



P-ISSN: 2394-1685
E-ISSN: 2394-1693
Impact Factor (ISRA): 5.38
IJPESH 2022; 9(1): 354-357
© 2022 IJPESH
www.kheljournal.com
Received: 22-11-2021
Accepted: 24-12-2021

Debabrata Sarkar
Research Scholar,
Department of Physical
Education, Guru Ghasidas
Vishwavidyalaya, Bilaspur,
Chhattisgarh, India

Buddhadev Kandar
Research Scholar,
Department of Physical
Education, Guru Ghasidas
Vishwavidyalaya, Bilaspur,
Chhattisgarh, India

A comparative study of selected physical fitness variables between university level cricket and football players

Debabrata Sarkar and Buddhadev Kandar

DOI: <https://doi.org/10.22271/kheljournal.2022.v9.i1f.2396>

Abstract

The purpose of the study was to compare the selected physical fitness variables among university level cricket and football players of Guru Ghasidas Vishwavidyalaya. A total 40 male subjects in which 20 subjects from cricket and 20 subjects from football discipline between the age group of 20-28 years were randomly selected as subjects. The selected subjects were tested on speed by 50 yards dash test, explosive strength by standing broad jump test, agility by 4x10 meter shuttle run test and muscular strength was tested by sit ups test which was selected as criterion variable. It was hypothesized that there may be significant difference between cricket player and football players on selected physical fitness variables. To find out the significant difference in physical fitness variables “t” test was applied and the level of significance was set at 0.05 level. The result showed that No significance differences was found among cricket players & football group in 50 yards dash, standing broad jump and shuttle run. The result also showed that football players were found better compared to cricket players in sit up test.

Keywords: Physical fitness, crick players football players speed, explosive strength, agility, muscular strength

Introduction

All through the world fitness and wellness development has filled in size and it gives unique significance to youth. Progressively, the clinical calling general concurs that legitimate exercise is exceptionally wanted capable as a vital piece of keeping up with wellbeing and health is for more pleasant then attempting to recover it. Physical fitness is a condition of wellbeing and prosperity and all the more explicitly parts of sports, the capacity to perform parts of sports occupation and day by day exercises. Before the modern unrest fitness was characterized as the ability to do the day's exercises without fatigue. Physical Fitness is viewed as a proportion of the body's capacity to work productively and actually in work and relaxation exercises and stay solid. As start prior, it is by and large acknowledged truth that a sound mind lies in a sound body. Fitness isn't a thing to be accomplished with next to no work. An earnest and true exertion is expected to acquire it.

The idea of physical fitness as old as mankind, keeping in mind the survival of the fittest, down through the ages, as only strong and agile invader safeguard themselves and their property. It's undeniably true that, physically fit people are in a superior situation to bear the rigorous and abnormal stress and strain, than the people who are less physically fit. The fundamental movement like running, throwing, climbing, jumping lifting etc. requires explicit physical attributes such as muscular strength, muscular endurance, cardiovascular endurance, strength, balance and coordination.

Every intense game or sport requires certain physical qualities that should be prioritized for development in each athlete. Generally these qualities are speed, ability to run, walk or run faster. Agility, the ability to change direction in the air and on the ground. Flexibility, the range of motion determined by the joints of the body. Strength, the ability of muscles a muscle to pull, push, press, or squeeze. During the course of one's training in sports and games these qualities are developed depending upon physical constitution of an individual.

Corresponding Author:
Debabrata Sarkar
Research Scholar,
Department of Physical
Education, Guru Ghasidas
Vishwavidyalaya, Bilaspur,
Chhattisgarh, India

All the basic components of physical fitness are essential in all sporting events, however each sport event is fundamentally governed by one component of the other.

The idea of "total football" or football applies ability development tactical development and improvement of all the physical parameters of the vital motor parts that are closely related and contribute to the success of the game. No longer improving the technique physiology and the most effective body, sports scientists are also working to expand the intellectual abilities of football players. The official football literature shows that patience speed agility maximum leg strength upper frame strength leg energy muscular endurance flexibility ability Coordination ability and reaction time are essential prerequisites for effective overall soccer performance. Football is a hoy requires physical mental technical and tactical qualities with all the necessary condition abilities football has become faster than when professional athletes around the world continues to be drawn to it. It is not a speed and acceleration game. Cricket is a game wherein health is historically not thought of as very crucial. The importance of fitness in any game cannot be underlined. The healthier you are the better you'll play. But Cricket is one such game which exams your game talents intellectual power stamina and physical endurance as properly.

Fitness is fundamental in any regard levels of the game, while being fundamental for zenith level players. It is helpful for amateurs who will work on both their viability and amusement through great prerequisites of fitness.

Statement of the problem

The main purpose of the study was to compare the selected physical fitness variables among university level cricket and football players of Guru Ghasidas Vishwavidyalaya.

Delimitation of the Study

- This study was delimited to university level players of age 20 to 28 years.
- This study was delimited to selected physical fitness test.
- This study was delimited to 30 university level male cricket and football players from Guru Ghasidas Vishwavidyalaya.

Limitations of the study

During the study researcher has recorded some drawbacks/limitations as follows:

- Lack of motivation of the participants in performing the physical fitness tests, which might affect the results of the study.
- The performance effect of the subjects due to their difference in physical characteristics.

Significance of the study

It is hoped by the researcher that the recordings created and interpreted in this study will assist professional college football players and cricketers the information collected can be used to under Following training programs as well as consulting currently records the same age of physical activity that must have in football and cricket players. The researcher also thinks that this study will help the expert cricket and football players improve their gaming habits.

Review Literature

Sumanta majhi & *et al.* in their study found that the result of the study was a significant difference in Speed, Agility and Explosive Leg Strength between soccer players and B.P.Ed

students.

Firdous Ahmad Bhat and Dr. Rakesh Pathak (2018) ^[17] conducted a study on physical fitness components of athletes and non-athletes found the result that athlete students due to their regular practice have better physical fitness than the non-athlete students.

Mr. Mahipal (2016) ^[3] in his study found that result of the study showed that athletes have found greater speed, explosive power and agility as compared to football players. No significant difference was found between athletes and football players for the variables of muscular strength.

Mr. Tufan Mete and Dr. Atanu Das (2018) ^[1] conducted a study on motor fitness component and physiological characteristics were selected as the measuring criteria. Statistical t-test showed significant difference of leg explosive strength (2.2112>2.021) between sprinters and jumpers. Lastly the physiological characteristics showed similar uniqueness for both sprinters and jumpers.

Kunvar Singh and Ratnesh Singh (2017) ^[7] The reason of the prevailing observe changed into to discover the relationship of walking among the wickets performance of the Cricket players with decided on Anthropometric Variables (peak and Arm period) and physical health variables (pace, Agility and flexibility). Fifteen male Cricket players had been participated as topics inside the present study.

Deepla K and Raj T. Rajender made a study on the physical fitness among athletes and football players of schools in Hyderabad. The results indicated that football players are having good in pull ups, sits ups, shuttle run, standing broad jump compare to athletes who were good in 50 yards & 600 yards run.

Maurya D.C. *et al.* (2010) ^[10] made a comparative study of physical variable football players & athletes of school levels. They found that there were no significant difference was found in football players and athletes of school level in regards of muscular strength variable.

Subramanya NS and Pasodi MS (2011) ^[2], in their study attempt to investigate the impact of education on physical fitness improvement. They found that numerous elements are exceedingly inter-related to training and physical health and it's utility is a vast contribution to the sector of bodily training and sports activities in terms of broaden physical fitness of sports individuals.

Dr. Rajdhar Chaitram Bedse (2017) ^[14], prevailing examines makes an attempt to investigate physical fitness variables of football and cricket players and confirmed that athletes have determined extra velocity, explosive power and agility as compared to soccer players. No great difference found in muscular energy.

Material and Methods

Selection of Subjects

The purpose of the present study was to compare the selected physical fitness variables among university level cricket and football players of Guru Ghasidas Vishwavidyalaya. For the purpose of the study total 30 subjects male in which 15 subjects from cricket discipline and 15 subjects from football discipline were taken on random basis from Guru Ghasidas Vishwavidyalaya. The age of the selected subjects were ranged from 20-28 years. Physical fitness test was employed for all the subjects of both the groups in twice and best performance was taken as final score. Subjects also asked for trail if any body required.

Table 1: Variables and tests

N	Variables	Test	Units
15	Speed	50-yard dash test	Seconds
15	Explosive Strength	Standing broad jump test	Meter
15	Agility	Shuttle run test	Seconds
15	Muscular Strength	Sit-ups test	Numbers

Methods

In above Table –1 shows that the 50 yard dash test was used to assess the speed of Individual. The time taken in sec. was counted as a score by the subjects to complete the test. The standing broad jump was used to assess explosive strength of the legs. The distance of the jump is counted as the score. Shuttle run test was used to estimate the agility of the subjects. The time in seconds was taken by the subjects between the start and the finishing of the run was recorded as the score. The sit-ups test was used to assess the muscular strength. The score of the test is the number of correctly executed sit ups performed by the subjects in 60 seconds.

Date Collection

All the players were asked to go for proper warmup & exercise. The test for physical fitness were demonstrated and

complete instructions were given to all the players regarding all test. When all the players were ready for the test, the data was recorded by the administering the test.

Statistical Analysis

All of the statistics were calculated. Mean Standard Deviation and Std. Error Mean was computed. To compare the selected Physical Fitness variables among cricket players and football players “t” test was used by using SPSS, V-26. The level of significance was set at 0.05 level.

Results

To accomplish the purpose of study data collected was analysed with statistical technique and results are presented in below tables.

Table 2: Group Statistics

Group Statistics					
	Players	N	Mean	Std. Deviation	Std. Error Mean
Speed	Football player	15	7.7067	.37362	.09647
	Cricket player	15	7.7860	.37798	.09759

		F	Sig.	t	df	Sig. (2-tailed)
Speed	Equal variances assumed	.002	.963	-.578	28	.568
	Equal variances not assumed			-.578	27.996	.568

Tab t 0.05 (28) = 2.048 Level of Significance 0.05 level

The table -2 clearly shows that mean value of speed for cricket players was calculated 7.7860 with S.D. 0.37798 and football players was calculated 7.7067 with S.D. 0.37362 respectively. The obtained t-value on speed is 0.578 which is

less than the required table value (2.048) with 28 df and at 0.05 level of confidence. This shows that there is no significance difference exit when speed is considered among athletes & football players.

Table 3: Group Statistics

Group Statistics					
	Players	N	Mean	Std. Deviation	Std. Error Mean
Explosive Strength	Football player	15	2.4693	.25697	.06635
	Cricket player	15	2.3767	.22109	.05709

		F	Sig.	t	df	Sig. (2-tailed)
Explosive_Strength	Equal variances assumed	.540	.468	1.059	28	.299
	Equal variances not assumed			1.059	27.390	.299

Level of Significance 0.05 level

The table 3 indicated that mean value of explosive strength for cricket players was calculated 2.3767 with S.D. 0.22109 and football players was recorded 2.4693 with S.D. 0.25697 respectively. The obtained t-value on explosive strength is

1.059 which is less than the required table value (2.048) with 28 df and at 0.05 level of confidence. This shows that there is no significance difference exit when explosive strength is considered among cricket players and football players.

Table 4: Group Statistics

Group Statistics					
	Players	N	Mean	Std. Deviation	Std. Error Mean
Agility	Football player	15	10.0300	.27242	.07034
	Cricket player	15	10.2133	.38148	.09850

		F	Sig.	t	df	Sig. (2-tailed)
Agility	Equal variances assumed	2.738	.109	-1.515	28	.141
	Equal variances not assumed			-1.515	25.332	.142

Level of Significance 0.05 level

The table 4 clearly shows the mean value of agility for cricket players was calculated 10.2133 with S.D. 0.38148 and Footballers was calculated 10.0300 with S.D. 0.27242 Respectively. The received t-value on agility is 1.515 which is

less than the required table value (2.048) with 28 df and significant at 0.05 level of confidence. This shows that there is no significance difference exist when explosive strength is considered among cricket players and football players.

Table 5: Group Statistics

Group Statistics					
	Players	N	Mean	Std. Deviation	Std. Error Mean
Muscular_Strength	Football player	15	33.6667	2.71679	.70147
	Cricket player	15	30.7333	1.86956	.48272

		F	Sig.	t	df	Sig. (2-tailed)
Muscular_Strength	Equal variances assumed	4.144	.051	3.445	28	.002
	Equal variances not assumed			3.445	24.831	.002

Level of Significance 0.05 level

The table 5 indicates that mean value of muscular strength for cricket players was calculated 30.7333 with S.D. 1.86956 and Footballers was recorded 33.6667 with S.D. 2.71679 respectively. The t-value on muscular strength is 3.445 which is greater than the required table value (2.048) with 28 df. So there is a significant difference was found on the variable muscular strength between cricket players and football players.

Discussion

Physical fitness variables are very essential in both cricket players and football players for betterment in performance. But its requirement is Depending upon the demand of the game and each factor of physical fitness should be optimally developed. In the present study Table 2, 3 & 4 clearly shows that there was no significant difference in the variables of speed, explosive strength & agility between cricket players and football players. In the variable of muscular strength (sit ups) test Significant difference was found among cricket players and football players which is shown in the table 5.

Conclusion

Within the limitations of the present study, the following conclusions are enumerated. No superiority was observed among cricket players & football group in 50 yards dash, standing broad jump and shuttle run.

Football players were found better compared to cricket players in sit up test and May be due to footballers are basically participate endurance type activity. Because of that Footballers are having less adipose tissue in lower abdomen area.

References

1. Mete T, Dr. Atanu Das. A comparison on selected motor fitness components & physiological characteristics between sprinters & jumpers, International Journal of Yogic, Human Movement and Sports Sciences. 2018;3(2):148-151.
2. Subramanya NS, Pasodi MS. Training and physical fitness. 2011;2(2):43-47. ISSN: 0976-9862
3. Mr. Mahipal. A Comparative Study Of Selected Physical Fitness Variables Among State Level Athletes And Football Players Of District Panipat, TIJR, Jan 2016, 11-21
4. Busch Judy G. A Normative study of the AAHPER Youth Fitness Test in grades seven through ten in the state of South Dakota, completed Research in Health, Physical Education and Recreation, XII, 204, 1970.
5. Deepla K, Raj T. Rajinder. "A study on the physical fitness among athletes and football players of schools in Hyderabad" Asian journal of Physical education and Computer Science in Sports. 1970;5(1):105.
6. Sumanta Majhi *et al.* A Comparative Study of Selected Motor Fitness Component Between Soccer Players And B.P.Ed Students, IOSR Journal of Sports and Physical Education (IOSR-JSPE). 2016;3(4):42-44.
7. Kunvar Singh, Ratnesh Singh. An association of anthropometric and physical fitness variables of cricket players with the performance of running between the wickets. 2017;4(1):141-145. ISSN: 2394-1685
8. Hart M and Shay CT. Relationship between physical fitness and academic success, Res. Quarts. 1964;25(2):443-445.
9. Kumari Sunita & Devi Santosh. Physical fitness status of female college athletes. Res. J physical edu. sci. 2014;2(6):5-7.
10. Maurya DC, *et al.* "A comparative study of Physical variable (Muscular strength) football players and athletes of school levels." 2015;3(8):1-4.
11. Singh Mandeep *et al.* "A study of the effect of resistance training on arm strength of state level adolescent male athletes" Asian Journal of multidimensional Research. 2012;1(1):84-89.
12. Trank Robert and Lewi's. Physical fitness quantitative expression of the physical condition of an individual. Journal of strength & conditioning. 1993 Jan;8:253-287.
13. V Gaurav *et al.* "Comparison of physical fitness variables between individual games and team games athletes." Indian j.sci. & technology. 2011;4(5):547-549.
14. Dr. Rajdhar Chaitram Bedse. A comparative study on physical fitness variables of football and cricket players, IJPNE. 2017;2(1):40-43.
15. Uppal AK. "Effects of 10 weeks participation in physical education programme on selected strength variables in women. SNIPES. 1980;3(3):31-34.
16. Kumar Gulshan *et al.* "A comparative study of physical fitness of state level medalists & Non-medalist weight lifters. IJSSIR. 2013;2(9):172-176.
17. Firdous Ahmad Bhat, Dr. Rakesh Pathak. A comparative study of physical fitness components of athletes and non-athletes in S.R.T.M. University Nanaded, IJPESH. 2018;5(3):28-29.