

INVESTIGATION OF SPECIFIC PHYSICAL FITNESS AMONG MALE CRICKET PLAYERS

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ABSTRACT

The sum of five motor abilities namely speed, strength, flexibility, endurance and to coordinative abilities and their complex form like strength, endurance, maximum strength, explosive strength, maximum speed and agility were the basic prerequisites of human motor action. and sports performance depends to a greater extent on these abilities. The purpose of study was to investigate and analyze the specific physical fitness of divisional level male cricket players. Fifty male cricket players of Jabalpur division were selected as subjects who played cricket matches during the divisional tournament held at Jabalpur (M.P.). The range of age of the subject is from 18-25 years. On the basis of Frank Tyson specific fitness test following physical components were selected for this study : Aerobic Fitness, Anaerobic Fitness, Flexibility, Speed And Agility, Muscular Endurance, Muscular Strength, and Muscular Power. To assess the specific physical fitness, the mean of scores of each component obtained by the players were compared with the norms constructed by Frank Tyson. The results of the present study indicated that the division level cricket players possessed fair specific physical fitness. In 12 minute Run Test, 40 Meter Sprint, Sit and Reach Test, Run a Three Test, Sit-ups and Vertical Jump Test the results were fair, where as in Step Test, Phosphate Recovery Test, Shoulder Hyper Extension Test, Fielding Agility and Hand Dynamometer Squeeze Test result were poor and in push ups and chin ups test results were good.

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INTRODUCTION

The physical fitness is the sum of five motor abilities namely speed, strength, flexibility, endurance and to coordinative abilities and their, complex form like strength endurance, maximum strength, explosive strength, maximum speed and agility are the basic prerequisites of human motor action. Therefore the sports performance is depend to a greater extent on these abilities. The improvement and maintenance of specific physical fitness or condition is the main aim of sports training. Each sport requires different type and level of specific fitness as a result different types of fitness training is requiring for different sports. Some sports like running requires a very high level of endurance and low level of other motor abilities, sports like shooting and archery do not require high level of physical fitness (Singh, 1991).

Physical fitness is the capacity to carry out our various reasonable well forms of physical activities without being unduly tired and include qualities improvement to the individual's health and well being, regular participation in vigorous exercise increase physical fitness is desirable for full productive life, sedentary living habits and poor physical fitness have a negative impact on both health and daily living (Albara, 1947).

Every cricketer should Endeavour to become at least a reliable fielder just as keenly as he tries to become a good batsman, a good bowler, irrespective of what standard he may attain as a batsman or a bowler, his side is vigorously handicapped if he is lacking in fielding ability. He should specialized and become outstanding in particular position.

Today cricket is considered as an athletic activity, in cricket the demands of optimum physical fitness is increased. The level of performance is affected by the level of specific physical fitness. By likely to drop out of sports due to embarrassment, failure or possible injury.

A cricket player with a high degree of motor fitness is able to cope better with the demand of the game the onset of fatigue is the point at which skill standards drop, mental reactions become slower these the best condition. Proper conditioning is commonly recognized as one of the most important elements of any strenuous sport. Any cricketer who cannot functions at maximum efficiency throughout a contest will not be to help the team to attain its goals. Therefore, it must be a priority for any cricket coach to work with cricket player's specific fitness in peak physical condition.

Herman administered the AAHPER youth fitness test to 100 rural and 100 urban boys. The urban boys were superior to the rural boys and the difference was significant. Johnson found that Negro high school boys were superior to white school boys in strength, cardiovascular endurance state of health, physical appearance, skill and sexuality. Chandrashekar found that the mean difference of the performance of football and basketball players in extent flexibility, dynamic flexibility, leg explosive strength, abdominal strength, and gross body coordination were significant. Singh evaluated the physical fitness of hockey players.. This study showed dominance of explosive strength and respiratory endurance elements of physical fitness among hockey players. Dahl found that Negro boys were significantly higher than white boys on muscular explosiveness (standing broad jump). A larger mean difference was obtained.

METHODOLOGY

Selection of Subject

The purpose of study was to investigate and analyze the specific physical fitness of divisional level male cricket players. Fifty male cricket players of Jabalpur division were selected as

subjects who played cricket matches during the divisional tournament held at Jabalpur (M.P.). The range of age of the subject is from 18-25 years.

Selection of Specific Physical Fitness Components

On the basis of Frank Tyson specific fitness test following physical components were selected for this study : Aerobic Fitness, Anaerobic Fitness, Flexibility, Speed And Agility, Muscular Endurance, Muscular Strength, and Muscular Power.

Criterion Measure

The criterion measure chosen for the test were the scores obtained in various items of the test constructed by Frank Tyson.

Administration of Test and Collection of Data

Various tests were conducted by the research scholar on cricket field. i.e. hand dynamometer squeeze, chin-ups, step - test, sit and reach test, shoulder hyper extension test. Vertical jump was conducted in multi-gym. Track of R. D. University, Jabalpur was also used to measure the performance of 40 m. sprint and 12 minutes run test. All the tests were conducted in the morning and evening session during the coaching camp.

RESULTS AND DISSCUSION

To assess the specific physical fitness of Jabalpur division cricket players simple mean of their performances was calculated by research scholar. The mean of scores of each component obtained by the players were compared with the norms constructed by Frank Tyson (2002) was presented in the Table - 1.

TABLE 1
COMPARISON OF MEANS OF THE SCORES OBTAINED BY CRICKET PLAYERS WITH
THE NORMS CONSTRUCTED BY FRANK TYSON

S.NO.	Components	Mean	Result
1	12 Minute Run Test	23 85. 6 Meters	Fair
2	Step Test	154.98	Poor
3	Phosphate Recovery Test	35.56	Poor
4	40 meter sprint	6.069 sec.	Fair
5	Sit and Reach Test	4.4 cm..	Fair
6	Shoulder Hyper Extension Test	19.54 cm.	Poor
7	Three Runs Test	10.56 sec.	Fair
8	Fielding Agility	17.94 sec.	Poor
9	Sit ups	34.11	Fair
10	Push - ups	32.89	Good
11	Hand Dynamometer Squeeze	61.77kg	Poor
12	Chin ups	7.42	Good
13	Vertical Jump	42.34 cm.	Fair

Mean scores obtained from the cricket players were compared with the norms constructed by Frank Tyson. It was clear that the cricket players possess fair specific fitness. Research scholar conducted 13 specific physical fitness test on different abilities out of these 13 test in 6 components the players possessed fair specific fitness in 5 components the results

were poor, in 2 components results were good. The outcomes of the results were as; in 12 minutes run and in Step Test which measures the aerobic fitness of the cricket players the results were fair and poor respectively. In phosphate recovery test and in 40 meters Sprint Test the results were poor and fair respectively. In Sit and Reach Test and Shoulder Hyper Extension Test which measure the flexibility of cricket players, the results were Fair and poor. In Run a Three Test and Fielding Agility Test, which measure the speed and agility of cricket players, the results were fair and poor respectively. In Sit-ups and Push-ups Test which measures the muscular endurance of cricket players the results were fair and good respectively. In Hand Dynamometer Squeeze and Chin-ups Test which measure muscular strength the results were poor and good. In vertical jump test which measure muscular power of cricket players the results were fair.

TABLE 2

MEANS OF DIFFERENT SPECIFIC PHYSICAL FITNESS COMPONENT

S.NO	Components	Mean
1	12 Minute Run Test	2385.6 Meters
2	Step Test	154.98
3	Phosphate Recovery Test	35.56
4	40 meter sprint	6.069 sec.
5	Sit and Reach Test	4.4 cm.
6	Shoulder Hyper Extension Test	19.54 cm
7	Three Runs Test	10. 56 sec.
8	Fielding Agility	17.94 sec.
9	Sit ups	34.11
10	Push - ups	32.89
11	Hand Dynamometer Squeeze	61.77kg
12	Chin ups	7.42
13	Vertical Jump	42.34 cm

TABLE 3
SPECIFIC PHYSICAL FITNESS NORMS CONSTRUCTED BY FRANK TYSON

S. N0	Component	Excellent	V. Good	Good	Fair	Poor
1	12 Minute Run Test	3200 m..	2950-3200m	2700-2950 m.	2450-2700 m	Below 2450 m.
2	Step Test	Under 110	110-124	125-140	141-155	155+
3	Phosphate Recovery Test	Over 80	68-80	55-67	42-54	Under 42
4	40 meter sprint	Under 5.30 sec	5.30-5.60 sec	5.61-5.90 sec	5.91-6.20 sec	6.20 sec. +
5	Sit and Reach Test	14 cm. +	10-14 cm.	5-9 cm.	0-4 cm.	0 cm.
6	Shoulder Hyper Extension Test	34 cm. +	30-34 cm	25-29 cm	20-24 cm	Under 20 cm
7	Run a Three Test	Under 9.20 sec.	9.20-9.69 sec s	9.70-10.19sec.	10.20-10.69 sec.	10.69 sec. +
8	Fielding Agility	Under 16.50 sec.	16.50-16.99 sec.	17.0-17.49 sec.	17.50-17.99 sec.	18 sec. +
9	Sit ups	Over 54	45-54	35-44	25-34	Under 25
10	Push ups	Over 50	41-50	31-40	21-30	Under 21
11	Hand Dynamometer Squeeze	Over 130 kg-	116-130 kg-	101-115 kg-	86-100 kg-	Under 86 kg-
12	Chin ups	Over 15	11-14	7-10	3-6	Under 3
13	Vertical jump	Over 64 cm.	54-64 cm..	49-56 cm.	41-48 cm.	Under 41 cm..

DISCUSSION

In many sports, training for successful competition has become virtually a year-round endeavour. To assist in better preparation, a competitor's year may be divided into phases such as off-season and in season, indicating reduced or increased competition commitments respectively. A number of studies have described the effects of seasons or periods of competition, training, detraining and reduced training on aspects of physical fitness. It was evident that optimum physical fitness was essential to every player to perform skills efficiently and effectively.

Today cricket is considered as an athletic activity, by achieving an optimum physical fitness level player enhance the sports performance. It was evident from the findings that Jabalpur division cricket players possess a fair specific fitness. The reason may be that the Jabalpur division cricket players did not pay full attention towards physical fitness, besides their batting or bowling they had to work on their physical fitness also. The reason may be due to lack of concentration and motivation on test and there might be lack proper physical fitness programs to the players. The players were not aware about their fitness and they did not know about the fitness and the role of fitness in achieving good sports performance. Based on specific physical fitness conducted by the research scholar on selected 50 cricket players of Jabalpur division and their fitness was found fair. Hence, the hypothesis as stated earlier was rejected.

CONCLUSIONS

Within the limitation of the present study and on the basis of findings, conclusions were drawn :

1. The fifty cricket players of division cricket players possessed fair specific physical fitness.
2. In 12 minute Run Test, 40 Meter Sprint, Sit and Reach Test, Run a Three Test, Sit-ups and Vertical Jump Test the results were fair.
3. In Step Test, Phosphate Recovery Test, Shoulder Hyper Extension Test, Fielding Agility and Hand Dynamometer Squeeze Test result were poor.
4. In push ups and chin ups test results were good.

RECOMMENDATION

On the basis of the study it is strongly recommended that the coaches dealing with the players at this level may pay more attention towards specific physical fitness for their players.

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