

**EFFECT OF PLYOMETRIC TRAINING ON  
SPEED AND POWER AMONG  
MALE ATHLETES**

**A THESIS  
PRESENTED TO THE VIDYASAGAR UNIVERSITY  
IN LIEU OF A THEORY PAPER  
FOR THE DEGREE OF  
MASTER OF PHYSICAL EDUCATION**

**BY  
BISWAJIT HAZRA**

**DEPARTMENT OF PHYSICAL EDUCATION  
MUGBERLA GANGADHAR MAHAVIDYALAYA  
BHUPATINAGAR :: PURBA MEDINIPUR  
W.B. PIN-721425**

**JULY, 2016**

**EFFECT OF PLYOMETRIC TRAINING ON SPEED AND  
POWER AMONG MALE ATHLETES**



**A THESIS**

**PRESENTED TO THE VIDYASAGAR UNIVERSITY  
IN LIEU OF A THEORY PAPER  
FOR THE DEGREE OF  
MASTER OF PHYSICAL EDUCATION**

**BY**

**BISWAJIT HAZRA**



4  
**EXAMINED**  
*[Signature]*  
20.7.16

**DEPARTMENT OF PHYSICAL EDUCATION  
MUGBERIA GANGADHAR MAHAVIDYALAYA  
BHUPATINAGAR :: PURBA MEDNIPUR**

**W.B. PIN-721425**

**JULY, 2016**

DEPARTMENT OF PHYSICAL EDUCATION  
Mugberia Gangadhar Mahavidyalaya  
VIDYASAGAR UNIVERSITY  
Mugberia-721425, West Bengal



Sk. Khabiruddin  
Assistant Professor

Ref. No.....

.....

*CERTIFICATE BY THE SUPERVISOR*

This is to certify that **Mr. Biswajit Hazra** is a regular student of Mugberia Gangadhar Mahavidyalaya under Vidyasagar University, in the session of 2014 - 2016. He is a student of master of physical education, semester-IV, carried out his research study my supervision and guidance in partial fulfilment of the requirements for the master of physical education degree with his thesis entitled "**EFFECT OF PLYOMETRIC TRAINING ON SPEED AND POWER AMONG MALE ATHLETES**" the material and data composed from students in this study are genuine and were collected by him.

Date.....*12/07/2016*.....

  
(Sk Khabiruddin)  
Supervisor

**Sk. Khabiruddin**  
Assistant Professor  
Dept. of Physical Education  
M.G.M., Bhupatinagar, Purba Medinipur  
West Bengal, Pin-721425

## VITA

**Name of the scholar** : Biswajit Hazra  
**Father Name** : Swapan Hazra  
**Place of Birth** : Brajalalchak (Haldia), Purba Medinipur  
**Date of Birth** : 28/02/1991  
**Address** : Haldia, West Bengal, India.  
**Email** : [hazrabiswajit91@gmail.com](mailto:hazrabiswajit91@gmail.com)  
**Nationality** : Indian  
**Religion** : Hinduism

### **Under graduate and graduate schools and colleges attend: -**

- **M.P** : Chakdwipa High School (Haldia).
- **H.S** : Chakdwipa High School (Haldia).
- **B.A (HONOURS)** : Haldia Govt. College (V.U).
- **B.P.ED** : Seva Bharati Mahavidyalaya, Jhargram (V.U).

### **Degree obtained :-**

- Bachelor of Arts (Geography Honours) - 2012, Vidyasagar University.
- Bachelor of physical education, 2013. Vidyasagar University.

## TABLE OF CONTENTS

<b>CHAPTER-1</b>	<b>INTRODUCTION</b>	<b>PAGE NO</b>
	• General Introduction	1-09
	• Statement of the problem	09
	• Significance of the study	09
	• Hypothesis	09
	• Delimitation	10
	• Limitation	10
	• Definition and explanation of terms	10
<b>CHAPTER-II</b>	<b>REVIEW OF RELATED LITERATURE</b>	<b>13-23</b>
<b>CHAPTER-III</b>	<b>METHODOLOGY</b>	<b>24-30</b>
	• Selection of the subjects	24
	• Selection of variables	24
	• Dependent variables	24
	• Independent variables	24
	• Criterion measure	24
	• Experimental Design	24
	• Selection of the test	27
	• Reliability of the data	27
	• Instrument Reliability	27
	• Subject Reliability	27
	• Collection of data	27
	• Training procedure	28
	• Statistical procedure	30

<b>CHAPTER-IV</b>	<b>RESULT AND DISCUSSION</b>	<b>31-37</b>
• Overview		31
• Test of Significance		31
• Level of Significance		31
• Computation of Analysis of 't' Test		31
➤ Results of personal data		31
➤ Results of vertical jump in experimental group		33
➤ Results of vertical jump in control group		35
➤ Results of 50 mts run in experimental group		36
➤ Results of 50 mts run in control group		37
<b>CHAPTER-V</b>	<b>SUMMARY CONCLUTIONS AND</b>	
	<b>RECOMMENDATIONS</b>	<b>38-39</b>
	<b>BIBLIOGRAPHY</b>	<b>40-43</b>
	<b>APPENDIX</b>	<b>44-50</b>

## LIST OF TABLE

Table No	Titles	Page No
1	Selection of Test	27
2	Plyometric Training schedule for Experimental group athletes	28
3	Computation of mean and S.D of experimental group and control group on personal data	32
4	Computation of mean, S.D and 't' test of experimental group between pre-test and post-test on vertical jump	33
5	Computation of mean, S.D and 't' test of control group between pre-test and post-test on vertical jump	35
6	Computation of mean, S.D and 't' test' of Experimental group between pre-test and post-test on 50 mts Run	36
7	Computation of mean, S.D and 't' test' of control group between pre-test and post-test on 50 mts run	37

## LIST OF FIGURE

Figure No	Particulars	Page No
1	Administration of 50 mts run	25
2	Administration of vertical jump	26
3	Bar Diagram Showing the Mean Difference and S.D Of Control Group and Experimental Group	33
4	Bar Diagram Showing the Mean and S.D Difference of Experimental Group on Vertical Jump	34
5	Bar Diagram Showing the Mean and S.D Difference of Control Group on Vertical Jump	35
6	Bar Diagram Showing the Mean and S.D Difference of Experimental Group on 50 Mts Run	36
7	Bar Diagram Showing the Mean and S.D Difference of Control Group on 50 Mts Run	37

## LIST OF APPENDICES

Appendix	Description	Page No
A	Experimental Group Data(Pre-Test)	44
B	Control Group Data(Pre-Test)	45
C	Experimental Group Data(Post-Test)	46
D	Control Group Data(Post-Test)	47
E	Plyometric Training Schedules For Experimental Group Athletes	48
F	Personal Data Collection Picture And Group Male Athletes Picture	50