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Anthropometric characteristics contributing to success at different level

Dr. Gaurav Pant and Sachin Parsekar

Abstract

The study is to compare the Anthropometrics characteristics, body composition and physical fitness parameters of state level cricketers and national level cricketers. The significance was set as 0.05 level and tabulated 't' value is 1.686. Anthropometrics characteristics was measured by conducting test which shows there is significant difference in standing height (2.036>1.686), weight (2.024>1.686), leg length (2.058>1.686), arm length (2.026>1.686), calf girths(2.024>1.686), upper arm girths (2.045>1.686), thigh girths (2.028>1.686).

Body composition is measured and it also shows significant difference in triceps skinfold thickness (2.024>1.686), biceps skinfold thickness (2.030>1.686), sub-scapula skinfold thickness (2.024>1.686).

Physical fitness parameter speed, strength, agility and flexibility was tested by conducting 50 meter dash (2.028>1.686), strength (2.032>1.686), agility (2.026>1.686), flexibility (2.032>1.686)

By conducting study on 40 subjects i.e 20 state level cricketers and 20 national level cricketers it is observed that there is significant difference in all 14 variables. National level cricketers has better anthropometrics characteristics and physical fitness level than state level cricketers. Hence anthropometrics characteristics also enhance performance level in cricket.

Keywords: Anthropometrics characteristics, cricketer players

Introduction

Physical and physiological characteristics of elite athletes are different among sports. In selection of athletes for a particular sport, the focus should be on those traits and abilities which have the most significant influence on sport performance, such as physiological and anthropometric characteristics. The anthropometric provide us with the foundations and the private information concerning the characteristics of motor, which contribute about the possibility of evolving to reach high level of performance and achievement, they are measurements on the components of fat, muscles and bones to give the coaches, during their processes of selection and training, a vision more deep and specialized of the effect of the compound operations and functional physical contributing to the high levels of athletic achievement. It also considers specifications anthropometric grounds that must be rationalized through the selection in sports for its close association with the access of emerging and evolving the levels of sporting prowess and that because of their impact on the level of the emergence of the physical characteristics and skill and functionality necessary to achieve those high levels of activity sports specialist. As early as the 1920s, researchers were examining the potential of anthropometrical (e.g., height) and physiological (e.g., strength) measures as discriminating factors between athletes involved in different sporting events. The list of variables considered was wide-ranging, from simple consideration of age, height, and weight to more extensive studies containing many anthropometric measurements, somato typing, and tissue analysis. However, numerous studies have contrasted senior and junior athletes; relatively few have examined the characteristics of the 'world class' performer.

Methodology

This was experimental study. With help of test the data was be collect to conduct study. A experimental study conducted to assess anthropometric characteristics contributing in success to success at different level in cricket. The research scholar had formal meeting with the cricket players and explained the purpose of study and the need of data collection.

After receiving permission from the authority and basis of the consent from players, the researcher have conducted anthropometric tests

Analysis of Data

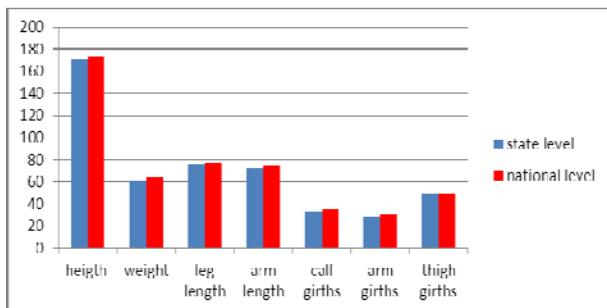
The analysis of the data was presented in this chapter. A the data pertaining to independent t-test applied to find out the statistical mean difference in between the selected Anthropometrics characteristics (height, weight, leg length, arm length, upper arm girths, calf girths, thigh girths), body composition (skin fold thickness of triceps, biceps, sub-scapula) and physical parameter (speed, strength, agility, flexibility) of state level and national level cricketers.

A statistical tool has been used for accurate and systematic result. The researcher for obtaining systematic result from the study has been used following statistical tool, i.e descriptive Analysis, Mean, and standard deviation

Tabular representation of Anthropometrics Characteristics mean score

Sr. no.	Anthropometric Characteristics	State mean score	National mean score
1	Standing height	171.25	173.2
2	Body weight	61.7	63.9
3	Leg Length	76.05	77.5
4	Arm length	72.95	74.9
5	Calf girths	33.15	35.05
6	Upper arm girths	28.15	30.55
7	Thigh girth	49.35	48.7

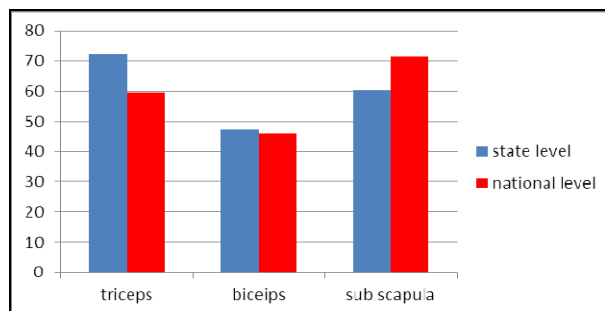
Graphical representation Anthropometrics Characteristics of mean score



Tabular representation of body composition mean score

Sr. no.	Anthropometrics body composition	State mean score	National mean score
1	Triceps	72.32	59.7
2	biceps	47.17	46
3	Sub-scapula	60.38	71.25

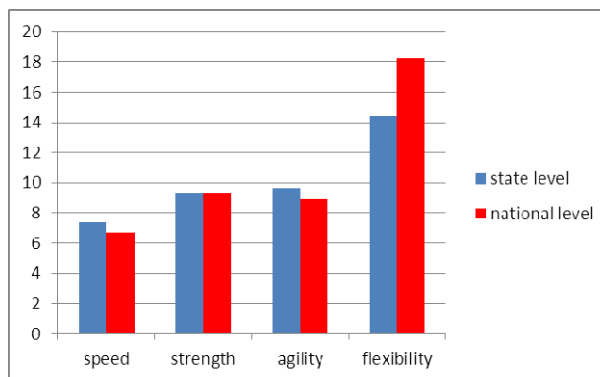
Graphical representation body composition of mean score



Tabular representation of physical fitness parameter mean score

Sr. no.	Anthropometrics physical fitness parameter	State mean score	National mean score
1	Speed	7.35	6.70
2	Strength	9.25	9.35
3	Agility	9.67	8.91
4	Flexibility	14.42	18.22

Graphical representation physical fitness parameter of mean score



Summary

The purpose of the study was to compare the anthropometric characteristics, body composition and physical fitness Parameters of state level and national level cricketers

The oldest form of measurement, known as anthropometry, deals with the study of man, that is the study of body. It is the science of measuring the human body and its parts. Physical characteristics of elite athletes are different among sports. In selection of cricketers the focus should be on those traits and abilities which have the most significant influence on sport performance

Anthropometrics characteristics contribute about the possibility of evolving to reach high level of performance and achievement, they are measurements on the components of fat, body dimension and bones to give the coaches

Conclusion

Taking in to consideration the limitation of the present study the following conclusion were drawn:

- There may be significant difference of standing height of state level cricketers and national level cricketers
- There may be significant difference of body composition of state level cricketers and national level cricketers
- There may be significant difference of physical fitness of state level cricketers and national level cricketers

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