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ANTHROPOMETRIC CHARACTERISTICS OF PRE COACHING SKILL PERFORMANCE & POST COACHING GAME PERFORMANCE OF THE INTER-UNIVERSITY BASKETBALL PLAYERS

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ABSTRACT:

INTRODUCTION: Sports play a vital role in modern society, especially in young athletes. In modern era the sports performance are highlighted in the newspapers, news channels & they become national & international heroes. To achieve highest performance they train hard, the coach try to get maximum from the sportsman's. Thus the study of Anthropometric characteristics in sports has become significant role, because the best structure & physique of athletes will have best outcome in the high competitive world of sports. Sport is a highly organized form of play and play is a general innate tendency. Sports has very important role in growth and development of a human body.

PURPOSE OF THE STUDY

The main Purpose of this study was to investigate, selected Anthropometric Characteristics of the of Inter-University Basketball players.

METHODOLOGY

The present study is to identify the significant and limited number of Anthropometric variables of Inter-University Basketball players, total 60 subjects were selected for fulfill the aim of the study. The age group of the above players was between 19 to 25 years and players were selected from Ballari, Dharwad, Haveri, Koppal & Bagalkote universities of Karnataka state .

RESULTS:

The mean score of 133.70 & stand deviation 8.30 for Post coaching game performance during Invitational competition, which was higher than mean score of Pre coaching skill performance. The T-value of 7.789* is significant at 0.05 level of confidence indicates that there was a significant difference in the Pre coaching skill performance & Post coaching game performance during Invitational competition of inter-university basketball players & In the Anthropometry Variables Percentage of fat (0.714 ⁺⁺) is significantly positively correlated with the Pre-Coaching skills performance at 0.01 level of significance

CONCLUSION: In the Anthropometry Variables Percentage of fat (0.714 ⁺⁺) is significantly positively correlated with the Pre-Coaching skills performance at 0.01 level of significance & In game performance inter-university basketball players of Height, sitting height, arm span length, arm length, humerus width, shoulder width, forearm girth, chest girth, thigh girth, calf girth, ankle girth, mesomorphy were greater than the table 'r' value at 0.05 level of confidence and they were significantly negatively correlated with the post coaching game performance during invitational competition.

Therefore, it was concluded that there was a significant impact of Anthropometric variables in the inter-university basketball players.

Keywords: Anthropometry, skills, performance & coaching



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INTRODUCTION

Sports play a vital role in modern society, especially in young athletes. In modern era the sports performance are highlighted in the newspapers, news channels & they become national & international heroes. To achieve highest performance they train hard, the coach try to get maximum from the sportsman's. Same way in sports has the perfect Anthropometric characteristics (structure & physique) has best skill performance. The skill execution depends on the body movements and body structure. Eg: In Volleyball height of sportsman will have better shooting ability, dunking, rebound collection & defensive tactics. Thus Anthropometric Characteristics of Volleyball players have impact on their performance.

In performance sports, competition provides the means by which one can show one's worth by competing successfully. Consequently sports competitions have triggered off a vigorous competition in research on sports physiology, sports psychology, sports training, sports nutrition and sports medicine. Competitive sports have brought into sharp focus many methods for improvement and achieving high level performance. Everywhere efforts are on to set up research laboratories so that ways and means could be found out to access and accelerate human performance in sports.

Dr. Sukhwinder Singh (2016) investigation finds the relationship between selected Anthropometric variables and performance of university-level Volleyball Players. For the purpose of the study, thirty (N=30) volleyball players were selected as subjects from the North Zone Inter-University Volleyball Tournament. The selected Anthropometric measurements were taken with the help of vernier callipers and Lange's skinfold callipers. The performance of the subjects was measured in terms of Spiking ability of the players during the match. Product moment method for inter-correlation was applied for analysis of data. The body diameters i.e. bi-acromial, bicrystal and elbow diameters have been found to possess positive and significant ($p < 0.05$) correlation with the performance. The skinfold measurements i.e. subscapular and suprailiac have been found to possess positive and significant ($p < 0.05$) correlation with the performance. It can be concluded from the findings of the present study that body diameters bi-acromial, bicrystal, and elbow and; subscapular, suprailiac biceps, and calf skinfold measurements contribute significantly to Volleyball performance.

Sarachandra (March, 2014) studied on anthropometric dimensions of Volleyball and Basketball players. To find out the purpose of the study eighty men intercollegiate players, forty Volleyball players and forty volley ball players were selected as a sample for the study. The data in respect of anthropometric dimensions were collected as per the standard procedure. The collected data were analyzed by using 't' statistical technique with the help of 19th version of SPSS. The results of the study shows that, there exists significant mean difference between Volleyball and volleyball players in the selected anthropometric dimensions, viz., height, arm length, chest girth, thigh girth, calf girth, there were no significant difference leg length.

Mala et al. (2010) presented the profile and comparison of body composition of the female national volleyball team of the Slovak Republic (senior team – SNT, U19, and U17). The body composition was identified with the use of the multi-frequency bioimpedance method (BIA 2000M). The monitored parameters included the amount of lean body mass (LBM), intra-(BCM) and extracellular mass (ECM) and BCM proportion in LBM (CQ), fat mass (FM), the phase angle indicating cell quality (α), total body water (TBW) and its distribution into intra – (ICW) and extracellular liquid (EDW). The authors recorded the values of female volleyball players indicating their good training load and corresponding to the values characterizing high-performance sport even in the category U17 when this team significantly differed from the senior team (SNT) only in FM ($p < 0.05$). On the contrary, team U19 and SNT were significantly different in FM, TBW, α , BCM, EDM/BCM, ECM/BCM, ICW, ECW and CQ ($p < 0.5$). We assume that body composition indicators of the team may relate not only to the state of training load (players' physical preparedness) but also to the success of the team at important events.

PURPOSE OF THE STUDY

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METHODOLOGY

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THE VARIABLES

In order to assess Anthropometric characteristics selected anthropometric measurements were under taken.

Administration of Tests

Anthropometric variables			
Length	Skinfold	Width	Girth
Body weight in Kgs.	Chest	Bi-epicondylar Humorous	Tensed Arm
Stature in Cms	Triceps	Bi-epicondylar Femur	Arm Relaxed
Sitting height	Biceps	Bi-acrominal width	Forearm
Leg length	Sub Scapular	Bi-iliocrystal width	Chest
Arm span	Supra Spinale		Waist
Hand Length	Abdomen		Thigh
	Thigh		Medial Calf
	Calf		

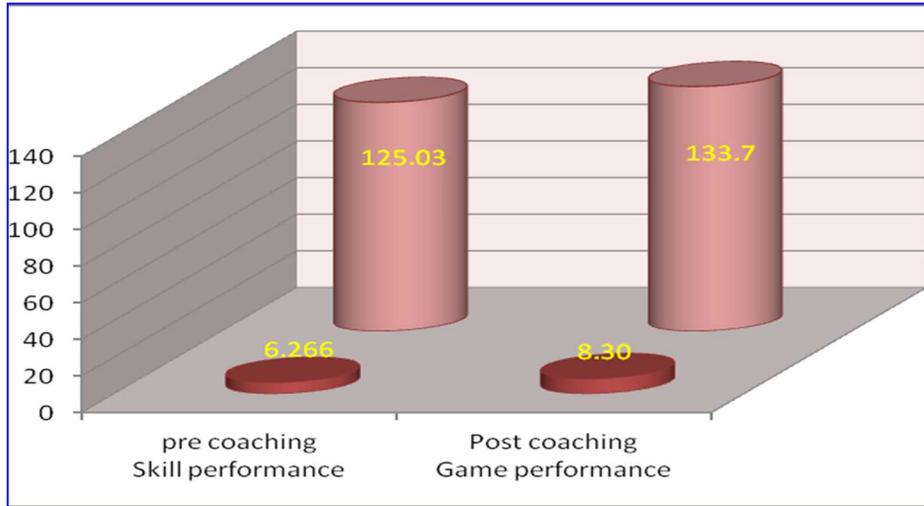
RESULTS:

Mean, SD and T-value computed for Pre coaching skill performance & Post coaching game performance during Invitational competition of inter-university basketball players.

Variables	Mean	Standard deviation	t-value
Pre-coaching skill performance	125.03	6.26	7.789 *
Post coaching game performance	133.70	8.30	

* Significant at 0.05 level (3.659), df=29

The above table shows that the mean score of 133.70 & stand deviation 8.30 for Post coaching game performance during Invitational competition, which was higher than mean score of Pre coaching skill performance. The T-value of 7.789* is significant at 0.05 level of confidence indicates that there was a significant difference in the Pre coaching skill performance & Post coaching game performance during Invitational competition of inter-university basketball players.



Pearson's coefficient of correlation of selected Anthropometric variables with pre-coaching skill performance of the inter-university basketball players

Si No	Variables	Pearson correlation
1	Weight	-0.284*
2	Height	-0.017
3	Sitting Height	-0.92
4	Leg Length	0.44 *
5	Arm Span Length	-0.63*
6	Arm Length	-0.91*
7	Hand Length	0.02
8	Chest Skinfold	0.58 *
9	Triceps Skinfold	0.273 *
10	Biceps Skinfold	0.038
11	Sub Scapula Skinfold	-0.024
12	Supra Spinal Skinfold	0.248 *
13	Abdomen Skinfold	0.225 *
14	Thigh Skinfold	0.35 *
15	Mid Calf Skinfold	0.165 *
16	Humorous Width	0.039
17	Femur Width	0.306 *
18	Shoulder Width	-0.027
19	Waist Width	-0.176*
20	Arm Relax Girth	0.098
21	Arm Tense Girth	0.23 *
22	Forearm Girth	-0.045
23	Wrist Girth	0.213 *
24	Chest Girth	-0.02



25	Waist Girth	-0.349 *
26	Abdomen Girth	-0.22*
27	Thigh Girth	0.202 *
28	Calf Girth	0.207 *
29	Ankle Girth	0.131 *
30	Muscle Mass	0.279 *
31	Body mass index	0.087
32	Percentage of fat	0.714 ⁺⁺
33	Body Density	-0.387 ⁺
34	Endomorphy	0.254 *
35	Mesomorphy	0.205 *
36	Ectomorphy	0.178 *

⁺ Correlation is significant at the 0.05 level.

⁺⁺ Correlation is significant at the 0.01 level.

* Significant at 0.05 level (0.128) n=28, df=30

The above table shows that, Pearson coefficient of correlation values between pre-coaching skill performance and Anthropometric variables such as leg length (0.44*), chest skinfold (0.58*), triceps skinfold (0.273*), supraspinal skinfold (0.248*), abdomen skinfold (0.225*), thigh skinfold (0.35*), mid-calf skinfold (0.165*), femur width (0.306*), arm tense girth (0.23*), wrist girth (0.213*), waist girth (-0.349*), thigh girth (0.202*), calf girth(0.207*), ankle girth (0.131*), muscle mass (0.279*), endomorphy (0.254*), mesomorphy (0.205*) and ectomorphy (0.178*) in the inter-university basketball players were greater than of table 'r' value (0.128) at 0.05 level of confidence and they were significantly correlated with the pre-coaching skill performance at 0.05 level of confidence.

Weight (-0.284*), sitting height (-0.92)*, arm span length (-0.63*), arm length (-0.91*), waist width (-0.176*) and abdomen girth (-0.22*) of inter-university basketball players were greater than of table 'r' value at 0.05 level of confidence and they were significantly negatively correlated with the Pre-Coaching skill performance at 0.05 level of confidence in the inter-university basketball players.

Percentage of fat (0.714 ⁺⁺) is significantly positively correlated with the Pre-Coaching skills performance at 0.01 level of significance, body density (-0.387⁺) is significantly negatively correlated with the Pre-Coaching skill performance at 0.05 level of significance in the inter-university basketball players. Therefore, it was concluded that there was a significant relationship between Pre-Coaching skill performance and above Anthropometric variables in the inter-university basketball players.

The remaining variables such as height, hand length, biceps skinfold, humerus width, shoulder width, arm relax girth, forearm girth, chest girth and body mass index Anthropometric variables were less than that the table 'r' value (0.128) at 0.05 level of significance. It was concluded that there was no significant relationship between pre-coaching skill performance and Anthropometric variables of the inter-university basketball players.

Pearson's coefficient of correlation of selected Anthropometric variables with post coaching game performance during Invitational competition of the inter-university basketball players.

Si No	Variables	Pearson correlation
1	Weight	-0.017
2	Height	-.138 *



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3	Sitting Height	-.197*
4	Leg Length	0.075
5	Arm Span Length	-0.203*
6	Arm Length	-0.255*
7	Hand Length	0.040
8	Chest Skinfold	-0.096
9	Triceps Skinfold	0.317*
10	Biceps Skinfold	0.185
11	Sub Scapula Skinfold	-0.017
12	Supra Spinal Skinfold	0.156*
13	Abdomen Skinfold	-0.014
14	Thigh Skinfold	0.013
15	Mid Calf Skinfold	0.317*
16	Humorous Width	-0.272*
17	Femur Width	-0.030
18	Shoulder Width	-0.189*
19	Waist Width	0.054
20	Arm Relax Girth	-0.070
21	Arm Tense Girth	-0.059
22	Forearm Girth	-0.276*
23	Wrist Girth	-0.085
24	Chest Girth	-0.170*
25	Waist Girth	0.072
26	Abdomen Girth	0.182*
27	Thigh Girth	-0.289*
28	Calf Girth	-0.300*



29	Ankle Girth	-0.241*
30	Muscle Mass	0.033
31	Body mass index	-0.122
32	Percentage of fat	0.305*
33	Body Density	0.035
34	Endomorphy	0.228*
35	Mesomorphy	-0.204*
36	Ectomorphy	0.088

* Significant at 0.05 level (0.128) n=28, df=30

The above table shows that Pearson's coefficient of correlation values between Post coaching game performance during Invitational competition and Anthropometric variables such as triceps skinfold (0.317*), supra spinal skinfold (0.156*), mid calf skinfold (0.317*), abdomen girth (0.182*), percentage of fat (0.305*), endomorphy (0.228*) in the inter-university basketball players were greater than the table 'r' value (0.128) at 0.05 level of confidence and they were significantly positively correlated with the post coaching game performance during invitational competition.

Height (-0.138 *), sitting height (-0.197*), arm span length (-0.203*), arm length (-0.255*), humerus width (-0.272*), shoulder width (-0.189*), forearm girth (-0.276*), chest girth (-0.170*), thigh girth (-0.289*), calf girth (-0.300*), ankle girth (-0.241*), mesomorphy (-0.204*) of inter-university basketball players were greater than the table 'r' value at 0.05 level of confidence and they were significantly negatively correlated with the post coaching game performance during invitational competition at 0.05 level in the inter-university basketball players.

The remaining variables such as weight, leg length, hand length, chest skinfold, biceps skinfold, sub scapula skinfold, abdomen skinfold, thigh skinfold, femur width, waist width, arm relax girth, arm tense girth, wrist girth, waist girth, muscle mass, body mass index, body density and ectomorphy Anthropometric variables were less than that the table 'r' value (0.128) at 0.05 level of significance. It was concluded that there was no significant relationship between post coaching game performance during Invitational competition with Anthropometric variables in the inter-university basketball players.

CONCLUSION:

In the Anthropometry Variables Percentage of fat (0.714 ⁺⁺) is significantly positively correlated with the Pre-Coaching skills performance at 0.01 level of significance & In game performance inter-university basketball players of Height, sitting height, arm span length, arm length, humerus width, shoulder width, forearm girth, chest girth, thigh girth, calf girth, ankle girth, mesomorphy were greater than the table 'r' value at 0.05 level of confidence and they were significantly negatively correlated with the post coaching game performance during invitational competition.

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