Research Paper

Physical Education

A Comparative Study of Physical Fitness between Basketball and Hockey Players of Tamil Nadu

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ABSTRACT

Fitness denotes a person status of physique in relation to its physical achievements. The latest scientific evidence also edict the fact that for internal or physiological soundness physical fitness is necessary. Modern physical educators divided the factor of fitness into skill related and Health related physical fitness. Physical fitness refers to the capacity of an athlete to meet the varied physical demands of their sport without reducing the athlete to a fatigued state.

The components of physical fitness are: Strength, Endurance, Speed, Flexibility and Coordination. For this study 15 female State level BasketballPlayers and 15 female State level Hockey Players of Tamil Nadu were selected as the subjects. All the players were specialized in Basketball and Hockey and undergoing training at the different centers/clubs in Tamil Nadu. State level female Hockey players have better average performance than State level female Basketball players in speed. State level female Hockey players are not having better average performance than State level female basketball players in 10x6mt shuttle run. Basketball players are better than female Hockey players in Bent and Reach component.

The average performances of State level female Hockey players are higher than State level female Basketball players in endurance. The calculated value of t-ratio was higher than the tabulated value required at 0.05 level of confidence. The results of the study when compared with physical fitness of both the groups showed that both are not equal in physical fitness.

KEYWORDS

Basketball Players, Hockey Players, State level, Physical Fitness.

Introduction

Fitness is the term, which is widely used in the present day health conscious society. The people have realized the importance of fitness in day to day routines and also in achieving sports excellence. Fitness denotes a person status of physique in relation to its physical achievements. The latest scientific evidence also edict the fact that for internal or physiological soundness physical fitness is necessary. Modern physical educators divided the factor of fitness into skill related and Health related physical fitness. It is also an undesirable fact, that the health related physical fitness, which is main concern for physicaleducationists, is depended on the skill related physical fitness of an individual. It is also a high concern for a coach to develop various skills and for this the sportsperson's skill related physical fitness should be upgraded and developed. Physical fitness refers to the capacity of an athlete to meet the varied physical demands of their sport without reducing the athlete to a fatigued state. The components of physical fitness are: Strength, Endurance, Speed, Flexibility and Coordination.

Physical fitness is one component of total fitness of an individual. Total fitness is a result of the genetic makeup and the interaction with the environment. The totally fit individual is psychological stable, mentally alert, emotionally balanced and socially adjustable to different circumstances prevailing in the society. For successful motor sequence to achieve, an accurate and efficient movement is needed whether it is a single effort as in a golf drive or a series of complex and rapidly changing movements as in basketball.

There is a significant impact of modern technology on human living. His muscles, upon which he used to rely entirely for survival, are now used for less and less with inevitable results. Many researchers in such divergent fields as medicine, psychology and physiology, however, attest to the fact that exercise with attendant development of fitness has far reaching effects on vital bodily processes and upon the functional realization of one's growth and capabilities.

Review of Literature

Uppal et al. (1987) conducted a study to examine the motor fitness components as a predictor of soccer playing ability. They were administered five tests of motor fitness elements namely Speed, Agility, Max, Leg Strength, Explosive Leg Strength and Cardio-respiratory Endurance. The regression equation developed was = 11.72 (standing broad jump) + .52 (Cooper's 12 minute run/walk test horses in 100th unit) - 2.06 (4×10m shuttle run) +4.94. The study result shows that all the independent variables have been found to be significantly related to depend variable.

Gupta, (2002) the study deals with physical fitness, spinal mobility, and flexibility of 100 footballers of national and inter-university levels. The players' performance was compared with adequate controls. Three physical fitness tests viz. sit-ups, standing broad jump and shuttle run, anterior and lateral spinal flexion and spinal extension were conducted on all the subjects. The result of this study indicated a greater physical fitness in footballers than control showing significant differences in sit-ups, standing broad jump, shuttle run, and lateral spinal flexion and in spinal extension.

Selvam, (2007) under took a identify to catch the effects of selected training programmes of six weeks duration on the physical fitness and the motor ability of the B.Ed. women students. To execute the study, the students were segmented into

two groups experimental and controlled group. The finding of the study revealed that the isotonic and isometric exercises are best suited for the development of physical fitness whereas circuit training is more suitable for developing general motor ability at.01 level of significance.

Objectives of the Study
The main objective of the study is to a Comparative study of Physical Fitness between Basketball players and Hockey players of Tamil Nadu.

- To identify the Motor components of 30Mts.sprints and Shuttle Run of state level players.
- To examine the motor components of Bent and Reach of state level players.

Methodology of the Study
The study is mainly based on Primary data and also Secondary data. The primary data has been collected through Question-ers from the state levels player of Tamil Nadu. The secondary data has been collected from the various sources of Live Jour-nals, Magazines, and Records**.**

For this study 15 female State level Basketball Players of Tamil Nadu and 15 female

State level Hockey Players of Tamil Nadu were selected as the subjects. All the players were specialized in Basketball and Hockey and undergoing training at the different centres/clubs in Tamil Nadu.

Variables of the Study

| Sl.No:	Variable	Equipment
1.	30 meters sprint	Electronic Stop Watch
2.	10x6m shuttle run	Electronic Stop Watch
3.	Bent & reach, 2 ft. stool	measuring tape (inches / centimeters)
4.	2.4 km run	Electronic Stop Watch

Discussion of the Study

Table No.1
Comparison of Physical components of State level Basket-ball and
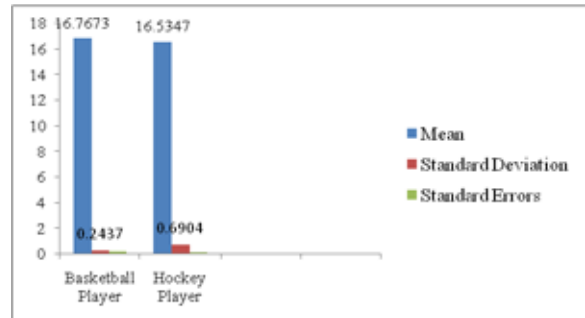**Hockey Players of Tamil Nadu**

| Motor Components	Subjects	No. of Players	Mean	Standard Deviation	Standard Errors
30 Meters sprint	Basketball Players	15	5.1293	0.2085	5.385E-02
	Hockey Players	15	5.2533	0.2437	6.292E-02
10 X 6 m Shuttle run	Basketball Players	15	16.7673	0.6904	0.1782
	Hockey Players	15	16.5347	0.3854	9.951E-02
Bent & Reach	Basketball Players	15	15.6667	4.8648	1.2561
	Hockey Players	15	12.0667	2.5204	0.6508
2.4 KM run	Basketball Players	15	11.1280	1.1530	0.2977
	Hockey Players	15	12.2733	1.3207	0.3410

Source: Primary Data.

Chart No.1
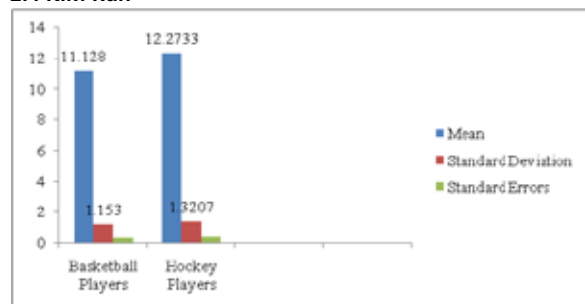**30 Mts. Sprint**
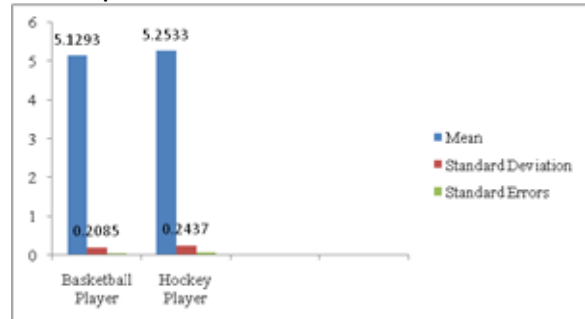
Chart No.2
10 X 6 Mts. Shuttle Run

Chart No.3
Bent & reach
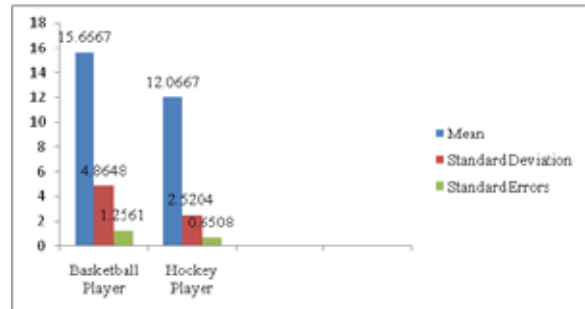
Chart No.4
2.4 K.M Run

The table no.1 indicates that the comparison of all variables viz. 30 meters sprint, 10x6 meters Shuttle run, Bent and Reach and 2.4 km run in respect of female State level Basket-ball and Hockey players of Tamil Nadu. The calculated value of Mean and Standard deviation on the First variable shows in (30 meters sprint) 5.1293, 0.2085 and 5.2533, 0.2437 respec-tively in respect of female State level Basketball and Hockey playersof Tamil Nadu. There is a little variation as the Mean value of female Basketball playersare less than female Hockey players and this can be interpreted that in this variable Hockey players are better than Basketball players.

The calculated value of Mean and Standard deviation on the Second variable shows in (10x6 meters Shuttle run) 16.7673, 0.6904 and 16.5347, 0.3854 respectively in respect of female State level Basketball and Hockey players of Tamil Nadu. There is a little variation as the Mean value of female Basketball players are higher than that of Hockey players and this can be attributed that in this variable female Hockey players are not better than Female Basketball players. The calculated value of Mean and Standard deviation on the third variables shows in (Bent and Reach) 15.6667, 4.8648 and 12.0667, 2.5204 respectively in respect of female Basketball and Hockey players of Uttar Pradesh. There is a little variation as the Mean value of female Basketball players are higher than that of female Hockey players and this can be explained that in this variable State level Basketball players are better than State level Hockey players.

The calculated value of Mean and Standard deviation on the fourth variables shows in (2.4 km run) 11.1280, 1.1530 and 12.2733, 1.3207 respectively in respect of female State level Basketball and Hockey players of Uttar Pradesh. There is a little variation as the Mean value of female State level Basketball players are less than female State level Hockey players and this can be explained that in this variable female State level Hockey players are better than female Basketball players.

Summary and Conclusion
Based on the results of the above study the investigator has drawn the following conclusions: State level female Hockey players have better average performance than State level female Basketball players in speed. This speaks that 30 meters sprint is speed event, which comes under sprinting distance. Hence State level female Hockey players are already having good speed and can cover 30 meters sprint in less time compared to female basketball players.

The reason is that female Hockey players of Tamil Nadu training schedule includes mostly activities like strength training, explosive strength training and speed training. State level female Hockey players are not having better average performance than State level female basketball players in 10x6mt shuttle run. This speaks that State level Hockey players are not having good speed and agility. To improve speed and agility Sports female State level Basketball players play the games which improves the agility like the kho-kho, handball, volleyball and short races etc. The average performances of State level female Basketball players are better than female Hockey players in Bent and Reach component. This speaks like that they are having good flexibility. To improve the flexibility in the body their training schedule includes stretching i.e. individual and partner stretching, individual flexibility and partner flexibility.

The average performances of State level female Hockey players are higher than Statelevel female Basketball players in endurance. To find out whether there is any significant difference among Hockey players and Basketball players of Tamil Nadu t-ratio was tabulated. The calculated value of t-ratio was higher than the tabulated value required at 0.05 level of confidence. The results of the study when compared with physical fitness of both the groups showed that both are not equal in physical fitness.

This speaks that female State level Basketball players and State level female Hockeyplayers of Tamil Nadu does regularly two practice sessions in the morning and evening with each of two to three hour duration daily. Their training schedule opted aimed to improve speed, strength, endurance, agility etc for achieving the high level of sports performance.

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