

Vol 5 Issue 6 March 2016

ISSN No : 2249-894X

*Monthly Multidisciplinary
Research Journal*

*Review Of
Research Journal*

Chief Editors

Ashok Yakkaldevi
A R Burla College, India

Flávio de São Pedro Filho
Federal University of Rondonia, Brazil

Ecaterina Patrascu
Spiru Haret University, Bucharest

Kamani Perera
Regional Centre For Strategic Studies,
Sri Lanka

Welcome to Review Of Research

RNI MAHMUL/2011/38595

ISSN No.2249-894X

Review Of Research Journal is a multidisciplinary research journal, published monthly in English, Hindi & Marathi Language. All research papers submitted to the journal will be double - blind peer reviewed referred by members of the editorial Board readers will include investigator in universities, research institutes government and industry with research interest in the general subjects.

Regional Editor

Manichander Thammishetty
Ph.d Research Scholar, Faculty of Education IASE, Osmania University, Hyderabad.

Advisory Board

Kamani Perera Regional Centre For Strategic Studies, Sri Lanka	Delia Serbescu Spiru Haret University, Bucharest, Romania	Mabel Miao Center for China and Globalization, China
Ecaterina Patrascu Spiru Haret University, Bucharest	Xiaohua Yang University of San Francisco, San Francisco	Ruth Wolf University Walla, Israel
Fabricio Moraes de Almeida Federal University of Rondonia, Brazil	Karina Xavier Massachusetts Institute of Technology (MIT), USA	Jie Hao University of Sydney, Australia
Anna Maria Constantinovici AL. I. Cuza University, Romania	May Hongmei Gao Kennesaw State University, USA	Pei-Shan Kao Andrea University of Essex, United Kingdom
Romona Mihaila Spiru Haret University, Romania	Marc Fetscherin Rollins College, USA	Loredana Bosca Spiru Haret University, Romania
	Liu Chen Beijing Foreign Studies University, China	Ilie Pintea Spiru Haret University, Romania
Mahdi Moharrampour Islamic Azad University buinzahra Branch, Qazvin, Iran	Nimita Khanna Director, Isara Institute of Management, New Delhi	Govind P. Shinde Bharati Vidyapeeth School of Distance Education Center, Navi Mumbai
Titus Pop PhD, Partium Christian University, Oradea, Romania	Salve R. N. Department of Sociology, Shivaji University, Kolhapur	Sonal Singh Vikram University, Ujjain
J. K. VIJAYAKUMAR King Abdullah University of Science & Technology, Saudi Arabia.	P. Malyadri Government Degree College, Tandur, A.P.	Jayashree Patil-Dake MBA Department of Badruka College Commerce and Arts Post Graduate Centre (BCCAPGC), Kachiguda, Hyderabad
George - Calin SERITAN Postdoctoral Researcher Faculty of Philosophy and Socio-Political Sciences Al. I. Cuza University, Iasi	S. D. Sindkhedkar PSGVP Mandal's Arts, Science and Commerce College, Shahada [M.S.]	Maj. Dr. S. Bakhtiar Choudhary Director, Hyderabad AP India.
REZA KAFIPOUR Shiraz University of Medical Sciences Shiraz, Iran	Anurag Misra DBS College, Kanpur	AR. SARAVANAKUMARALAGAPPA UNIVERSITY, KARAIKUDI, TN
Rajendra Shendge Director, B.C.U.D. Solapur University, Solapur	C. D. Balaji Panimalar Engineering College, Chennai	V.MAHALAKSHMI Dean, Panimalar Engineering College
	Bhavana vivek patole PhD, Elphinstone college mumbai-32	S.KANNAN Ph.D , Annamalai University
	Awadhesh Kumar Shirotriya Secretary, Play India Play (Trust), Meerut (U.P.)	Kanwar Dinesh Singh Dept.English, Government Postgraduate College , solan

More.....

Address:-Ashok Yakkaldevi 258/34, Raviwar Peth, Solapur - 413 005 Maharashtra, India
Cell : 9595 359 435, Ph No: 02172372010 Email: ayisrj@yahoo.in Website: www.ror.isrj.org

Review of Research

International Online Multidisciplinary Journal

ISSN: 2249-894X

Impact Factor : 3.1402(UIF)

Volume - 5 | Issue - 6 | March - 2016



COMPARATIVE EFFECT OF SPECIFIC WEIGHT TRAINING ON THE PERFORMANCE OF FAST & SPIN BOWLING IN CRICKET PLAYERS



Suhel Raza

Assistant Professor, Department of Physical Education & Sports,
PPN College, Kanpur.

ABSTRACT:

The purpose of this study was to find out the comparative effect of specific arm and leg strength training exercises on the performance of fast and spin bowlers. Material and Methods: The study was delimited to the 30 male cricket players belonging to the age group 18 to 28 years of CSJMU, Kanpur Cricket Match Practice Group and delimited to following training period of ten weeks specific weight training programme. Analysis of co-variance was used to find out the significant difference among the difference exercise group and the level of significance set as 0.05 levels. Results: The difference between the paired adjusted final means for Arm Strength, Leg Strength and Control Group in Cricket Players indicates significant value gain of 5.98 and 6.08 and in case of leg strength and control arm strength and control in significant value gain (0.102). The difference between the paired adjusted final means for Arm Strength, Leg Strength and Control Group in SPIN indicates significant value gain of 2.47, 9.13 and 6.66 in case of arm strength and leg strength, arm strength and control, leg strength and

control. Conclusion: (a)Both training groups (leg strength and arm strength) improved fast bowler performance but for these both arm strength and leg strength required equally (b)Arm Strength training programme is significantly better than Leg strength training programme on the performance of spin bowler.

KEY WORDS: Training, Bowling & Strength

INTRODUCTION:

Cricket was introduced in India some seventy years ago by the Y.M.C.A., Calcutta, after that Y.M.C.A. College of Physical Education which was started in 1920 at Madras played an important role in popularizing the game. But in India we are not able to make much head way as far as International Competition is concerned, because of lack of facilities and advance scientific coaching. The performance of Indian cricket players at the International level has been a great concern to the coaches, scientists and physical educationists. Efforts have been and are being made to improve the standard of our sportsmen, but little has been achieved in this respect¹ (H.S. Sodhi and L.S. Sodhi 1984).

Bowling is probably the most attractive part of the game of cricket, players practice the skill for long periods of time without being prodded by the coach. It is an activity from which they derive enjoyment during the off season or even after a hard practice session is concluded. As a result, couple with better techniques of instruction bowling percentages have steadily climbed during the years. Cricket players are better bowlers today, and they will continue to improve each year, because bowling is a skill that can be learnt. Coaches every where have devised excellent method of instructing their players in this all important area and the results have been extremely rewarding² (Jack Richard 1957).

The selection of strengthening exercises should be done according to aim, training state and nature of the competition activity. According to the competition activity, these exercises should be further subordinated to general, special and competition exercises and should be accordingly selected and used³ (Hardayal Singh 1984).

Objective

The purpose of this study was to find out the comparative effect of specific arm and leg strength training exercises on the performance of fast bowler and spine bowlers.

Methodology

The study was delimited to the 30 male cricket players belonging to the age group 18 to 28 years of CSJM University, Kanpur Cricket Match Practice Group and delimited to following training period of ten weeks specific weight training programme. The study was further delimited to two techniques in cricket i.e fast bowling and spine bowling.

The pre test was conducted and on the basis of their performance and with the help of Equating Group Design, the three groups were formed (Group A, group B, Group C) each consisting of ten subjects. The groups were further assigned randomly to act as experimental I i.e. arm strengthening, experimental II i.e. leg strengthening and III as control group.

The total number of wicket taken out of 20 delivers (10 each techniques) from both side i.e. over the wicket and round the wicket was taken as the criterion measure for the study. Each subject was given 5 chances at each side. The test was taken at the beginning and after the ten weeks training period.

If a cricketer was able to take a wicket, he was awarded, Two points and if he was able to beat the

batsmen he was awarded one point and if he failed to right ball, then he was given a zero. So, like wise points of the individual was collected.

Experimental Design

Group A were given the set of selected arm strengthening exercises, group B were given the set of selected leg strengthening exercises and group C worked as a control group. This exercise programme was given for ten weeks period and again the same test i.e. post test was conducted.

Weight Training Exercises for Experiment

Arm and Shoulder Strength :

1. Arm Curl
2. Reverse Arm Curl
3. Wrist Curl
4. Bent Arm Pull-over
5. Press Behind the Neck
6. Shoulder Press

Leg Strength :

1. Heel Raise
2. Half Squat
3. Dead Lift
4. Straddle Lift
5. Striding
6. High Knee Action

A training programme of 10 weeks on alternate days, in the morning session i.e. 8.15 am. To 9.00 am. was administered to Group A and Group B. Group C was the control group who went through the normal playing schedule without doing any specific weight training exercises. The training load was increased progressively after every two weeks. These exercises with same load was repeated for thrice a week for a block of two weeks. The days were Monday, Wednesday and Friday.

Analysis of co-variance was used to find out the significant difference among the difference exercise group and the level of significance set as 0.05 level.

Table No. 1
ANALYSIS OF CO-VARIANCE OF THE MEAN OF TWO EXPERIMENTAL GROUPS AND THE CONTROL GROUP IN FAST BOWLERS

	Arm Strength	Leg Strength	Control Group	Sum of Square		Df.	Mean sum of Square	F-Ratio
Pre-test Mean	21.8	23.32	22.72	A	59.30	2	29.65	2.2
				W	364.10	27	13.48	
Post0Test Means	30.10	32.50	23.60	A	352.46	2	176.23	13.66
				W	348.35	27	12.90	
Adjusted Post Test Mean	30.65	30.732	24.67	A	185.24	2	92.62	20.38
				W	118.17	26	4.545	

* Significant at 0.05 level

i) F 0.05 (2.27) 3.35 ii) F 0.05 (2.26) 3.37

As shown table that fast bowlers for Arm Strength, Leg Strength Control Groups indicates insignificant F-ratio of 2.20 for the pre-test. This shows that the random assignment of the group was quite successful. However, the F-ratio for the post test mean, and adjusted post test means reveals a value of 13.66 and 20.38 which was significant for being greater than the required F-value at 0.05 level of significance. This indicates that there was significant difference from the adjusted post test means of Arm Strength, Leg Strength and Control Groups in fast bowlers.

Table No. 1.1
 PAIRED ADJUSTED FINAL MEANS AND DIFFERENCE BETWEEN MEANS OF THREE DIFFERENT GROUPS OF FAST BOWLERS IN CRICKET

Leg Strength	Arm Strength	Control Group	Mean Difference	Critical Difference
30.752	30.65		0.102	2.096
30.752		24.67	6.082*	2.096
	30.65	24.67	5.98*	2.096

Table 1.1 indicate that the difference between the paired adjusted final means for Arm Strength, Leg Strength and Control Group in fast bowlers indicate significant value gain of 5.98 and 6.08 and in case of leg strength and control arm strength and control in significant value gain (0.102).

Table No. 2
 ANALYSIS OF CO-VARIANCE OF THE MEAN OF TWO EXPERIMENTAL GROUPS AND THE CONTROL GROUP IN SPIN BOWLERS

	Leg Strength	Arm Strength	Control Group	Sum of Square		Df.	Mean sum of Square	F-Ratio
Pre-test Mean	21.6	20.18	22.57	A	32.221	2	16.110	1.356
				W	320.70	27	11.88	
Post0Test Means	31.80	30.30	24.55	A	226.53	2	113.265	8.372*
				W	365.30	27	13.529	
Adjusted Post Test Mean	34.89	32.42	25.76	A	354.32	2	177.16	34.85*
				W	132.20	26	5.084	

* Significant at 0.05 level
 i) F 0.05 (3.36) 2.86 ii) F 0.05 (3.35) 2.88

The table 2 of spin bowlers for Arm Strength, Leg Strength Control Groups indicates insignificant F-ratio of 1.356 for the pre test. This show that the random assignment of the group was quite successful. However the F-ratio for the post test mean, and adjusted post test means reveals a value of 8.372 and 34.85 which was significant for being greater than the required F-value at 0.05 level of significance. This indicate that there was significant difference from the adjusted post test means of Arm Strength, Leg Strength and Control groups in spin bowlers.

Table No. 2.1
 PAIRED ADJUSTED FINAL MEANS AND DIFFERENCE BETWEEN MEANS OF THREE DIFFERENT
 GROUPS OF SPIN BOWLERS IN CRICKET

Leg Strength	Arm Strength	Control Group	Mean Difference	Critical Difference
34.89	32.42		2.47*	2.023
34.89		25.76	9.13*	2.023
	32.42	25.76	6.66*	2.023

Table 2.1 indicate that the difference between the paired adjusted final means for Arm Strength, Leg Strength and Control Group in Spin bowlers indicate significant value gain of 2.47, 9.13 and 6.66 in case of arm strength and leg strength, arm strength and control, leg strength and control.

Discussion of Findings

Results of the study revealed that both the training groups (leg strength and arm strength training group / improved fast bowlers performance of cricket. Further the study also revealed that leg strength training. Proved to be equal to arm strength in the improvement of Fast bowlers performance. This might be due to the reason that in the Fast bowlers performance strength in both the body parts i.e. leg as well as arm required equally. It means that performance of Fast bowlers depends on the involvement of leg and arm equally.

Results of the study revealed that leg strength training group improved Spin bowlers performance of cricket players. Further the study also revealed that leg strength training proved to be superior to arm strength training in Spin bowlers. This might be due to the reason that performance of Spin bowlers depends on the jumping ability of the individual which required greater leg strength. Although arm strength is also required but leg strength is more significantly. As revealed by the study.

CONCLUSIONS

1. Both training groups (leg strength and arm strength) improved Fast bowlers performance but for these both arm strength and leg strength required equally.
2. Leg Strength training programme is significantly better than arm strength training programme on the performance of Spin bowlers.

BIBLIOGRAPHY

1. Gregor, John Gray, "The Effect of Progressive Weight Training Programme on the Performance of Swimming the 100 Yard Crawl Stroke of Male and Female Competitive Swimmers Between the Age of 10 and 16", Dissertation Abstracts International 35 (August 1974) : 869.
2. H.S. Sodhi and L.S. Sodhi, Physique and Selection of Sportsmen (Patiala : Punjab Publishing House, 1984), p. 123
3. Hanson, Leslie C. "The Effects of Three Selected Weight Training Programmes on Muscular Strength, Endurance Girth and Cardio-Vascular Endurance", Completed Research in Health, Physical Education and Recreation 12 (1970) : 205.
4. Hardayal Singh, Sports Training : General Theory and Methods (Patiala : Phulkian Press, 1984), p. 111.
5. Hey, John Philip, "The Effect of Weight Training Upon the Accuracy of Cricket Jump Shooting", Dissertation Abstracts International 33 (August 1972) : 606-A.
6. J.M. Cooper and Daryl Sidentop Theory and Science of Cricket, (Philadelphia : Lea and Febiger 1975), p.15

7. Jack Richard, Treasury of Cricket Drills from Top Coaches (Englewood Cliffs, N.J. : Prentice Hall, 1957), p. 17
8. James, Gironard E. "The Effect of Practice Position on Accuracy in Goal Shooting in Cricket", Completed Research in Health, Physical Education and Recreation 9 (1967) : 43.
9. Jay, Kinser, "The Effect of Practicing with Varied Weights of Crickets on Free Throw Skill", Completed Research in Health, Physical Education and Recreation 9 (1967):31.
10. Jeannine, McHaney, "The Development of Shoulder and Arm Strength and its Effect Upon Accuracy of Long Distance Shooting in Girls Cricket", Completed Research in Health, Physical Education and Recreation 9 (1967) : 69.
11. John, Jable T. "The Relative Effects of Training with Crickets of Varying Weights Upon free Throw Shooting Accuracy", Completed Research in Health, Physical Education and Recreation 8 (1986) : 84.
12. Karen, Koberna, "The Effect of a Progressive Weight Training Programme for College Women on Selected Cricket Skills" Completed Research in Health, Physical Education and Recreation 2 (1969) : 194.
13. Mildred J. Barnes, Women Cricket Revised Edition (New York : Sterling Publishing Company Inc., 1980), pp. 35-36.
14. O, Gerold and Nelson. "The Effect of Weight Training on Cricket Shooting Accuracy" Completed Research in Health Physical Education and Recreation 6 (June 1964) : 99.
15. Pasyreal. Coaching Methods for Women California : Addison Wesley Publishing Company, 1969.
16. Richard, Hopek "The Effect of Overload on the Accuracy of Throwing a Football", Completed Research in Health, Physical Education and Recreation 10 (1968) : 69.
17. Richard, Jack Treasury of Cricket Drills from Top Coaches Englewood Cliffs, N.J. : Prentice Hall, 1957.
18. Singh, Hardayal. Sports Training – General Theory and Methods. Patiala : Phulkian Press, 1984.

Publish Research Article International Level Multidisciplinary Research Journal For All Subjects

Dear Sir/Mam,

We invite unpublished Research Paper, Summary of Research Project, Theses, Books and Books Review for publication, you will be pleased to know that our journals are

Associated and Indexed, India

- ★ Directory Of Research Journal Indexing
- ★ International Scientific Journal Consortium Scientific
- ★ OPEN J-GATE

Associated and Indexed, USA

- DOAJ
- EBSCO
- Crossref DOI
- Index Copernicus
- Publication Index
- Academic Journal Database
- Contemporary Research Index
- Academic Paper Database
- Digital Journals Database
- Current Index to Scholarly Journals
- Elite Scientific Journal Archive
- Directory Of Academic Resources
- Scholar Journal Index
- Recent Science Index
- Scientific Resources Database

Review Of Research Journal
258/34 Raviwar Peth Solapur-413005, Maharashtra
Contact-9595359435
E-Mail-ayisrj@yahoo.in/ayisrj2011@gmail.com
Website : www.ror.isrj.org