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**COMPARISON OF BODY FAT PERCENTAGE OF GURUKUL KANGRI  
DEEMED UNIVERSITY'S SOCCER AND CRICKET PLAYERS<sup>p.p.46-51</sup>**



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**ABSTRACT**

The Body fat percentage contributes to any sport's performance and athlete's health. Body fat percentages have been widely studied in soccer and cricket, with their impact on the playing performance of athletes observed over time. However, a lack of current data exists comparing body fat percentages between university athletes playing soccer and cricket. This descriptive study aimed to compare Body fat percentage (BF%) between soccer and cricket players of Gurukul Kangri, deemed universities. There were 30 athletes the soccer players (n=15) and cricket players (n=15). Body fat percentage (BF%) was assessed using Dr. Trust's smart body fat scale. The 't' test was used to assess the two team's means differences. the mean difference in the body fat percentage of Gurukul Kangri University's soccer and cricket players is 3.2333. The obtained 't' value at 28 df is 2.336 which is higher than the 't' table value at 0.05 level of significance. Hence, it is interpreted that soccer and cricket players have significant differences.

**Keywords:** Body Fat Percentage, Soccer, Cricket & University Team.

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**INTRODUCTION**

Sports have become an integral part of school life for many students worldwide, although sports participation most often occurs in physical education classes. Sports is a permanent human activity (Dr. Kavita Sharma, 2014). The strength of the human body depends on its physical fitness. As a result, he can deal with unexpected changes in his life. Adjustment plays a major role in physical education and sports. The sports person, who doesn't have an average level of Adjustment, can't face the competition successfully. If an athlete is psychologically fit, desired goals can be achieved better in sports performance. The average person needs regular physical activity simply because the human body was designed to move. To keep it healthy, you need to move. You choose a variety of activities to benefit your body and your mind.

According to Goran (1995),“Body Fat Percentage is the amount of fat tissue in our body as a percentage of total body weight.”

Kathleen Trischer (2000) Body fat percentage can be defined as the percentage contribution of fat and lean body tissue to the body's total weight.

E.F.Zerigher (1982) Fat is the most variable tissue in the body and is distributed through the body primarily under the skin and in the abdominal cavity.

An Individual's Body Fat Percentage is the total weight of the individual's fat divided by the individual's weight and multiplied by 100, which consists of essential body fat and storage body fat.

Football is a family of team sports that involve, to varying degrees, kicking a ball to score a goal. Unqualified, the word football normally means the form of football that is the most popular where the word is used.

These various forms of football share, to varying degrees, common origins and are known as "football codes".

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In all codes, common skills include passing, tackling, evasion of tackles, catching, and kicking. In most codes, there are rules restricting the movement of players offside, and players scoring a goal must put the ball either under or over a crossbar between the goalposts.


The sport of cricket has a known history beginning in the late 16th century. Having originated in southeast England, it became an established sport in the country in the 18th century and developed globally in the 19th and 20th centuries. International matches have been played since the 19th century and formal Test cricket matches are considered to date from 1877. The game of cricket was exported to other colonies around the world. The Imperial Cricket Conference was founded in 1909 with England, Australia, and South Africa as the founder members. It had been set up with the Marylebone Cricket Club, the Australian Board of Control for International Cricket, and the South African Cricket Association as the original associations of the ICC. This aimed to regulate international cricket between the three sides considered the only three of equal status at the time. In 1926, both New Zealand and the West Indies were admitted as members, allowing them to play Test cricket against the other sides. However, at this time in the West Indies, cricket was primarily dominated by the white population. Originally, the ICC was not interested in broadening the international popularity of cricket. The organization was reluctant to invite non-commonwealth nations to play. New Zealand was restricted to play three-day test matches. New Zealand and India both became Test-playing nations before World War II and Pakistan joined soon afterwards in 1952.

**PURPOSE OF THE STUDY**

The primary purpose of this study was to compare the difference in Body Fat % between soccer players and cricket team players of Gurukul Kangri University Haridwar.

**HYPOTHESIS**

There would be no significant difference between soccer and cricket players of Gurukul Kangri deemed university in terms of body fat percentage.



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**DESIGN OF THE STUDY**

The study was conducted on 30 athletes, soccer players (15) and cricket players (15), selected from Gurukul Kangri University Haridwar, and also represented this university during the academic session 2022-2023. The athletes were 22-27 years old and purposive selected as a sample for this study. Further, the independent ‘t-test’ was used as the statistical tool to compare the comparison between selected variables (Body Fat %) of soccer and cricket team players. The significance level was set at 0.05—the SPSS version-22 used for statistical analysis.

**RESULTS AND DISCUSSION**

Tables 1 and 2 present the obtained mean values, standard deviations, mean difference, degree of freedom, t-value, and level of significance of body fat percentage of Gurukul Kangri University’s soccer and cricket players.

**Table No.1: Analysis of Mean, Standard deviation, and standard error mean of soccer and cricket players of Gurukul Kangri University.**


|                   | Teams           | N  | Mean    | Std. Deviation | Std. Error Mean |
|-------------------|-----------------|----|---------|----------------|-----------------|
| Bodyfatpercentage | soccer players  | 15 | 20.9667 | 4.12738        | 1.06568         |
|                   | cricket players | 15 | 17.7333 | 3.41962        | .88294          |

As per Table 1, the mean values of the body fat percentage of Gurukul Kangri University’s soccer and cricket players are 20.9667 and 17.7333. The standard deviation for the soccer and cricket players came out to be 4.12738 and 3.41962.


**Table No. 2:** Analysis of the ‘t’ ratio, degree of freedom, mean difference, and Standard error difference of soccer and cricket players of Gurukul Kangri University.




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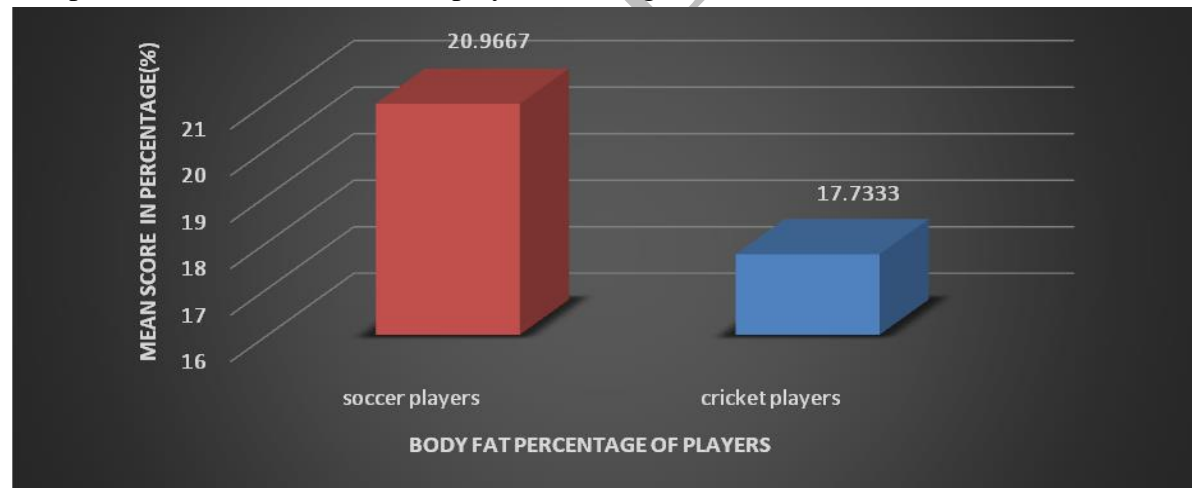
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**Independent Samples Test**

|                     | t-test for Equality of Means |    |                 |                       |   |         |
|---------------------|------------------------------|----|-----------------|-----------------------|---|---------|
|                     | t                            | df | Mean Difference | Std. Error Difference | 95% Confidence Interval of the Difference |         |
|                     |                              |    |                 |                       | Lower                                     | Upper   |
| Body fat percentage | 2.336                        | 28 | 3.23333         | 1.38393               | .39848                                    | 6.06819 |

\* (Significance at .05 level of confidence for D.F. of 28 is 2.048)

As per Table 2, the mean difference in the body fat percentage of Gurukul Kangri University’s soccer and cricket players is 3.2333. The obtained ‘t’ value at 28 df is 2.336 which is higher than the ‘t’ table value at 0.05 level of significance. Hence, it is interpreted that soccer and cricket players have significant differences.



**Fig.1:** Bar diagram of mean scores of body fat percentage of Gurukul Kangri University’s Soccer and cricket players.

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**CONCLUSION**

This study hypothesized that there would be no significant difference between soccer and cricket players of Gurukul Kangri deemed university in terms of body fat percentage is rejected because after the computed independent ‘t’ test the calculated value (2.336) is higher than the tabulated value (2.048).

**REFERENCES**

1. Kavita Sharma (2014) Khel Manovigyan, Sports Educational Technologies 102, 4787/23 Dariyaganj New Delhi.
2. Kathleen Tritschler (2000) “Practical Measurement and Assessment”, Maryland, USA
3. E.F.Zerigher “Physical Education and Sports an Introduction” (Phil. Adel. Sophia: Lea and Febiger(1982)
4. Goran, MI(1995) “Intra-abdominal adipose tissue in young children” Journal of Obesity and Related Metabolic Disorder.
5. Sushil Kumar and Dr. Hoshiyar Singh,” A Comparative study of flexibility and body fat percentage components of Chaudhary Charan Singh University’s volleyball and basketball players”
6. [http://en.wikipedia.org/wiki/History\\_of\\_cricket](http://en.wikipedia.org/wiki/History_of_cricket)
7. <http://en.wikipedia.org/wiki/football>