level.

Table 3: Represent the Mean, SD and t value of standing broad jump of volleyball and kho-kho groups

parameter	group	Mean	SD	sed	t
S.B.J. (explosive strength)	Volleyball	2.45	0.18	0.05	0.00
	Kho-kho	2.45	0.08		

Not significant

The Mean value of standing broad jump of volleyball and kho-kho groups' ware 2.45 and 2.45, and sd value were 0.18 and 0.08. It is noted from table no. 2 that there was not any difference between two means. So The Volleyball and Kho-Kho groups were found same S.B.J.

Table 4: Represent the Mean, SD and t value of resting heart rate of volleyball and kho-kho groups

Parameter	group	Mean	SD	sed	t
Resting heart rate	Volleyball	64.67	4.27	0.32	**5.81
	Kho-kho	66.53	5.34		

** Significant at 0.01 level

The Mean value of resting heart rate of volleyball and kho-kho groups ware 64.67 and66.53, and SD value were 4.27 and 5.34. To observe the significant different between two means t-value was calculated and found to be 5.81 which was significant at 0.01 level. So there is a different in resting heart rate between Volleyball and Kho-Kho groups and Volleyball group observe better in resting heart rate.

Table 5: Represent the Mean, SD and t value of sub maximal heart rate of volleyball and kho-kho groups

Parameter	Group	Mean	SD	sed	t
Sub-maximal heart rate	Volleyball	152.4	18.59	2.01	**5.44
	Kho-kho	141.47	10.05		

** Significant at 0.01 level

The Mean value of sub maximal heart rate of volleyball and kho-kho groups' ware 152.4 and 141.47 respectively and sd value were 18.59 and 10.05. To observed the significant different between two means, t- value was calculated and found to be 5.44 which was significant at 0.01 level. So it may be conclude from table no 5 that tha Volleyball group was found better in sub maximal heart rate.

Table 6: Represent the Mean, SD and 't' value of fitness index of volleyball and kho-kho groups

Parameter	Group	Mean	s.d	sed	t
Fitness index	Volleyball	99.33	16.01	5.51	**3.14
	Kho-kho	116.66	12.56		

** Significant at 0.01 level

The Mean value of fitness index of volleyball and kho-kho groups' ware 99.33 and 116.66 respectively and SD value were 16.01 and 12.56 respectively. To observed the significant different between two means, t- value was calculated and found to be 3.14 which was significant at 0.01 level. So it may be conclude from table no 6 that the Kho-Kho group wares found better fitness index than the volley ball group.

4. Conclusion

Thus on the basis of the results it can be concluded that that Kho-Kho players are significantly better in speed and Physical Fitness Index (PEI) than the Volleyball players. In resting heart rate and sub maximal heart rate Volleyball players were significantly better than the Kho-Kho players. In the standing broad jump of the strength there has no different, kho-kho and Volleyball both the players are equal.

5. References

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