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Anthropometric measurements level fitness and performance of Hand ball players

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Abstract

The purpose of the present study was to describe the anthropometric measurements and level of fitness and performance of district men handball players. The subject of this study were 45 male handball players of Mysore districts. The subject were systematically selected to perform the selected fitness test and anthropometrical test. The subject age ranged between 15 to 25 years of male district level hand ball players. All the subject were tested on the anthropometric variables Such as chest girth, biceps girth, arm length, leg length, calf girth, and physical fitness variables such as speed, endurance, flexibility, strength and agility. Descriptive statistics and dependent 't' test used to relate the differences in the handball players. The significance level was chosen at 0.05 level of significance. There were no significant differences found in physical fitness level of performance of Mysore district male handball players and there was no significance difference found in the anthropometric measurements of district level hand ball players of Mysore district.

Keywords: Hand ball players, anthropometric, fitness

Introduction

Every person has some idea of physical fitness, even though their concept about fitness may not be very clear. Not only in the present age but even the people of the ancient times were aware of the importance of physical fitness. Ancient people did not have any systematic programme to develop physical fitness, yet they kept themselves fit by participating in activities involving jumping, running and throwing. These activities not only kept them fit, but also enabled them to meet the requirements of their daily life. There were occasions when the ancient man had to run at considerable speed to save him from the wild beasts and in the process of running he required food he had to kill the animals by throwing homemade weapons. To perform these skills efficiently, there was no other way but to keep him physically fit.

Anthropometric measurements are a must in manning the rate of growth of different body part in classification of body types and also in identifying the talents according to the requirements of the port in recent days a special concern is given to this factor in achieving elite performance. Anthropometric measurements are also essential for allotting physical activities to individual students according to their fitness, strength, stamina endurance, agility, flexibility and speed. Physical fitness is the fundamental need, like food clothing and shelter, it is not isolated the physical betters the physical endurance and precision of movement which are highly essential for any sports. Physical fitness is the entire human organism's ability to function efficiently and effectively.

Level of performance

In this study, level of performance refers to the Club levels of performance in sports.

Club level of performance is taken to the pattern of anthropometric measurements and physical fitness at this levels. In the present study researcher investigate analyse the handball player's anthropometric measurements and level physical fitness in club level performance of the men players. Therefore, in this study the researcher has made an attempt to find out the anthropometric measurements, level of fitness and performance of state handball men players.

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Statement of the problem

The purpose of this study is to find out the physical fitness and anthropometric measurements, level of fitness and performance of club level men handball players of Mysore district.

Hypothesis

It was hypothesized that there would be differences in the physical fitness and anthropometric measurement and level of performance among handball players of Mysore district.

Significance of the study

1. This study will help to estimate the physical fitness among handball players.
2. This study may help the coaches and physical education teacher to improve the physical fitness of the school children.
3. This finding may reveals vital information regarding the selection of talents in handball games, keeping in mind the anthropometric variables suitability.
4. This finding may provide information regarding the status of various anthropometric measurements, physical fitness and performance of the players among handball players.

Methodology

The present study was conducted on 45 handball players. The entire subjects were boys. Their age ranges between 15-25 years. all the district level handball players are from Mysore district.

Table 1: Keeping in mind the criteria the following physical fitness variables, related field test and anthropometric measuring these variables were selected for conducting this study.

S. No	Physical Fitness Variables	Field test
1	Speed	30 meter dash
2	Endurance	600 meter run
3	Strength	Standing broad jump
4	Flexibility	Sit and reach test
5	Agility	Shuttle run
S. No	Anthropometric Variables	Measurements
1	Height	Anthropometric measurements
2	Weight	
3	Chest girth	
4	Biceps girth	
5	Arm girth	
6	Leg length	
7	Calf girth	

Analysis and interpretation of data

The statistical analysis on selected anthropometric measurements and level fitness performance of district handball players are presented in this chapter. The present stud was conducted on 45 handball players. The entire subjects are district handball men players and their age group between 18-25 years.

To measure physical fitness viz, 50 metre dash, 600 metres run, standing broad jump, sit and reach test and shuttle run and anthropometric measurements viz., chest girth biceps

Table 3: Mean, standard deviation and t-ratio for anthropometric measurements between low and high level performance of district handball players.

Variables	Groups	Nos.	Mean	S.D	't' values	Significance
Chest Girth	Low	29	74.078	3.741	1.376	N.S
	High	16	76.053	4.567		
Biceps Girth	Low	29	20.489	2.567	0.861	N.S

girth, arm length, leg length and calf girth were conducted and the scoring were recorded. The data was statistically analysed using appropriate statistical analysis by convert the raw scores to the standard scores. The significance was established by testing the 't'test to find out the significance among hand ball players.

Physical fitness and anthropometric measurement

The careful examination of table shows the anthropometric and physical fitness of each variables for the handball players such as 50 mts. Standing start, 600 metres run, standing broad jump, sit and reach test and shuttle run, chest girth, biceps girth, arm length, leg length and calf girth. The physical fitness and anthropometric measurements of each variables of handball players are calculated and presented respectively.

Table 2: Mean, standard deviation and t-ratio for physical fitness between low and high level performance of district handball players.

Variables	Groups	Nos.	Mean	S.D	't' values	Significance
Speed	Low	29	8.415	0.867	0.447	N.S
	High	16	8.278	0.761		
Endurance	Low	29	3.133	0.342	0.521	N.S
	High	16	3.061	0.432		
Strength	Low	29	1.851	0.180	0.486	N.S
	High	16	1.938	0.363		
Flexibility	Low	29	10.793	4.463	0.648	N.S
	High	16	9.875	4.323		
Agility	Low	29	8.032	0.398	0.746	N.S
	High	16	7.971	0.445		

Table-3 clearly shows that there were no significant differences were found in speed endurance, strength, flexibility and agility between low and high level performance of district handball players. As the values of 't' values that is 0.447(speed), 0.521(Endurance), 0.486(strength), 0.648(Flexibility), 0.746(Agility) respectively were lesser than the table values 2.02 at 0.05 level. The mean value of the high performance players were more when compared with low performance.

Average physical fitness among low and high performance of district handball players were graphically were graphically presented in Fig.1

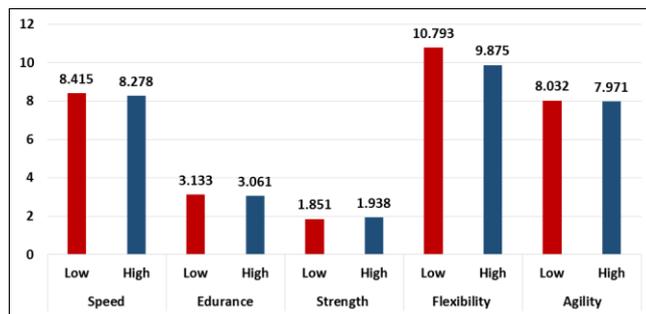


Fig 1: Average physical fitness among low and high performance of district handball players

Above Bar graph-1 shows the mean scores of physical fitness among low and high level performance of district handball players

	High	16	21.350	2.321		
Arm Length	Low	29	65.331	3.547	0.459	N.S
	High	16	66.352	4.843		
Leg length	Low	29	74.627	5.629	0.892	N.S
	High	16	75.459	4.752		
Calf Girth	Low	29	26.432	3.452	1.236	N.S
	High	16	28.057	2.752		

Table-4 clearly shows that there were no significant differences were found in speed endurance, strength, flexibility and agility between low and high level performance of district handball players. As the values of 't' values that is 1.376(Chest girth), 0.861(Biceps girth), 0.459(arm length), 0.892(leg length), and 1.236(Calf girth) respectively were lesser than the table values 2.02 at 0.05 level. The mean value of the high performance players were more when compared with low performance.

Average anthropometric measurements among low and high performance of district handball players were graphically presented in Fig.2

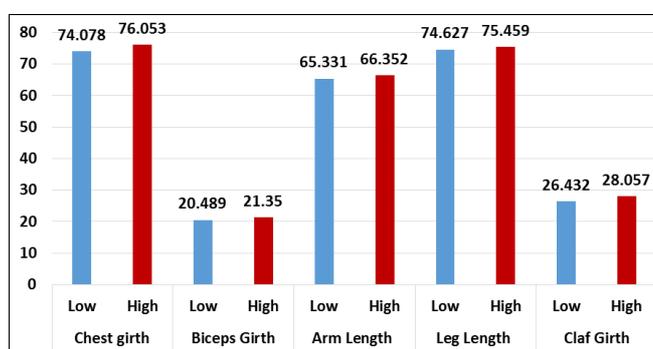


Fig 2: Average anthropometric measurements among low and high performance of district handball players

Above Bar graph-2 shows the mean scores of anthropometrical measurements among low and high level performance of district handball players.

Summary

Physical fitness for any sports consists of number of interrelated qualities of such as speed, endurance, strength, flexibility, agility. So many players and athletes live at a level of fitness far below their abilities and capabilities making drudgery of the sports activity in which they participate. They show poor performance in that game/sports even though they may be well-versed with skills and techniques of a particular game/sports.

The purpose of the present study was to carry out a study on anthropometric measurements, level of fitness and performance of district level handball players were selected. The physical fitness variables to compare the players ability such as 50 mts dash, 600metres run, standing broad jump, sit and reach test and shuttle run anthropometric measurements viz., chest girth, biceps girth, arm length, leg length and calf girth. Handball players were tested on the five physical fitness and five anthropometric variables on two different days respectively and it consists of 45 state handball players.

The data collected from the test were statistically analysed. The significant of mean and standard deviation, differences among handball players were analysed by using the 't' test and also found physically fitness and anthropometric measurement of handball players among low and high level performance.

Conclusion

With the limitation of the present study and on the basis of the findings the following conclusions have been drawn.

1. There was no significant difference in speed performance between pivotal and wing of handball players.
2. There were no significant differences in endurance among handball players of Mysore district.
3. There were no significance differences in strength among the handball players of Mysore district.
4. There were no significance differences in flexibility among the handball players of Mysore district.
5. There were no significant differences in agility among the handball players of Mysore district.
6. There were no significant differences found in speed, endurance, strength, flexibility and agility between low and high level performance of district handball players.
7. There were no significant differences were found in chest girth, biceps girth, arm length, leg length, and calf girth between low and high level performance of district handball players.

This study may be helpful for following ways

It is recommended that more studies may be conducted to identify othe variables of motor ability and psychological variables among Handball players. It is recommended that study may be conducted for girls. It is recommended that study may be conducted on more subjects. It is recommended that study may be conducted on state level handball player of Karnataka.

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