A COMPARATIVE STUDY ON SELECTED ANTHROPOMETRIC VARIABLES IN BETWEEN UNIVERSITY AND COLLEGE MALE CRICKET PLAYERS

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Abstract
The purpose of the study was to compare selected anthropometric variables between University and College male cricket players. The subjects in this study were (N=60) male belongs from university and college level players; were 30 from university, 30 from college levels cricket players and age ranged from 21 to 25, from Guru Ghasidas Vishwavidyalaya and Bilaspur university, Bilaspur (C.G.) were randomly selected. The selected anthropometric measurements like biceps skin fold width, triceps skin fold width, subscapular width, suprailiac skin fold width, thigh skin fold width, calf skin fold width, chest skin fold width, abdominal skin fold width. The statistical technique employed for this study was independent't'-test at 0.05 level of significance. As per the statistical analysis significant difference was found between University and College level cricket players in respected to selected anthropometric variables sub scapular skin fold width , biceps skin fold width , suprailiac skin fold width, thigh skin fold width, calf skin fold width, chest skin fold width. But, in the triceps skin fold and abdominal skin fold width no significant differences ($p < 0.05$) were found.
Keywords: Anthropometric, Skin fold and Cricket.

Introduction

The physical education seems to have taken a new turn in the form of sports science. The sports science in turn has their substance and methodology from various sports basic. Anthropometric measurements were central concerns of the first phase of the scientific era of measurements which were initiated in the 1960s. Anthropometric characteristics play a vital role in determining the success of sportspersons (Rico-Sanz, 1998; Wilmore and Costill, 1999; Keogh, 1999). Specific physical characteristics or anthropometric profiles are required for the highest level of performance in a specific sport (Claessens et al., 1999; Bourgois et al., 2000; Reilly et al., 2000; Gabbet, 2000; Ackland et al., 2003; Slater et al., 2005). Anthropometric data have also varied uses in public health including the assessment of nutritional status, cancer studies, as a risk factor for coronary heart disease (CHD) (Wang, 2003), type-2diabetes and hypertension (HT). Hence, specific basis of selection is being inducted in the procedure of selection of athletes at various levels in some advanced countries. To excel in a physically competitive sport, the player must possess such dimensions of body characteristics are known to be of fundamental importance for individual development to achieve Olympic level performance in a sport. Measurements of body include such descriptive information as height, weight and surface area, while measure of body proportion describes the relation between the height and weight among length, widths and circumference of various body segments. It has been found that the top athletes in some sports tend to have those proportions that biomechanically aid the particular performance required (Zeigler, 1982). As a result, physique which includes the evaluation of size, shape and form of an individual is of prime importance as to know how far an individual can succeed in becoming a top athlete. Studies have also shown that champion's of different sports require different qualities with respect to their events. Therefore, observing the felt requirement, we consider it necessary to attempt a compare selected anthropometric variables between university and college level of male cricket players.

Keeping in mind the purpose of the study it was hypothesized that there might be significant differences between University and College level cricket players in respected to selected anthropometric variables.

Objective of the Study

The objective of the study was planned with the aim to compare selected anthropometric variables between university and college level of male cricket players.

Materials and Methods

The subjects in this study were (N=60) male cricket players belongs from Guru Ghasidas University (Thirty subjects) and Bilaspur university (Thirty subjects) Bilaspur (C.G.) and 100% provided permission to use data from class project for research purpose. To compare selected anthropometric variables between

university and college male cricket players, t- test was applied at the significance level of 0.05.

Instrumentation

All anthropometric measurements are based on standard methodology adopted from Harpendon, Lange and Layaffatte, The equipment used for measuring selected skin fold by Harpenden skin fold calipers (British indicators Ltd., West Sussex, UK), to the nearest 0.1 mm at a standard pressure of 10 gg/mm square on the skin fold. These measurements were as follows:

- Biceps skin fold width
- Triceps skin fold width
- Sub scapular width
- Suprailiac skin fold width
- Thigh skin fold width
- Calf skin fold width
- Chest skin fold width
- Abdominal skin fold width

Data Analysis

For data analysis responses were expressed as mean and standard deviation. Independent test were performed for comparisons between two group (university and college male cricket players), $p<0.05$ was considered statistically significant. Data analysis was performed using SPSS 17.0 software under windows.

Results

The minimum and maximum ages were similar in both the groups and the mean age of the university player was 22.8 and for college player was 20.5. The means and standard deviation (SD) of the anthropometric variables, the means and standard deviations of the two groups along with the significance of difference by way of 't' test has been presented in table-1.

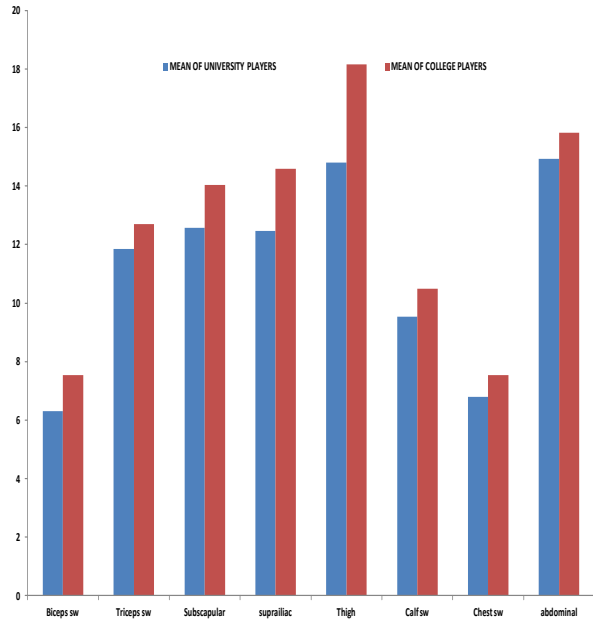
TABLE-1

SIGNIFICANCE DIFFERENCE OF MEAN OF ANTHROPOMETRIC VARIABLES BETWEEN UNIVERSITY AND COLLEGE LEVEL CRICKET PLAYERS

S. No	Anthropometric Variables	University Players		College Players		't ' value
		MEAN	S.D	MEAN	S.D	
1	Biceps skinfold width	6.30	2.27	7.53	1.63	2.41*
2	Triceps skin fold width	11.85	2.99	12.7	2.92	1.11
3	Sub scapular skin fold width	12.58	2.30	14.03	2.15	2.51*
4	Suprailiac skin fold width	12.46	2.30	14.6	2.81	3.25*
5	Thigh skin fold width	14.8	3.03	18.16	6.74	2.49*
6	Calf skin fold width	9.53	1.75	10.5	1.46	2.32*
7	Chest skin fold width	6.8	1.8	7.53	0.50	2.13*
8	Abdominal skin fold width	14.93	2.31	15.83	1.76	1.69

*Value of "t" at the level of 0.05= (2.02)

Table-1 describes the statistical attributes of anthropometric data of Players (21-25 years) of university and college level. From the results of the distribution of 't' value of the eight-anthropometric measurements, significant differences were noted in the sub scapular skinfold width(2.51), biceps skinfold width (2.41), suprailiac skinfold width(3.25), thigh skinfold width (2.49), calf skinfold width (2.32), chest skinfold width(2.13) at level ($p < 0.05=2.02$). But, in the triceps skin fold (1.11) and abdominal skinfold (1.69) width no significant differences ($p < 0.05=2.03$) were seen between the University and the College players were found. The graphical representation of mean differences is shown in fig.1.



Discussion of Findings

The results of the study indicate that there was significant difference in anthropometric variables of University and College level players in respected to (biceps, subscapular, suprsiliac, thigh calf and chest skin fold). Mean of respected anthropometric variables of University players less than college players which indicate body fat of University players less than College players and it attributed to the fact that the players of University holder involve training and conditioning programmed during camp which lead more physical activity as result the fat deposition tissue burn and revel narrow fat mass. A player holding university may also attend coaching club for further competition and well awareness to their physical fitness importance that

convert it into higher level performance. And players of college level having bulky mass because of non participation in physical activity. Analysis of data further revels that there was no significant difference found on triceps and abdominal skin fold width anthropometric variables. This may be attributed to the reason that College players were engaged in attending different activities for considerable period of time for recreational purpose.

Conclusion

Results of this study are demonstrated that University players were narrow fat and well physical fitness in comparison to the College players. These results may help coaches, sports clubs, sports body and society that sports activities provide health better and keep away from fat diseases and other multiple perspectives.

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