EFFECT OF WEIGHT TRAINING ON PHYSICAL FITNESS COMPONENTS AMONG SPIN BOWLERS AND FAST BOWLERS IN CRICKET

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Abstract

The purpose of the present study was the effect of weight training on physical fitness components among spin bowlers and fast bowlers in cricket. The study was administered on 15 spin bowlers and 15 fast bowlers in the age group 18-25 years of various colleges from Madres University men cricket team. Chennai to find the impact of weight training on the development of Physical fitness, the pre and post – test (AAHPER fitness tests) had been conducted. The present study attempts to assess the influence of weight training on physical fitness development. It is well understood that several factors are highly inter – related to training and Physical fitness. This application is a significant contribution to the field of physical education and sports in relation to develop physical fitness of sports persons. In addition, the results been analyzed and presented through tables in discussion part. So the hypothesized statement i.e., there would be significant impact of training on physical fitness development of cricket players is accepted. The value of speed (23.65), Aerobic fitness (12.76), Agility (15.46) Flexibility (9.19) and Strength test (8.92) among cricket players in two tests are significant at the level of 0.01. Thus then results determined the influence of physical fitness training on the performance of the spin bowlers and fast bowlers

Keywords: Physical fitness, weight training

INTRODUCTION

Fitness plays small though significant part in the success of a cricketer. Several components of fitness are important for the success of the players. Cricket has determined that balance and coordination is seen as one of the most important aspects of cricket fitness, followed by speed and power. Despite its long history and global appeal, relatively little is known about the physical requirements of cricket physical fitness sis the ability to carry our daily tasks with vigor and alertness without undue fatigue and with ample energy to engage in leisure time pursuits and to meet the above average physical strength, stress, muscular endurance and circulatory endurance, muscular power, agility, speed and flexibility and added to compose motor fitness. Then kinetic, arm –eye coordination is needed for general motor ability. Bowlers need fitness because if they are playing 50 overs. Especially spinners will bowl more than 30 overs. So physical fitness is very important for spin bowlers and fast bowlers.

METHODOLOGY

For these study 15 spin bowlers and 15 fast bowlers in cricket there age groups between 18-25 years are selected on random basis from various colleges Madres university men cricket team, Chennai. The selected sample's physical fitness was measured in five physical tests speed, aerobic fitness, flexibility agility and strength. further, the sample was underwent weight training -nor four weeks continuously during morning hours, and at every weekend there is a rest day. After the training, physical fitness was again measured in terms of performance of the players in all the five physical fitness test used in per -training condition. Thus the performance of the sample 's before and after

training conditions was taken to assess the effect of weight training on physical fitness . the data of both pre and post - test conditions were analyzed statically .

STATISTICAL ANALYSIS

To meet the objective of the study and to verify the formulated hypotheses the data were statistically analyzed. The 't' test was calculated and data were organized.

ANALYSIS OF DATA AND INTERPRETATION

The major aim of the present study is to assess the effect of weight training on physical fitness components among spin bowlers and fast bowlers in cricket, The study attempts to examine the differences in physical fitness in terms of motor ability between the pre- training and post- test performance of players. The data were organized, statistically analyzed and presented in the tables.

RELIABILITY OF DATA

Test retest method of establishing reliability was employed to determine the reliability of the performance of the subjects various tests. For the purpose the performance of the subjects in speed, agility, strength endurance and flexibility were recorded twice on two different conditions with a gap of four weeks. The level of significance of two tailed test thus obtained is significant beyond 0.05 (2.246).

PHYSICAL FITNESS TESTS (AAHPER)

Synod	VARIABLES	TEST/TOOLS	UNIT OF MEASUREMENT
1.	Speed	30 Meter	Time
2	Aerobic Fitness	Cooper's 12 minutes, continuous run/walk test	Distance
3	Agility	Illinois agility test (Getchell 1979)	Time
4	Flexibility	Sit and Reach Test	Inches
5	Strength	Standing Broad Jump	Meter

TRAINING SCHEDULE

Day	Workout	Repetitions	Set	Rest between sets	Intensity
Monday	Flat Bench press incline Bench press Decline Bench press	8-12 Max	3	45-60 minutes	40-60
Tuesday	Pull ups Let pull down One arm DB row	8-12 Max	3	45-60 minutes	40-60

Wednesday	BB shoulder press DB front raise DB shrug	8-12 Max	3	45-60 minutes	40-60
Thursday	BB Biceps EZ bar preacher curl Concentration DB curt Hip rotation	8-12 Max	3	45-60 minutes	40-60
Friday	Cable Tri press EZ bar try extension DB kick back Abdomen crunch	8-12 Max	3	45-60 minutes	40-60
Saturday	Squad Leg Press Leg Curl Calf Rise	8-12 Max	3	45-60 minutes	40-60
Sunday	Rest				

**BB-barbell *DB – dumbbell

TABLE –I
MEAN, SD AND T- VALUES OF SPEED TEST AMONG SPIN BOWLERS AND FAST BOWLERS

Conditions	Mean Scores	SD	t-value
Pre-test	**8.91**	**0.31**	**23.65****
Post – test	**6.79**	**0.37**	

** Significant at 0.01 level

Table – I gives the mean scores of speed tests in two conditions. It can be observed that the mean scores in Pre – test were 8.91 while the mean score in Post – test is 6.79. This shows that the cricket players have taken more time to complete the given task in Pre – test while less time was taken in Post –test condition. The t- value of 23.65 is significant at 0.01 levels, which state that there is a significant difference in the speed between the two tests. The four weeks weight training has facilitated the higher performance of the spin and fast bowlers. This clearly indicated that the physical fitness of spin bowlers of cricket players is improved after training.

TABLE –2
MEAN, SD AND T- VALUES OF AEROBIC FITNESS TEST AMONG SPIN BOWLERS AND FAST BOWLERS

Conditions	Mean Scores	SD	t-value

Pre-test	**1607.16**	**63.55**	**12.76****
Post – test	**1831**	**69.93**	

** Significant at 0.01 level

Table two present the mean scores of endurance test of the spin bowlers and fast bowler of cricket players in two tests. The mean scores of post – test (1831) were significantly higher than the pre-test (1st 607.16). The t-value (12.76) is significant. It clearly shows the significant differences between the two tests in the physical fitness component.

TABLE –3
MEAN, SD AND T- VALUES OF AGILITY TEST AMONG SPIN BOWLERS AND FAST BOWLERS

Conditions	Mean Scores	SD	t-value
Pre-test	**9.87**	**037**	**15.46****
Post – test	**8.06**	**0.51**	

**Significant at 0.01 level

Table – Three indicate that spin bowlers and fast bowlers of cricket players have taken significantly less time in the Post – test (8.06) condition than the pre- test (9.87). The t-value (15-46) also reveals the same. Therefore, the test is found to be a promoting factor in the development of physical fitness components.

TABLE –4
MEAN, SD AND T- VALUES OF FLEXIBILITY TEST AMONG SPIN BOWLERS AND FAST BOWLERS

Conditions	Mean Scores	SD	t-value
Pre-test	**3.76**	**0.45**	**9.19****
Post – test	**4.80**	**0.41**	

**Significant at 0.01 level

Table – 4 gives the score of flexibility of the sample in two tests. It is seen that the mean score of Post – test is s4.80 and mean score of pre – test is 3.76. This shows that the flexibility is found to be more in trained sample. It is all because of the training given. The t-value of 9.19 which is significant also reveals the same.

TABLE –5
MEAN, SD AND T- VALUES OF STRENGTH TEST AMONG SPIN BOWLERS AND FAST BOWLERS

Conditions	Mean Scores	SD	t-value
Pre-test	**1.41**	**0.22**	**8.92****
Post – test	**1.91**	**0.21**	

**Significant at 0.01 level

Table – Five presents the results of strength test of the spin bowlers and fast bowlers of cricket players in pre and post – test. It is seen that mean score of Post – test (1.91) is higher than the Pre – test (1.41). The t – value is 8.92, which are significant. At 0.01 level. Thus, the results clearly speak the influence of the weight training on the performance of the spin bowlers and fast bowlers.

CONCLUSION

There is a significant difference in physical fitness test of speed between pre and Post –test. After the training among spin bowlers and fast bowlers shows significantly higher performance in speed test as comparing to before training. There is a significant effect of training on the development of aerobic fitness component of spin bowlers. The significant difference was found in agility test between pre and Post – test; the agility performance was increased after the weight training. There is a significant influence of training on the physical fitness components of flexibility of spin bowlers and fast bowlers. The flexibility strength been developed after the weight training. The significant difference was found in physical fitness test of strength between two conditions. In addition, the strength performance increased after the four-week weight training. Hence, there is a significant effect of four week weight training on the performance of spin bowlers and fast bowlers.

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