



IMPACT OF PROPRIOCEPTIVE NEUROMUSCULAR FACILITATION TRAINING ON SELECTED SKILLS AMONG HOCKEY MEN PLAYERS

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Abstract

The purpose of the study was to find out the impact of PNF training on selected skill among hockey men players. To achieve the purpose of the study, thirty male hockey players have been randomly selected from chennai were selected. The age of the subjects selected for this study was between 18 and 25 years. The subjects had past experience of at least three years in Hockey and only who those represented their respective college teams were taken as subjects. A dribble is assessed by Schmithals – French Field Hockey test, by using the matching procedure on the basis of their initial hockey playing ability performance test scores, The subjects were randomly assigned into two groups of fifteen each, such as experimental and control groups. Group-I underwent PNF training and Group-II acted as control group. The experimental group participated in the PNF training for 3 days a week, one session per day and for 8 weeks each session lasted 90 minutes. The control group maintained their daily routine activities and no special training was given. To analyze the data analysis of covariance was used. The result reveals that there was a significant difference on dribble of experimental group than control group.

Key words: PNF training, dribble, Hockey

INTRODUCTION

Sports training is the total process of preparation of a sportsman, through different means and forms for better performance. The Sports performance is the result and expression of the total personality of the sportsman (Hardayal Singh 1984).

PNF stretching is currently the fastest and most effective way known to increase static-passive flexibility. PNF is an acronym for proprioceptive neuromuscular facilitation. It is not really a type of stretching but is a technique of combining passive stretching and isometric stretching. In order to achieve maximum static flexibility. Actually, the term PNF stretching itself is a misnomer. PNF was initially developed as a method of rehabilitating stroke victims. PNF refers to any of several post-isometric relaxation stretching techniques in which a muscle group is passively stretched, then contracts isometrically against resistance while in the stretched position, and then is passively stretched again through the resulting increased range of motion. PNF stretching

usually employs the use of a partner to provide resistance against the isometric contraction and then later to passively take the joint through its increased range of motion. It may be performed, however, without a partner, although it is usually more effective with a partner's assistance. Most PNF stretching techniques employ isometric agonist contraction/relaxation where the stretched muscles are contracted isometrically and then relaxed. Some PNF techniques also employ isometric antagonist contraction where the antagonists of the stretched muscles are contracted. In all cases, it is important to note that the stretched muscle should be rested for at least 20 seconds before performing another PNF technique (Westerterp, 1999).

PNF recognizes that all physical conditioning depends primarily on neuromuscular processes involving sensitive receptors (proprioceptors) in the muscles, tendons and joints which enable a person to stabilise and move the body and its parts in space and time. Appropriate recruitment of the various stretch reflexes of the body, therefore,

forms a vital part of PNF conditioning (Tancred, 1995).

Many athletic trainers employ this method and utilize its immediate assistance in enhancing flexibility. Usually the healthy, fully functional athlete is required, with the help of a personal trainer, to complete PNF stretching in order to increase range of motion. This improves agility which optimizes playing potential.

PNF stretching is also responsible for other various aspects to an athlete's health such as: reducing fatigue, helps prevent future injuries, reduces the threat of more serious or complex damage, and develops a higher threshold for the body's physical ability level (Tancred, 1995).

OBJECTIVES

1. To find out the impact of PNF training on selected skill among the male hockey players.

MATERIALS AND METHODS

To achieve the purpose of the study, thirty male hockey players have been randomly

selected from chennai were selected. The age of the subjects selected for this study was between 18 and 25 years. The subjects had past experience of at least three years in Hockey and only who those represented their respective college teams were taken as subjects. A dribble is assessed by Schmithals – French Field Hockey test . By using the matching procedure on the basis of their initial hockey playing ability performance test scores, The subjects were randomly assigned into two groups of fifteen each, such as experimental and control groups. Group-I underwent PNF training and Group-II acted as control group. The experimental group participated in the PNF training for 3 days a week, one session per day and for 8 weeks each session lasted 90 minutes. The control group maintained their daily routine activities and no special training was given. To analyze the data analysis of covariance was used. The result reveals that there was a significant difference on dribble of experimental group than control group.

TABLE-I
COMPUTATION OF MEAN AND ANALYSIS OF COVARIANCE OF DRIBBLE OF
EXPERIMENTAL AND CONTROL GROUPS

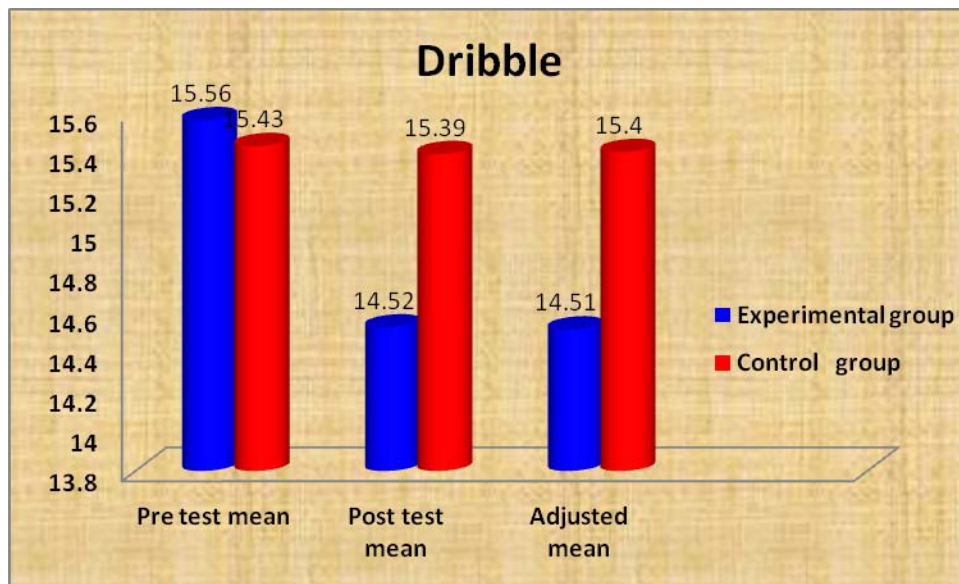
Test	Experimental group	Control group	Sum of variance	Sum of squares	df	Mean square	F ratio
Pre test mean SD (\pm)	15.56 0.24	15.43 0.32	B,G	0.13	1	0.13	1.62
			W,G	2.25	28	0.08	
Post test mean SD (\pm)	14.52 0.32	15.39 0.34	B,G	5.61	1	5.61	48.78*
			W,G	3.22	28	0.11	
Adjusted mean	14.51	15.40	B,G	5.58	1	5.58	47.68*
			W,G	3.16	27	0.11	

* Significant at 0.05 level

(Table value for df 1 and 28 was 4.2, Table value for df 1 and 27 was 4.20)

The above table indicates the adjusted mean value on dribble of control and experimental groups were 14.51 and 15.40 respectively. The obtained F-ratio of 47.68 for adjusted mean was greater than the table value 4.20 for the degree of freedom 1 and 27 required for significance at 0.05 level of confidence. The

result of the study indicates that there was a significant difference among experimental and control group on dribble. The above table also indicates that both pre and post test of control and experimental groups have significant difference.

**Figure-I**

The pre, post and adjusted mean values of dribble of both control experimental groups are graphically represented in the Figure I

DISCUSSION OF FINDINGS

The results presented in the table indicates that the experimental group namely PNF training group had shown significant improvement in dribble among the hockey players. The control group hockey player had not shown significant changes in dribble.

The results of the study indicates that there is a significant difference in the improvement of dribble between PNF and control group.

CONCLUSIONS

From the analysis of data, the following conclusions were drawn.

1. The experimental group hockey players improved significantly in selected hockey skill on dribble.
2. The control group did not improve significantly in the selected parameters.

REFERENCE

Caplan ,N. (2009), The effect of proprioceptive neuromuscular facilitation and static stretch training on running mechanics. ,Jul;23(4):1175-80.

Christensen B.K, and Nordstrom B.J. (2008), The effects of proprioceptive neuromuscular facilitation and dynamic

stretching techniques on vertical jump performance. Journal of Strength and Conditioning research. Nov;22(6):1826-31.

González-Ravé ,J.M., (2012), Efficacy of two different stretch training programs (passive vs. proprioceptive neuromuscular facilitation) on shoulder and hip range of motion in older people. Journal of Strength and Conditioning research. Apr;26(4):1045-51.

Hardayal Singh. (1991). Science of Sports Training, New Delhi: D.V.S. Publications.

Johnson R. Clayne and Fisher A. Garth (1970).Scientific Basis of Athletic Conditioning (Philadelphia : Lea and Febiger.

Robbert A. Robergs and Scott O. Roberts (2004).Fundamental Principles of Exercise Physiology for Fitness, Performance and Health, Dubuque: Quebecor Printing Book Group.