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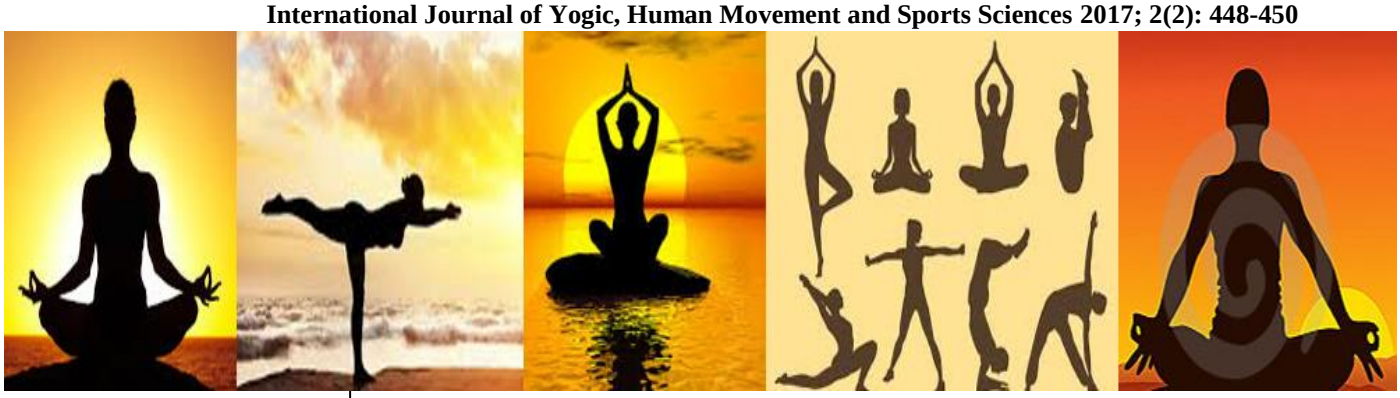

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Effectiveness of plyometric exercises on jumping ability among students belonging to backward areas

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Abstract
Jumping is included in anaerobic exercises. People who exercised regularly with jumping exercises have strong bone density, good balance and coordination, good respiratory health and muscle tone. While jumping, our body digs into the stored energy also. Long jump is included in track and field events. Long jump combines all the strength, agility and speed in an attempt to cover more and more distance from the take-off point. The aim of this study was to find out the effect of plyometric exercises on jumping ability among collegiate students belonging to backward areas in Govt. Degree College Chararisharief. Materials and Methods: Data was individually collected on 60 backward area male students (Age 18±25 years) at long jump pit of Govt. Degree College Chararisharief ground before and after the six week training program. The subjects were divided into two groups (30 in Experimental group and 30 in control group). The researcher prepares a six week training program before started his research. The instruction of training was given by researcher every day before starting the training in Govt. Degree College Chararisharief. Purposive sampling method was used for collection of data. Only one variable was selected for collection of data, i,e, Long jump. The data was analysed using descriptive and t test. Results: The mean value and standard deviation of Control and Experimental group (Pre-test) was 3.52#3.55 & 0.33#0.37 in relation to Long jump. The mean value and standard deviation of Control and Experimental group (Post test) was 3.51#3.91 & 0.33#0.21 respectively, in relation to Long jump. Calculated t–ratio of Pre-test was found 0.70, where as calculated t–ratio of Post test was found 4.60 in relation to Long jump. Conclusions: Significant effect of plyometric exercises on jumping ability with respect to long jump among backward areas in Govt. Degree College Chararisharief was found.

Keywords: Plyometric exercises, jumping, backward area, long jump

Introduction
Long jump is one of the events in Track & Field events. The multiple event competitions in which Long jump is included are, Pentathlon, heptathlon and Decathlon. Long jump has a long history as it was played from the ancient Olympics. Actually long jump is an activity of primitive man who lives on leaves, meat, fruits, flowers etc,. The primitive man uses long jump, high jump and other activities while chasing the animals for meat for his survival. Long jump is simple activity as compared to other jumping activities like high jump, triple jump. Jumping is included in anaerobic exercises. People who exercised regularly with jumping exercises have strong bone density, good balance and coordination, good respiratory health and muscle tone. While jumping, our body digs into the stored energy also. Long jump is included in track and field events. Long jump combines all the strength, agility and speed in an attempt to cover more and more distance from the take-off point. The long jumpers should use the correct techniques so that they can jump as long as distance in the competition. False techniques can decrease their performance. Long jump consists of four main skills which are running, last two strides, take off & position in the air, landing. These four skills should be in a perfect way so that long jumper can jump as farther as possible. Plyometric exercises is considered effective tool to increase the performance of long jumpers in their long jump during the competition.

Materials and Methods
The sample comprised of Total 60 male students in Govt. Degree College Chararisharief belonging to backward areas, were selected as subjects for the present study and their age

ranged between 18 to 25 years. These 60 subjects were divided into two groups (30 in Experimental group and 30 in control group). For the present study, modified tools were used for data collection (Long jump pit, measuring tape and lime). Data was individually collected at long jump pit of Govt. Degree College Chararisharief ground before and after the six week training program. The researcher prepares a six week training program before started the research. The instruction of training was given by researcher every day before starting the training in Govt. Degree College Chararisharief. Purposive sampling method was used for collection of data. Only one variable was selected for collection of data, i,e, Long jump. The data was analysed using descriptive and t test.

Table 1: Six week training program for experimental group

Training week	Plyometric exercise	Sets/ Repetitions	Training intensity
01	Side to side ankle hops	2 x 15	Low
	Standing jump & reach	2 x 15	Low
	Front cone hops	6 x 5	Low
02	Side to side ankle hops	2 x 15	Low
	Standing long jump	2 x 15	Low
	Lateral jump over barrier	6 x 5	Medium
	Double leg hops	10 x 3	Medium
03	Side to side ankle hops	2 x 12	Low
	Standing long jump	2 x 12	Low
	Lateral jump over barrier	6 x 4	Medium
	Double leg hops	8 x 3	Medium
	Lateral cone hops	2 x 12	Medium
04	Single leg bounding	2 x 12	High
	Standing long jump	3 x 10	Low
	Lateral jump over barrier	8 x 4	Medium
	Lateral cone hops	3 x 10	Medium
	Tuck jump with knees up	4 x 6	Medium
05	Single leg bounding	2 x 10	High
	Jump to box	2x 10	Low
	Double leg hops	6 x 3	Medium
	Lateral cone hops	2 x 11	Medium
	Tuck jump with knees up	6 x 5	High
	Lateral jump over barrier	3 x 10	High
06	Jump to box	2 x 11	Low
	Depth jump to prescribed height	4 x 5	Medium
	Double leg hops	6 x 3	Medium
	Lateral cone hops	2 x 10	Medium
	Tuck jump with knees up	4 x 5	High
	Lateral jump single leg	2 x 10	High

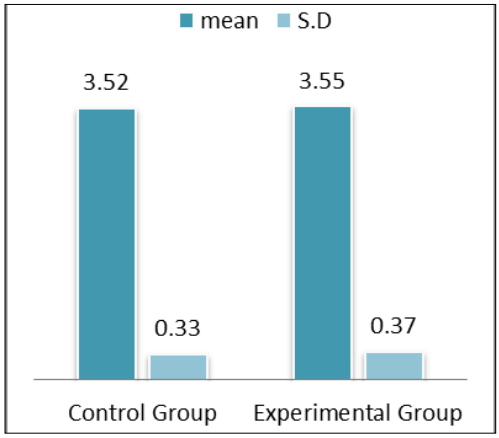
Results and Discussions

Mean and standard deviation of Control and Experimental Group of students of Govt. Degree College Chararisharief belonging to backward areas with respect to Long jump to measure the explosive strength.

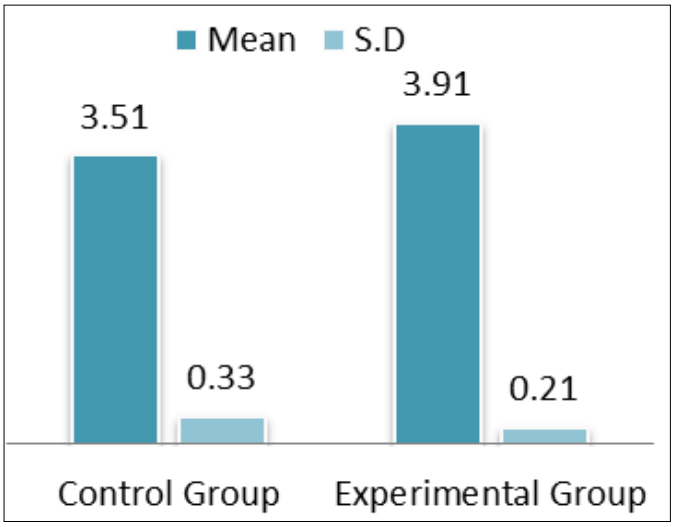
Table 2: Comparison of control and experimental group in relation to Long jump

Variable	N	Group		Mean	S.D	S.V (0.05)	T-ratio
Long jump	30	Control Group	Pre-test	3.52	0.33	2.048	0.70
			Post test	3.51	0.33		
	30	Experimental Group	Pre-test	3.55	0.37	2.048	4.60
			Post test	3.91	0.21		

From the above table it was observed that the mean and standard deviation of Control and Experimental Group (Pre-test) was 3.52#3.55 & 0.33#0.37 in relation to Long jump respectively. The mean value and standard deviation of Control and Experimental group (Post test) was 3.51#3.91 & 0.33#0.21 respectively, in relation to Long jump. Calculated t–ratio of Pre-test was found 0.70, where as calculated t–ratio of Post test was found 4.60 in relation to Long jump. Significant effect of plyometric exercises on jumping ability with respect to long jump among backward area students of Govt. Degree College Chararisharief was found. So the hypothesis given earlier was accepted. Experimental Group was better than Control group, because the experimental group was doing daily regular exercises. With the help of daily exercises, the jumping ability of the experimental group found increase.



Graph 1: Graphical representation of pre-test of control & Experimental group



Graph 2: Graphical representation of post-test of control & Experimental group

In the light of the findings, it was concluded that significant effect of plyometric exercises on jumping ability with respect to long jump among backward area students of Govt. Degree College Chararisharief was found.

The similar study may be repeated on the female subjects and other class of the society for different age groups. To make this study more authentic and valid, the study may be repeated on the larger sample.

References

1. Blakey JG, Southard D. The Combined Effects of Weight Training and Plyometric on Dynamic Leg Strength and Leg Power, Journal of Applied Sports Science Research, 1987.
2. Hardiyal Singh. Science of sports training. New Delhi, DVS Publication 1991.
3. Holcomb William R *et al*. The Effectiveness of a Modified Plyometric Program on Power and Vertical Jump, Journal of Strength and Conditioning Research, 1996, 10(2).
4. Kansal Kr. Devinder, ‘’Test and measurement in sports and physical education,’’ DVS Publication New Delhi.
5. Singh Ajmer *et al*. Essentials of physical education (New Delhi), Kalyani Publishers, third Edition, 2008.