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Comparative study of physical fitness training programme on cricket playing ability of Jammu and Kashmir Cricket players

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Abstract
The purpose of the study was to investigate the physical fitness training programme on cricket playing ability of Jammu and Kashmir cricket players. Thirty male cricket match practice group students of Jammu and Kashmir Ranji Trophy and Under-22 teams in M.A.M, Stadium, and Jammu were selected as subjects. In order to prepare training programme of Jammu and Kashmir Ranji Trophy and Under-22 teams in M.A.M, Stadium, Jammu match practive group (boys) for improving cricket playing ability, the students were tested in the motor ability viz, endurance, speed strength, agility, flexibility and co-ordinative abilities by employing standard tests. After finding out the level of fitness through test the training schedule was prepared for eight weeks. The specific physical fitness exercises were selected on the basis of their relevance to the game of cricket. The creation measure which was chosen for the testing of measure of this study was the cricket playing ability. The cricket playing ability was judged by three experts of cricket judging was done out of 30 marks, i.e., 10 marks each for batting, bowling and fielding. To find out the overall significant difference of the mean of the pre-test and post-test of experimental and control group 't' test and 'F' ratio was applied. The findings of the study revealed that physical fitness were significant at. 05 level of confidence with the playing ability in cricket.

Keywords: physical fitness, cricket playing ability

Introduction
A player having high degree of motor fitness does not only enjoys sports more, but he is also capable of using all the skill attained and mastered by him through strenuous and long practice, right to the end of the game. The combined motor fitness qualities such as speed, strength, agility and endurance are indispensable for outstanding performance. Cricket has become one of the most popular game in the world and of all major games in India it is the only one that has been jealous pre-served by all those who play or support it. Physical variables are the most important contributing factors for better performance is all sports and games so in cricket. The games of cricket requires considerable amount of physical fitness and mastery of skill.

Training in games and sports is no longer a myth and it has no casual approach, but it provides opportunities for scientific processes and verification. Training has been accepted as a highly specialized science involving the use of scientific method and physical investigation.

Physical fitness is an inseparable part of sports performance and achievement. The quality of an individual sportsman's fitness it term of its utilization value is directly proportional to the level of performance That means greater the level of fitness the greater the ability of a person to attain higher level of performance.

In recent year more and more attention has been paid to nature of 'physical fitness' not only in terms of general health but also of the special physical requirement of competitive sports and certain highly specialized and demanding occupations. As a result of current work particularly in the field of ergonomics and physical education is appreciated that the achievement and maintenance of high level of physical fitness produce significant efforts on the working of human body. Physical fitness is the key to the success in modem sports and games. Such a statement may sound extreme, but nevertheless, it is true. Physical fitness, however, is the key element because it is more easy to easily improve that the other elements it is in fact the only element that can be improved with one hundred percent success.

Methodology
Selection of Subjects
Thirty male cricket match practice group students of Jammu and Kashmir Ranji Trophy and Under-22 teams in M.A.M, Stadium, Jammu were selected as subjects.

Selection of Physical fitness components
On the basis of available literature in the library of Jammu and Kashmir Ranji Trophy and Under-22 teams in M.A.M, Stadium, Jammu and discussion with cricket experts, the following physical fitness components were selected for this study:

- Endurance training
- Speed training
- Strength training
- Agility training
- Flexibility training
- Co-ordinative Ability training

Selection of specific physical fitness exercises

The specific physical fitness exercises were selected on the basis of their relevance to the game of cricket. The exercises are presented in Table1.

Table 1: Specific physical fitness exercises

S/No.	Components	Exercise
1.	Endurance Training	i. Continuous running
		ii. Interval running
2.	Speed Training	i. Repeation of 30-50 mt sprint
3	Strength Training	i. Arms a. Pull ups (modified) b. Push ups(modified)
		ii. Legs a. Step ups, b. Half squats
		iii. Abdomen a. Bend knee, situp b. Leg raises
		iv. Back a. Back raises b. Back of raises
4	Agility Training	i. Shuttle run(4x10mt)
5	Flexibility Training	i. Stretching exercises of ankles
		ii. Stretching exercises of hips
		iii. Stretching exercises of trunks
		iv. Stretching exercise of shoulders
		v. Stretching exercises of wrists
		vi. Stretching exercises of neck
6	Co-ordinative Ability Training	i. Skipping with variations a. Cross skipping Two b. skippings in a single jump
		ii. Arm rotation in alternate direction
		iii. Exercises with plastic ball in closed eye i.e. dropping the ball on a cemented floor
		iv. catching it by its sound created while bouncing for kinesthetic perception.
		v. Once in a week table tennis for eye hand co-ordination.
		vi. Exercise with closed eye, lifting one leg and hands and maintenance of balance.

Creation measures

The creation measure which was chosen for the testing of measure of this study was the cricket playing ability.

Playing Ability

The cricket playing ability was judged by three experts of cricket judging was done out of 30 marks, i.e., 10 marks each for batting, bowling and fielding.

Collection of Data

The subject of the study were given rank after taking the pretest and were divided into 3 groups according to their rank to equate the groups. There were 10 subjects in each group. One of the group acted as a control group and the other two as an experimental group. Pre test values were taken by the three experts of cricket by judging the playing ability of cricket, before the training programme was given. The experimental group went under the 8 weeks of physical fitness training programme. After the completion of which the experimental and the control group were judged again by the same experts for the playing ability in cricket.

Tester's competency

The data in the present study was collected by the scholar with the help of three experts of the game of cricket, lecturer physical education, Noida college of Physical education, Dadri. The scholar as well as other judges has many years of experience in cricket and were specialized in cricket. Thus their ability to administer the tester in this study was considered quite adequate.

Administration of test

In order to prepare training programme of Jammu and Kashmir Ranji Trophy and Under-22 teams in M.A.M, Stadium, Jammu match practive group (boys) for improving cricket playing ability, the students were tested in the motor ability viz, endurance, speed strength, agility, flexibility and co-ordinative abilities by employing standard tests. After finding out the level of fitness through test the training schedule was prepared for eight weeks.

From the first week to the eight week, The intensity of load and the duration of training increased gradually as follows:

First Week

For the first week the intensity of load for the various training component was 60% of their maximum performance as performed in intial test. The total duration of training was of 40 minutes for the first week.

Second Week

For the second week the training intensity was increased to 65% of their maximum ability and duration was same as on first week.

Third Week
For the third week intensity of the training was increased to 70% and at the same time duration was increased to 50 minutes.

Fourth Week
For the fourth week the intensity of the training examined as on the third week and the duration of training was increase For the fifth week the training intensity was increased to 80% of their maximum ability and the total duration of training remained some as on fouIn this week again the test was conducted to evaluate the improvement in motor components for preparing training schedule for the further weeks. The test results showed that children improved their performances in motor components and thus keeping in mind their improved performance the training intensity was fixed at 90% of their maximum abilities and total duration of trining was increased to one hour.

Seventh Week
In this week the training intensity was 100% of their ability and total duration of training was same as of seventh week.

Eight Week
For this week training intensity was gradually decreased day by day and the total duration of training remained same as on seventh week.

Table 1: Reliability co-efficient by split half method

S.No.	Varialble	Co-efficient of Correlation
1	Playing ability	81%

Analysis of data and results of the study
The data of experimental group I and II and control group in playing ability were examined by applying‘t’ ration to find out the significant difference among the three groups (experimental group I, II and a control group) before and after the training. The data was further examined by the analysis of variance of the two experimental group and the control group to find out the inter group variability.

Findings
The data related pre-test and post-test means of two experimental group and a control group is presented in table 2.

Table 2: Pretest and post-test means of all the three groups after eight weeks of training

No. of subjects	Variables	Means		DM	DM	Ratio
		Pre	Post			
10	Experimental Group i	5.7	6.7	1	0.23	4.78
10	ExperimentalGroup ii	6.4	7.1	0.7	0.21	3.33
10	Control Group	4.6	4.8	0.2	0.13	1.53

Table 3: Analysis of variance of experimental groups and a control group ‘F’ ratio

Source of variance	Df	Ss	Mss	‘f’ ratio
Between group	2	4.1	2.05	5.25
Within group	27	10.6	0.39	

Table 4: Critical paired means difference between two experimental groups and a control group

Ex_1	Ex_2	C	Md	Cd
1.1		0.2	0.9	0.69
1.1	0.7		0.4	0.69
	0.7	0.2	0.5	0.69

Conclusion
With the limitations identified and on the basis of the result of the study. The conclusion drawn was that the training of physical components significantly improves the playing ability in cricket among the cricket players. That the hypothesis stated earlier that their will be a significant effect.

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