



EFFECT OF JUMP ROPE CIRCUIT TRAINING ON ELASTIC POWER AMONG HOCKEY PLAYERS

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Abstract

The purpose of the study was to find out the effect of jump rope circuit training on elastic power among hockey players. It was hypothesized that there would be significant differences on elastic power due to the effect of jump rope circuit training among hockey players. For the present study the thirty hockey players who participated in the Inter-collegiate tournaments from Ramakrishna Mission Vidyalaya, Coimbatore were selected at random and their age ranged from 18 to 22 years. Elastic power was tested by Margaria Kalamen power test. For the present study pre test – post test random group design which consists of control group and experimental group was used. The subjects were randomly assigned to two equal groups of fifteen players each and named as Group ‘A’ and Group ‘B’. Group ‘A’ underwent jump rope circuit training and Group ‘B’ has not undergone any training. The data was collected before and after twelve weeks of training. The data was analyzed by applying dependent ‘t’ test. The level of significance was set at 0.05. The jump rope circuit training had shown significant improvement in elastic power among hockey players.

Keywords: Jump rope circuit training, Elastic power, Hockey.

INTRODUCTION

Jumping rope has many benefits for young hockey players. When performed correctly jumping rope is an excellent training and development tool. It's an activity that is both efficient and effective for reinforcing sound movement patterns. It helps improve stamina, develops coordination including balance, rhythm and timing, helps to develop speed and agility as well as strength and power. Jump ropes are inexpensive to purchase and are easily carried in your child's hockey bag to and from the rink. Jumping rope can be a workout powerhouse, since it helps maintain—and improve—your cardiovascular fitness while strengthening your muscles to help reduce injury risk. jumping rope on a regular basis also helps improve your coordination, agility, and balance (Wagner & Koack, 1997).

METHODOLOGY

The purpose of the study was to find out the effect of jump rope circuit training on elastic power among hockey players. It was hypothesized that there would be significant differences on elastic power due to

the effect of jump rope circuit training among hockey players. For the present study the thirty hockey players who participated in the Inter-collegiate tournaments from Ramakrishna Mission Vidyalaya, Coimbatore were selected at random and their age ranged from 18 to 22 years. Elastic power was tested by bunny hop test. For the present study pre test – post test random group design

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RESULTS

TABLE 1
ANCOVA BETWEEN EXPERIMENTAL GROUP AND CONTROL GROUP ON ELASTIC POWER OF
HOCKEY PLAYERS FOR PRE, POST
AND ADJUSTED TEST

	Experimental Group	Control Group	Source of Variance	Sum of Squares	df	Mean Square	F
Pre Test Mean	7.46	7.55	BG	2.54	1	2.54	1.30
			WG	54.40	28	1.94	
Post Test Mean	8.16	7.56	BG	65.70	1	65.70	34.21*
			WG	48.26	28	1.92	
Adjusted Post Mean	8.18	7.53	BG	63.12	1	63.12	32.36*
			WG	47.50	27	1.95	

* Significant at 0.05 level.

df: 1/27= 4.21

Table1 revealed that the obtained 'F' value of 32.36 was found to be significant at 0.05 level with df 1, 27 as the tabulated value of 4.21 required to be significant at 0.05 level. The same table indicated that

there was a significant difference in adjusted means of elastic power of hockey players between experimental group and control group. The graphical representation of data has been presented in figure I.

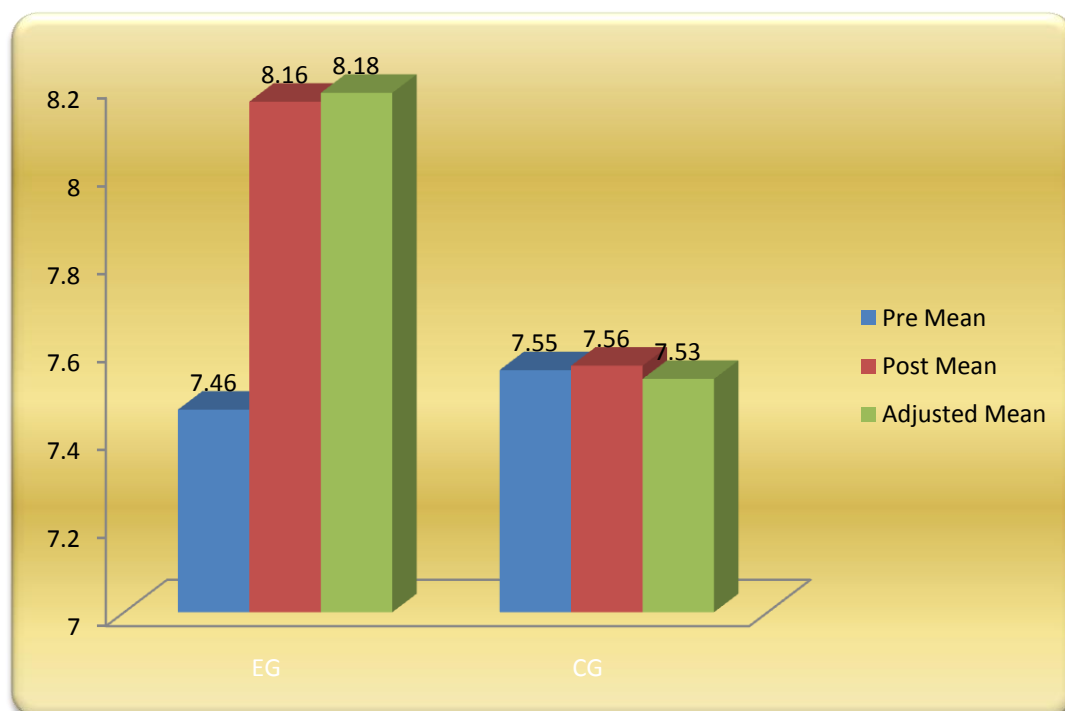


FIGURE I
COMPARISONS OF PRE – TEST MEANS POST – TEST MEANS AND ADJUSTED POST – TEST MEANS FOR
CONTROL GROUP AND EXPERIMENTAL GROUP IN RELATION TO ELASTIC POWER

CONCLUSION

1. The jump rope circuit training had shown significant improvement in elastic power among hockey players.

REFERENCES

1. Baechle Thomas, R., *Essential of Strength Training and Conditioning*, Champaign Illinois: Human Kinetics Publishers, 1994.
2. Barrow, H. M., & Mc, Gee. (1979). *A Practical Approach to Measurement in Physical Education*, New York: The C.V. Mosby company.
3. Blakey, J.B. & Southard, D, "The combined effects of weight training and Plyometrics on dynamic leg strength and leg power" *Journal of Applied Sport Science Research*. 1(1) pp. 14-16, 1987.
4. Brezzo, R.D., Fort, I.L., & Diana, R, "The effects of a modified plyometric program on junior high female basketball players" *Journal of Applied Research in Coaching and Athletics*. 3(3). pp. 172-181, 1988.
5. Dick Frank, W., *Sporting Training Principles*, Great Britain: University Press Cambridge, 1980.
6. Duke, S. & BenEliahyu, D, "Plyometrics: Optimising athletic performance through the development of power as assessed by vertical leap ability: an observational study" *Chiropractic Sports Medicine*. 6(1). pp. 10-15, 1992.
7. Gabbett, T. J, "Training injuries in rugby league: An evaluation of skill-based conditioning games". *Journal of Strength and Conditioning Research*, 16:236-241, 2002.
8. Hetzler DeRene., R.K., et.al, "Effects of 12 Weeks of Strength Training on Elastic power in Prepubescent Male Athletes, *Journal of Strength and Conditioning Research*, 11, 1997, 174-181.
9. Singh Hardayal, *Science of Sports Training*, New Delhi, D.V.S. Publications, 1991.
10. Singh, H. (1991). *Science of Sports Training*. New Delhi: D.V.S. Publications, 1991.
11. Wagner, D.R., and M.S.Koack, "A Multivariate Approach to Assessing Elastic power following a Plyometric Training program", *Journal of Strength and conditioning Research* 11:4, 1997, 251-255.