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Study of physical fitness variables of raiders and stoppers of kabaddi players

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Abstract

Games and Sports have high standards in Modern era. Different parameters are included in the growing of standard of Games and Sports i.e. Diet, labs for testing of Physical & Physiological components and Scientific equipment's. Though Physical Fitness variables play a vital role in improving the sports performance, without physical fitness we cannot think about good performance in games and sports. Therefore the objective of the research is to test and compare the Physical Fitness Variables of Raiders and Stoppers of Kabaddi players. In this study there have 40 subjects selected as the sample size (20 Raiders and 20 Stoppers) of the aged of 18 to 27 years from different Colleges and Universities. Explosive Strength, Speed, Endurance, Agility and Abdominal Endurance of Physical fitness variables were taken for the study. The data related to Physical Fitness Variables were collected through AAHPER Youth Fitness Test. The statistical analysis was performed by using the "t" test with the help of spss Statistical software. The results of study showed that the Raider are significantly fit than Stopper in most of Physical Fitness variables like Strength, Abdominal Ability, Explosive strength, Agility, Speed, and Cardio-Vascular Endurance.

Keywords: Abdominal ability, explosive strength, speed, agility and cardio-vascular endurance

Introduction

Human interest in Physical fitness is quite old and fitness has been a major concern of sports and physical educations. Today everyone got attracted to the field of Sports and Physical Education due to their interest in physical fitness. With the increasing awareness in the competitive in Sports and Physical Fitness all over the world, the endeavor of each nation is to attain the highest level of performance. Much emphasis is laid down today on fitness. The activities are thought to be very important for the all-round development of human beings. If anybody wants to progress in any field, he should be healthy and physically fit. So, we can say if the citizen of a country wants to improve in any field may be sports or general life, physical fitness is essential.

Physical fitness has been accepted as a vital element for good living Uppal *et al* (1994) ^[20], Physical fitness is necessary for success in most of the games and sports. Without a high level of physical fitness, an individual will not be able to withstand the stress and strain caused on the body by various games and sports. Physical fitness is addition to bring about better performance in the games and sports also helps in the prevention of injuries in the lay run. "American Alliance for Health, Physical Education, and Recreation" (AAHPER) arrived at the following definition of fitness: "Fitness is that state which characterizes the degree to which a person is able to perform physical work with fatigue. Fitness is an individual matter and it implies the ability of each person to live most effectively with his potential. Ability to function depends upon the physical, mental, emotional, social and spiritual components of fitness, all the which is related to each other and is mutually interdependent."

The study of Physical Fitness is very important not only in Sports and Games but also in general life. Physical Fitness means how a person fit in physically or we can say the ability of a person to do ample of work. It is about what the function is and what it can do and contribute to the wholeness of the human being. When talking about Physical Fitness, one does will always have to deal with Physical Efficiency. The Kabaddi players required very high level of Physical Fitness for high performance in the game. Only physically fit player can give good performance in Kabaddi game, either he is Raider or Stopper.

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Objective: To Analyses and Compare Physical Fitness Components of Raiders and Stoppers Male Kabaddi Players.

Material and Method

Data collection: 40 male Kabaddi Players (20 Raiders and 20 Stoppers) have been selected in this research work. All the players were from different Colleges and Universities who were practices under the Schemes of Sports Authority of India (SAI). In current research work, the players were minimum level of National level and Inter University.

Sample selection: The Present research work is limited to male Kabaddi players of Haryana state of India. This study considers 40 male players out of these 20 Raiders and 20 Stoppers as the sample size and using random as well as Random sampling.

Measurement procedure: Physical Fitness Variables of Kabaddi Players were measured by AAHPER Youth Fitness Test (1957).

Results of the Study

Table 1: Comparison of arm and shoulder strength (pull up test) between raiders and stoppers male kabaddi players

Groups	Mean	S. D.	d. f.	S.E.D.	't'-value
Raider	39.25	8.30	38	2.49	2.10*
Stopper	34.01	7.45			

*Significant at 0.05 levels of significance $t_{0.05} = 1.99$

Table: 1 Showed the mean value of Raiders and Stoppers Male Kabaddi Players in Arm and Shoulder Strength was 39.25 and 34.01 respectively and the SD value of Raiders and Stoppers Male Kabaddi Players in Arm and Shoulder Strength was 8.30 and 7.45 respectively. The standard error difference was also finding out with the reading of 1.75. The 't' was calculated as 2.10, which was significant at .05 level of significance. Which was showed that significant difference was found in mean values of Raiders and Stoppers Male Kabaddi Players in Arm and Shoulder Strength i.e. in Pull ups test and null hypothesis of the research was rejected.

Table 2: Comparison of abdominal strength (bent knee sit ups test) between raiders and stoppers male kabaddi players

Groups	Mean	S. D.	d. f.	S.E.D.	't'-value
Raider	40.50	9.27	38	2.62	2.74*
Stopper	33.20	7.47			

*Significant at 0.05 levels of significance $t_{0.05} = 1.99$

Table: 2 Showed the mean value of Raiders and Stoppers Male Kabaddi Players in Bent Knee Sit Ups test was 40.05 and 33.20 respectively and the SD value of Raiders and Stoppers Male Kabaddi Players in Bent Knee Sit Ups test was 9.27 and 7.47 respectively. The standard error difference was also finding out with the reading of 2.62. The 't' was calculated as 2.74, which was significant at .05 level of significance. Which was showed that significant difference was found in mean values of Raiders and Stoppers Male Kabaddi Players in Bent Knee Sit Ups test and the Null hypothesis of the research was rejected.

Table 3: Comparison of agility (shuttle run) between raiders and stoppers male kabaddi players

Groups	Mean	S. D.	d. f.	S.E.D.	't'-value
Raider	11.55	2.30	98	.82	2.49*
Stopper	12.85	3.15			

*Significant at 0.05 levels of significance $t_{0.05} = 1.99$

Table:3 represented the mean value of Raiders and Stoppers Male Kabaddi Players in Shuttle Run was 11.55 and 12.85 respectively and the SD value of Raiders and Stoppers Male Kabaddi Players in Shuttle Run was 2.30 and 3.15 respectively. The standard error difference was also finding out with the reading of .82. The 't' was calculated as 2.49, which was significant at .05 level of significance. Which was showed that significant difference in mean values of Raiders and Stoppers Male Kabaddi Players was found in Shuttle Run and the Null hypothesis of the research was rejected.

Table 4: Comparison of explosive strength (standing broad jump) between raiders and stoppers male kabaddi players

Groups	Mean	S. D.	d. f.	S.E.D.	't'-value
Raider	275	11.84	38	3.273	5.49*
Stopper	257	10.71			

*Significant at 0.05 levels of significance $t_{0.05} = 1.99$

Table: 4 represented the mean value of Raiders and Stoppers Male Kabaddi Players in Standing Broad Jump was 275 and 257 respectively and the SD value of Raiders and Stoppers Male Kabaddi Players in Standing Broad Jump was 11.84 and 10.79 respectively. The standard error difference was also finding out with the reading of .234 The 't' was calculated as 5.49, the difference was significant at .05 level of significance. Which was showed that significant difference was found in mean values of Raiders and Stoppers Male Kabaddi Players in Standing Broad Jump and our hypothesis was rejected.

Table 5: Comparison of speed (50 yards) between raiders and stoppers male kabaddi players

Groups	Mean	S. D.	d. f.	S.E.D.	't'-value
Raider	5.57	.95	98	.261	2.05*
Stopper	6.11	.98			

*Significant at 0.05 levels of significance $t_{0.05} = 1.99$

Table: 5 represented the mean value of Raiders and Stoppers Male Kabaddi Players in 50 Yards dash was 5.57 and 6.11 respectively and the SD value of Raiders and Stoppers Male Kabaddi Players in 50 Yards dash was .95 and .98 respectively. The standard error difference was also finding out with the reading of .261 The 't' was calculated as 2.05, which was quit significant at .05 level of significance. Which was showed that significant difference was found in mean values of Raiders and Stoppers Male Kabaddi Players in 50 Yards dash and the Null hypothesis of the study was rejected.

Table 6: Comparison of cardio-vascular endurance (600 yards run/walk test (time in minutes) between raiders and stoppers male kabaddi players

Groups	Mean	S. D.	d. f.	S.E.D.	't'-value
Raider	1.39	.25	38	.078	2.31*
Stopper	1.57	.27			

*Significant at 0.05 levels of significance

Table: 6 Showed the mean value of Raiders and Stoppers Male Kabaddi Players in Cardio-vascular Endurance was .25 and .27 respectively and the SD value of Raiders and Stoppers Male Kabaddi Players in Cardio-vascular Endurance was .25 and .27 respectively. The standard error difference was also finding out with the reading of .078 The 't' was calculated as 2.31, which was significant at .05 level of significance. That showed significant difference was found in mean values of Raiders and Stoppers Male Kabaddi Players in Cardio-vascular Endurance and Null hypothesis was rejected.

Conclusions

The researcher analyses of data Physical Fitness variables of Raiders and Stoppers of male Kabaddi Players of Haryana. The data related to Physical Fitness variables of male Kabaddi players showed that the Raiders was better in all most all items of Physical Fitness test i.e. Strength, Abdominal Ability, Explosive Strength, Agility, Speed and Cardio-vascular Endurance and Data also revealed that there was significance difference found between male Raiders and Stoppers of Kabaddi Players and the hypothesis related to the above variables was rejected.

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