"Knowledge Scholar"
An International Peer Reviewed E-Journal Of Multidisciplinary Research
Volume: 07, Issue: 06, Nov. – Dec. 2020 eISSN NO. 2394-5362
Impact Factor (SJIF) – 5.266

"COMPARATIVE STUDY OF SELECTED FITNESS COMPONENTS BETWEEN MALE FOOTBALL PLAYERS AND CRICKET PLAYERS."

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Introduction

Today's world is mechanical world where human beings have to perform very little physical activities as the number of appliances which are being operated by the electricity have been developed although through such appliances human beings have got a lot of relief, but still there are some drawbacks found in this modern and mechanical world, an important of which adversely affect the health and fitness level of human beings to a considerable extent. Many people fell that their daily work gives them more than adequate exercises of fitness, but such limited activities do not use the lungs fully, not do they provide adequate stimulation for the heart to produce beneficial training effect, in the long run. The decision to carry out physical fitness programme cannot be taken lightly. It requires a lifelong commitment of time and effort. Exercise must become one out question. Unless you are convinced of the benefits of fitness and the risks of unfitness you will not succeed. It has been realized that fitness ads not only years of one's life, but life to ones years.

Physical Fitness

It is the ability to perform moderate to rigors physical activity on a regular basis without excessive fatigue, exercises training of is the systematic performances of exercise at a specified frequency, intensity and duration of achieve a desired level is physical fitness.

Physical fitness in sports :

Modern sports is a competitive to the hilt, it requires on incredibly exceptional level of fitness, I fact, there can be no sport without fitness. In this modern world there is a vast competition in each field; sport field is not exception for that. There are many difficulties to survive because each player wants to break other player's record. Thus player should be engaging in a serious fitness training programme to a supreme competitive sport of once choice.

Physcal Fitness Components:

- Cardiovascular Endurance: It is the ability of the heart to deliver blood to working muscles and their ability to use it.
- Strength: Strength is the ability to overcome resistance or to act against resistance.
- Flexibility: The ability to move joints and use muscles through their full range of motion.
- Speed: It is performance perquisite to do motor actions under given conditions in minimum time.

History of Football:

Football (as well as rugby and soccer) are believed to have descended from the ancient Greek game of harpaston. Harpaston is mentioned frequently in classical literature, where it is often referred to as a "very rough and brutal game". The rules of this ancient sport were quite simple: Points were awarded when a player would cross a goal line by kicking the ball, running with it across the goal line, or throwing it across the line to another player. The other team's objective was simply to stop them by any means possible. There was no specific field length, no side line boundaries, no specified number of players per team, only a glaring lack of rules. Most modern versions of football are believed to have originated from England in the twelfth century. The game became so popular in England that the kings of that time (Henry II and Henry IV) actually banned football. They believed that football was taking away interest from the traditional sports of England, such as fencing and archery.

History of Cricket :

The game of cricket has a known history spanning from the 16th century to the present day, with international matches played since 1844, although the official history of international Test cricket began in 1877. During this time, the game developed from its origins in England into a game which is now played professionally in most of the Commonwealth of Nations.

Early cricket - Origin :

No one knows when or where cricket began but there is a body of evidence, much of it circumstantial, that strongly suggests the game was devised during Saxon or Norman times by children living in the

Weald, an area of dense woodlands and clearings in south-east England that lies across Kent and Sussex. It is generally believed that cricket survived as a children's game for many generations before it was increasingly taken up by adults around the beginning of the 17th century. Possibly cricket was derived from bowls, assuming bowls is the older sport, by the intervention of a batsman trying to stop the ball from reaching its target by hitting it away. Playing on sheep-grazed land or in clearings, the original implements may have been a matted lump of sheep's wool (or even a stone or a small lump of wood) as the ball; a stick or a crook or another farm tool as the bat; and a stool or a tree stump or a gate (e.g., a wicket gate) as the wicket.

Statement of the problem:

"Comparative Study of Selected Fitness Components between Male Football Players and Cricket players."

Need of the Study:

The researcher is intended to study the selected physical fitness components between Football and Cricket male players. It seems that physical fitness plays an important role in performance of a player.

Significance of the Study:

1) The finding of this study may help in better understanding of relationship of physical fitness between football and Cricket players of Aurangabad City.

2) The findings of this study can be used as a screening tool in assessing and classifying football and Cricket players.

3) This research may help physical education teacher and coaches to know about physical fitness components the Football and Cricket players require.

4) This research may help the physical teachers and coaches to attain the better understanding about physical fitness components and improvement of the performance of the players.

Objectives of the Study:

1) To study the physical fitness between club level male Football and Cricket players of Aurangabad City.
2) To find out the physical fitness of Cricket male players.
3) To find out the physical fitness of Football male players.
4) To analyze the obtained data.
5) To compare the physical fitness components (cardiovascular endurance, speed agility, trunk flexibility and maximum strength of Cricket and football players.
6) To give feedback to the players.

Hypothesis:

Ho1: There is no significant difference in selected physical fitness component between Football and Cricket male players.

Ho2: There is no significant difference in cardiovascular endurance between Football and Cricket male players.

Ho3: There is no significant difference in agility between Football and Cricket male players.

Ho4: There is no significant difference in trunk flexibility between Football and Cricket male players.

Ho5: There is no significant difference in a speed between Football and Cricket male players.

Ho6: There is no significant difference in strength between Football and Cricket male players.

Review Of Related Literature

The researcher has attempted in this chapter to locate the literature related to the study. In order to provide background materials and to outline significance of study, the related is being presented below :

Spencer, et.al., (2011)1, International Journal of Sports Physiology and Performance (2011) Volume: 6, Issue: 4, Pages: 497-508

Abstract : Variations in rates of growth and development in young football players can influence relationships among various fitness qualities.

Iñigo Mujika, et.al. (2009)2, Journal of sports sciences, Volume: 27, Issue: 2, Pages: 107-114.

Abstract :

In this study, we examined gender and age differences in physical performance in football. Thirty-four elite female and 34 elite male players (age 17 +/- 1.6 to 24 +/- 3.4 years) from a professional football club were divided into four groups (n=17 each) according to gender and competitive level (senior males, senior females, junior males, and junior females). Players were tested for specific endurance (Yo-YoIR1), sprint over 15 m (Sprint-15 m), vertical jump without (CMJ) or with (ACMJ) arm swing, agility (Agility-15 m), and ball dribbling over 15 m (Ball-15 m). The Yo-YoIR1 and Agility-15m performances showed both a gender and competitive level difference ($P < 0.001$). Senior and junior males covered 97 and 153% more distance during the Yo-YoIR1 than senior and junior females, respectively ($P < 0.001$). Gender but not age differences were found for Sprint-15 m performance ($P < 0.001$). No difference in vertical jump and Ball-15 m performances were found between senior and junior males ($P > 0.05$). More marked gender differences were evident in endurance than in anaerobic performance in female players. These results show major fitness differences by gender for a given competitive level in football players. It is suggested that training and talent identification should focus on football-specific endurance and agility as fitness traits in post-adolescent players of both sexes.

Sapkota Kishor, et.al. (2006)3, epal Medical College journal : NMCJ, Volume: 8, Issue: 4, Pages: 280-283

Abstract :

This study was undertaken to assess the visual acuity, refractive status, stereopsis, colour vision and ocular morbidity of Nepalese national footballers and cricketers. Ninety-five national football and cricket players of different age group, who had at least played one international tournament representing Nepal, were included in the study. A thorough ocular examination of the players was done in the study period of six months, which revealed that higher-level professional players have significant visual

problems. Among the players 70.0% had never had complete ocular examination, 8.0% were found with refractive error, 60.0% with stereo acuity equal or less than 40" of arc and 65.0% with ocular complaints.

Noakes T.D., et.al. (2000)4, Journal of sports sciences, Volume: 18, Issue: 12, Pages: 919-929

Abstract :

Despite its long history and global appeal, relatively little is known about the physiological and other requirements of cricket. It has been suggested that the physiological demands of cricket are relatively mild, except in fast bowlers during prolonged bowling spells in warm conditions. However, the physiological demands of cricket may be underestimated because of the intermittent nature of the activity and the generally inadequate understanding of the physiological demands of intermittent activity. Here, we review published studies of the physiology of cricket. We propose that no current model used to analyze the nature of exercise fatigue (i.e. the cardiovascular-anaerobic model, the energy supply-energy depletion model, the muscle power-muscle recruitment model) can adequately explain the fatigue experienced during cricket. A study of players in the South African national cricket team competing in the 1999 Cricket World Cup revealed that, in a variety of measures of explosive ('anaerobic') power and aerobic endurance capacity, they were as 'fit' as South African national rugby players competing in the 1999 Rugby World Cup. Yet, outwardly, the physiological demands of rugby would seem to be far greater than those of cricket. This poses the question: 'Why are these international cricketers so fit if the physiological demands of cricket are apparently so mild?' One possibility is that this specific group of athletes are unusually proficient in a variety of sports; many achieved high standards of performance in other sports, including rugby, before choosing to specialize in cricket. Hence their apparently high fitness may simply reflect a superior genetic physical endowment, necessary to achieve success in modern international sports, including cricket. Alternatively, it could be hypothesized that superior power and endurance fitness may be required to cope with the repeated eccentric muscle contractions required in turning and in bowling and which may account for fatigue and risk of injury in cricket. If this is the case, the fitness of cricketers may be increased and their risk of injury reduced by more specific eccentric exercise training programmes.

Vickery William, et.al. (2014)5, Journal of sports sciences, Volume: 32, Issue: 8, Publisher: Taylor & Francis, Pages: 722-37

Abstract:

Abstract this study compared physiological, physical and technical demands of Battlezone, traditional cricket training and one-day matches. Data were initially collected from 11 amateur, male cricket players (age: 22.2 ± 3.3 year, height: 1.82 ± 0.06 m body mass: 80.4 ± 9.8 kg) during four Battlezone and four traditional cricket training sessions encompassing different playing positions. Heart rate, blood lactate concentration, rating of perceived exertion and movement patterns of players were measured. Retrospective video analysis was performed to code for technical outcomes. Similar data were collected from 42 amateur, male cricket players (23.5 ± 4.7 year, 1.81 ± 0.07 m, 81.4 ± 11.4 kg) during one-day matches. Significant differences were found between Battlezone, traditional cricket training and one-day matches within each playing position. Specifically, Battlezone invoked the greatest physiological and physical demands from batsmen in comparison to traditional cricket training and one-day matches. However, the greatest technical demand for batsmen was observed during traditional cricket training. In regards to the other playing positions, a greater physiological, physical and technical demand was observed during Battlezone and traditional training than during one-day matches. These results suggest that the use of Battlezone and traditional cricket training provides players with a suitable training stimulus for replicating the physiological, physical and technical demands of one-day cricket.

Methodology

The purpose of the present study was to compare the selected physical fitness component between Football and male Cricket players of Aurangabad. In this chapter selection of subjects, selection of variables, administration of the test, collection of data and statistical analysis of data has been explained.

Population of the study:

The college men Football and Cricket players of age 20-28 who have participated at least once in inter club tournament in the years 2013 to 2015 of Aurangabad are considered population of the study

Sampling

The samples for this study where selected purposely. Total number of samples selected where 60 which were divided in 2 groups 1st group Football and 2nd group cricket. Each group contains 30 subjects

Selection of Subject:

The study was conducted on 60 male Football and Cricket male players of different clubs of Aurangabad representing in inter club Football and Cricket championship 2013 to 2015 has been selected as subjects for the present study. The age of the subjects ranged from 20 years to 28 years. The samples of 60 players were divided in to two groups (30 Football group and 30 Cricket group). The investigator motivates the subjects in such a way so that all the subjects agree to take part in this study for the interest of their self assessment.

Table-1 Cardiovascular endurance

Mean and stand rd deviation, degree of freedom and t –test of cooper's 12 minutes run and walk test of Football and Cricket male players

Variables	Mean	S.D	D.F	T-test
Football male player	46.7	6.69		
Cricket male player	45.1	8.39	58	0.342

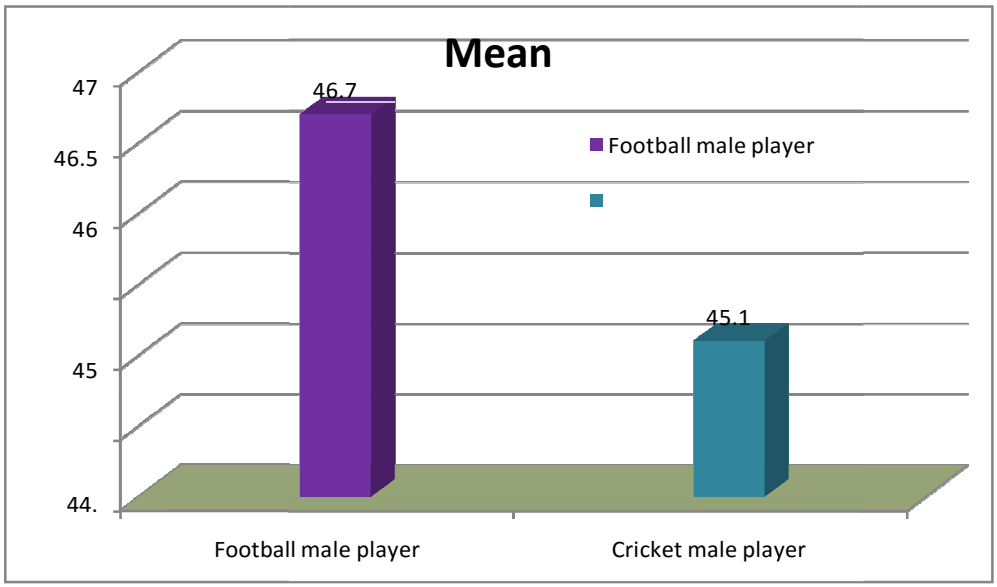

Chart - 1

Graphical comparison of coopers 12 minutes run and mean and standard Deviation value of football players is 46.7 walk test and 6.69 respectively and Cricket male players is 45.1 and 8.39 respectively. The T- value is 0.342 at 0.05 level of significance. The table value t test at 58.

Hence the difference between football and Cricket male players in there cardio vascular endurance found insignificant. Hence Ho2 is accepted.

Table -2 SHUTTLE RUN

Mean standard deviation, degree of freedom and t test of shuttle run of Foot ball and cricket male players.

Variables	Mean	S D	D F	T - Test
Football male players	10.25	0.593	58	0.480
Cricket male players	9.6	0.615		

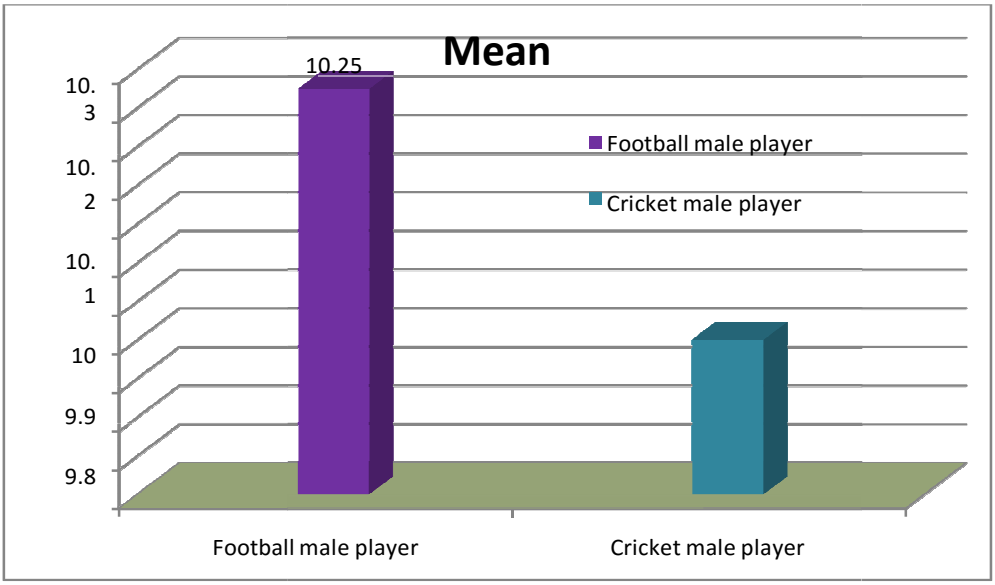

Chart 2

Graphical comparison of shuttle run test mean and standard deviation value of Football male players is 10.25 (0.593) respectively and Cricket male players is 9.6 (0.615) respectively and t value is 0.480 at 0.05 of significance. The table value at 58. Hence the difference among the Football and Cricket male in agility found is insignificant. Hence H 03 is accepted.

Table - 3

50 YARD DASH

Mean standard deviation, degree of freedom and T-test of 50 yard dash test of Football and Cricket male players.

Variables	Mean	S.D.	D.F.	T-test
Football male Players	7.406	0.549	58	0.290
Cricket male players	7.290	0.445		

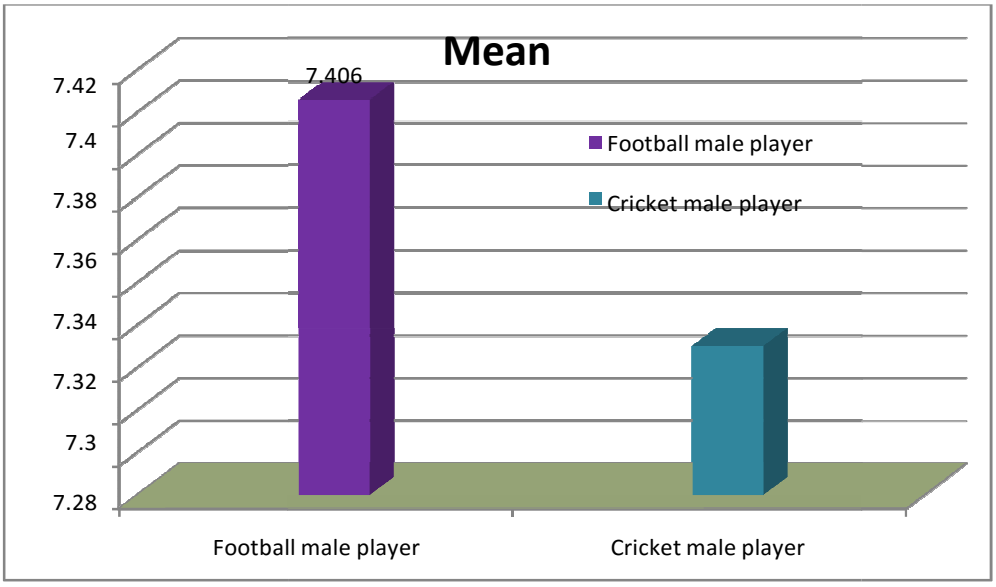

Chart 3

Graphical comparison of 50 yards dash test mean and standard deviation value of Football male players is 7.406 (0.549) respectively and Cricket male players is 7.290 (0.445) respectively and T value is 0.290 at 0.05 level of significance. The table value at 58. Hence the difference among Football and Cricket players in their speed is found insignificant. Hence H5 is accepted.

Table - 4

Forward Bend and Reach test

Mean standard deviation, Degree of Freedom and T-test of Forward Bend and Reach test of Football and Cricket male players.

Variables	Mean	S.D.	D.F.	T-Test
Football male players	12.26	4.35	58	0.017
Cricket male players	11.33	6.15		

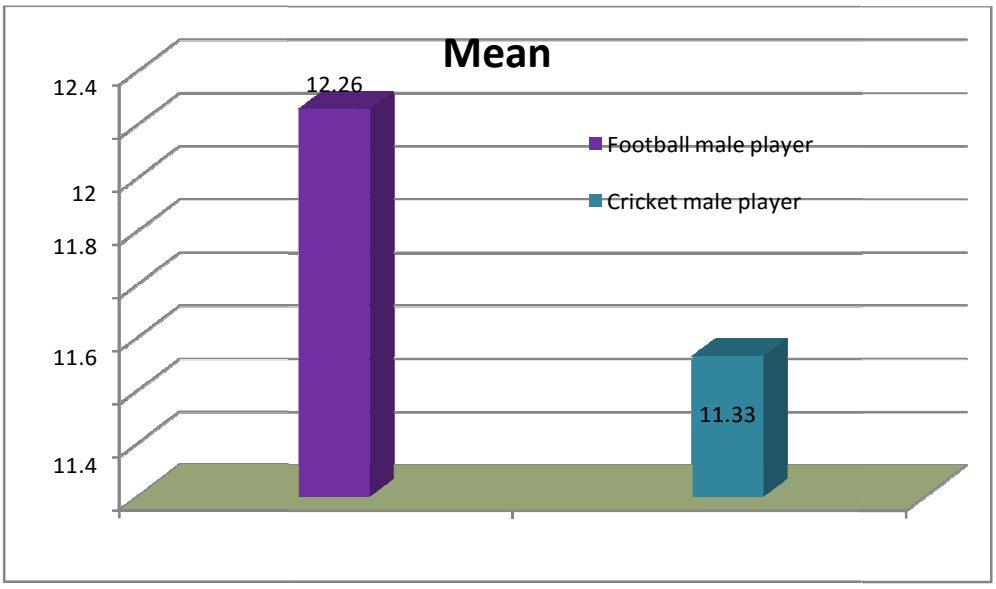

Chart- 4

Graphical comparison of Forward Bend Reach test mean and standard deviation value of Football male players is 12.26 (4.35) respectively and Cricket male players is 11.33 (6.15) respectively and 't value is 0.017 at 0.05 level of significance. The table value force 58 df is 2.021. Hence the difference among Football and Cricket male players in their flexibility found insignificant. Hence H 04 is accepted.

Table – 5 Standing Broad Jump

Mean standard deviation, degree of freedom and T-test of standing Broad Jump of football and Cricket male players.

Variables	Mean	S.D.	D.F.	T-Test
Football male players	7.75	0.45	58	0.953
Cricket male players	7.74	0.46		

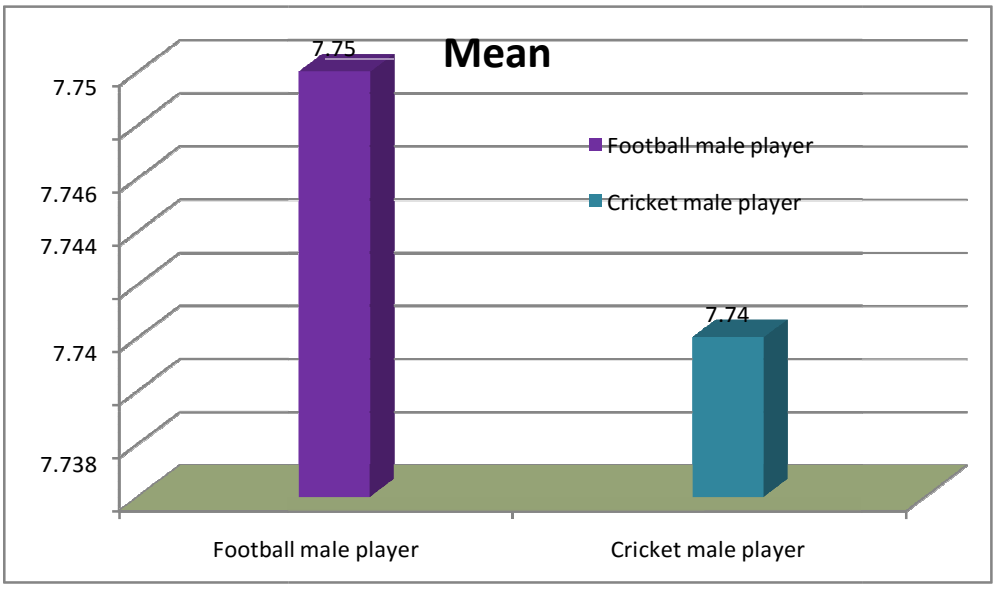

Chart 5

Graphical Comparison of standing Broad Jump test mean and standard deviation value of football players is 7.75 (0.45) respectively and Cricket male

players is 7.74 (0.46) respectively. The 't' value is -1.29 at 0.05 level of

significance. The table value for 58. Hence the difference among Football and Cricket male players in explosive strength found insignificant. Hence H 06 is accepted.

Discussion of Findings :

For the comparison of some selected physical components between club level Football and Cricket male players for this study. Who are instructed to give the true response for six tests they were scored according to the instructions as given by the author of the tests in its manual the mean and standard deviation of physical tests of Football and Cricket players were found out and 't' test value were calculated in order to find the significant difference among these groups. The significance level was set at 2.021 level.

The club level Football and Cricket male players having the average mean in coopers 12 minutes run and walk is (46.9 & 45.1) respectively and standard deviation is (6.69 & 8.39). The mean of Shutter run test is (10.25 & 9.6) and standard deviation is (0.593 & 0.615). The mean of 50 yards dash test is (7.406 & 7.290) and standard deviation is (0.549& 0.445). The mean of forward Bent and Reach test is (12.26 & 11.33) and standard deviation is (4.35 & 6.15). The mean of standing broad jump is (7.75 & 7.74) and standard deviation is (0.45 & 0.46) in case of T-test between football and Cricket players in coopers 12 minutes run and walk test having T-score is (0.342) which is insignificant according to the value. In shutter run test the T-test value between Football and Cricket players is (0.480) which is insignificant as per the table value. In 50 yards dash test the t- test value between Football and Cricket players is (0.290) which is insignificant as per the table value. In forward Bent and Reach test the t-test value between Football and Cricket players is (0.017) which is insignificant as per the table value. In standing broad jump test the T-test value between Football and Cricket players is (0.953) which is insignificant as per the table value.

Results :

- The calculated mean and standard deviation of Coopers 12 minutes run and walk test obtained are M=46.69 (S.D.6.69) and M = (45.01 S.D. 8.39) respectively the calculated T-value is 0.342 at 0.05 level of significance. The table value for 58 degree of freedom is 0.342. Hence the difference between Football and Cricket male players in their cardiovascular endurance found insignificant.
- The calculated mean and standard deviation of shutter run test obtained are M = 10.25 (S.D. 0.593) and M = 9.6 (S.D. 0.615) respectively the calculated t-value is 0.480 at 0.05 level of significance the table value for 58 degree of freedom is 0.480. Hence the difference between football and Cricket male players in their agility found insignificant.

- The calculated mean and standard deviation of 50 yards Dash step test obtained re M=7.406 (S.D. 0.549) and M= 7.290 (S.D. 0.445) respectively the calculated T-value is 0.290 at 0.05 level of significance. The table value for 58 degree of freedom is 0.290. Hence the difference between football and Cricket male players in their speed found insignificant.
- The calculated mean and standard deviation of Forward Bend and Reach test obtained are M=12.26 (S.D.4.35) and M = (11.33 S.D. 6.15) respectively the calculated T-value is 0.017 at 0.05 level of significance. The table value for 58 degree of freedom is 2.00. Hence the difference between Football and Cricket male players in their flexibility found insignificant.
- The calculated mean and standard deviation of Standing Broad Jump test obtained are M = 7.75 (S.D. 0.45) and M= 7.74 (S.D. 0.46) respectively the calculated 't'-value is 0.953 at 0.05 level of significance the table value for 58 degree of freedom is 0.953. Hence the difference between football and Cricket male players in their explosive strength found insignificant.

Summary :

The present study was to compare the selected physical fitness components among college level men Football and Field Hockey players. The study consists of 40 men players, they were belongs in to two games 20 Football players and 20 Field Hockey players with the age group of 20-28 years the data was collected by means of six physical fitness tests namely coopers 12 minutes run and walk, Shuttle run test, 50 yards dash test, forward Bend and reach test, standing Broad Jump test and 30 second Bent knee sit ups test. The data was analyzed and compared with the help of statistical procedures in which arithmetic mean, standard deviation (S.D.). The comparison of both the groups is analyzed by the t-test. The variables selected for the study are cardiovascular endurance, strength, speed, agility and flexibility. In conclusion the result of the study that there is no significant difference between college level men Football and Cricket players in any selected physical fitness components.

Conclusion:

After the statistical analysis of results of this study, the following conclusions can be drawn.

- There is no significant difference were found in cardiovascular endurance between Football and Cricket male players. But football players shown more cardiovascular endurance as compare to cricket players.
- There is no significant difference were found in agility between Football and Cricket male players. But football players shown more agility as compare to cricket players.
- There is no significant difference were found in trunk flexibility between Football and Cricket male players. But football players shown more flexibility as compare to cricket players.
- There is no significant difference were found in speed between Football and Cricket male players. But football players shown more speed as compare to cricket players.
- There is no significant difference were found in strength between Football and Cricket male players. But football players shown more strength as compare to cricket players.

Recommendation :

- A similar study can be conducted on other physical fitness components.
- A similar study can be conducted on women players.
- A similar study can be conducted on university players, national players and international players.
- A similar study can be conducted on athletes and non athletes.
- A similar study can be conducted on large samples.

Suggestions :

While going through this study the researcher suggests the following things.

1) The coaches should have enough knowledge about sports physiology so that they can select right players according to the needs of the game.

2) The coach should take special attention to words average fitness students to reach the need level.

3) In both the games the coach should special attention to words cardiovascular endurance, agility and speed of the players to get best results.

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