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Loop band with ladder training: An experimental study

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Abstract

The major goal of this study was to find out the combination of loop band and ladder training on performance variables among handball players. A convenience sample Thirty handball players were randomly selected from Coimbatore district. Their age of the subject ranged from 20 to 23 years and they were divided into two equal groups consisting of 15 each Experimental group underwent given training acted as group I and control group acted as group II. Training was given to the experimental group for 3 days per week for the period of 8 weeks. The control group was not undergoing any sort of training except the routine work. The collected pre and post data was critically analyzed with dependent 't' test. The level of significance was fixed at 0.05 levels for all the cases in order to find out the significance. The result clearly proved that the passing, throwing accuracy batter enhancement on loop band with ladder training of handball players.

Keywords: Loop band, ladder training, passing, throwing accuracy, and handball players

Introduction

Loop Bands

Resistance loop bands are a type of fitness gear made from natural rubber latex that can be used to increase strength and build individual muscles as well as muscle groups. The training refers to a type of exercise where resistance, such as in the form of a loop band, is used to produce a muscle contraction. Repeated muscle contractions build anaerobic endurance and muscle size, contributing to increased muscular strength. Loop bands are essentially giant rubber bands and they come in a variety of loop band depending on your fitness level. There are numerous kinds of loop bands, namely; power bands, exercise band loop, exercise band and loop band tubing. Each of them has its own specific use and their pros and cons. Loop bands are a type of fitness gear made from natural rubber latex that can be used to increase strength and build individual muscles as well as muscle groups. Loop bands can be used in activities like CrossFit, Pilates, yoga, and video workout programs (you may be familiar with their suggested use in Focus T25 or P90x), or physical therapy and rehab. They are stretchable, elastic bands and can have different kinds of handles or no handles at all. Lightweight loop bands are portable and easy to store. They are also an inexpensive way to add variety to your routine or even replace equipment that you do not have constant access to.

Ladder Training

Ladder training is the latest method of multi-directional training program, because the elements of motor components that is strength, power, balance, agility, co-ordination, joint's ability, foot speed, hand eye coordination and reaction time are increasing. By training, the mind and body understand a variety of foot combinations. There are mostly four type of basic skills that are used while training with ladder. These are runs through ladder, skips, shuffles and jump/ hops. Although linear and lateral moments are there. It can be learned in a slow controlled phase. Here I explain the three different types of drills these are steady-state drills, spurt drill and elastic response drill. Speed ladder drills are very important for all sports where agility, leg explosive strength, aerobic capacity and speed are important.

Methodology

A convenience sample thirty combinations of loop band and ladder training on performance variables among handball players were randomly selected from Coimbatore district. Their aged of the subject ranged from 20 to 23 years and thy were divided into two equal groups

consists of 15 each Experimental group underwent given training acted as group I and control group acted as group II. Training was given to the experimental group for 3 days per week for the period of 8 weeks. The control group was not undergoing any sort of training except the routine work. The collected pre and post data was critically analyzed with dependent 't' test. The level of significance was fixed at 0.05 levels for all the cases in order to find out the significance.

Statistical Analysis

The means and standard deviations of loop band and ladder training were calculated for passing, throwing accuracy, and handball players for the pre as well as posttests. The collected data was analyzed using "t" test. Statistical significance was set to a priority at $p < 0.05$. All statistical tests were calculated using the statistical package for the social science (SPSS)

Table 1: computation of 't' ratio on passing on experimental and control group.

Groups	Pre-test	Post-test	SD	"T" ratio
Experimental Group	17.30	20.40	5.80	14.01*
Control Group	17.10	16.90	6.25	1.79

*Significant level 0.05 level (degree of freedom 2.14 and 14)

Table 1 reveals the computation of mean, standard deviation and 's' ratio on pre and posttest on selected variables namely passing of experimental group. The mean values of pre and posttest of experimental group were 17.30 and 20.40 respectively. The mean values of pre and posttest of control group were 17.10 and 16.90. The obtained' ratio on experimental group was 14.01 respectively. The required table value was 2.14 for the degrees of freedom 1 and 14 at the 0.05 level of significance. Since the obtained' values were greater than the table value it was found to be statistically significant. The result clearly proved that the passing better improvement on loop band with ladder training of handball players.

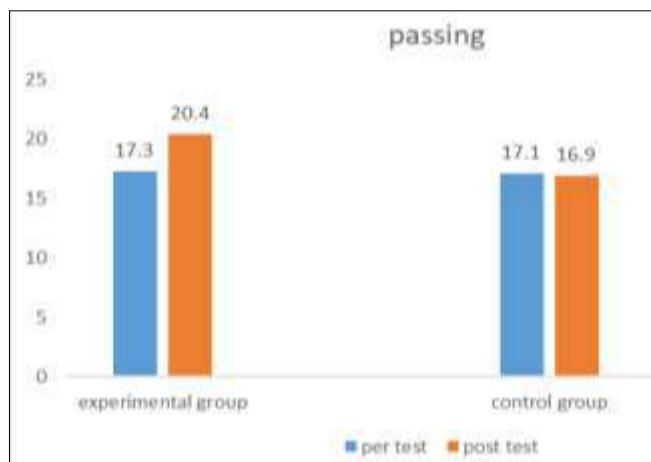


Fig 1: Bar diagram showing the mean values of passing pre and posttest for experimental group and control group.

Table 2: computation of 't' ratio on throwing accuracy on experimental group and control group

Groups	Pre-Test	Post Test	SD	"T" ratio
Experimental Group	21.05	25.35	1.99	15.79*
Control Group	21.45	21.85	1.61	2.03

*Significant level 0.05 level (degree of freedom 2.14 and 14)

Table 1 reveals the computation of mean, standard deviation and 't' ratio on pre and posttest on selected variables namely throwing accuracy of experimental group. The mean values of pre and posttest of experimental group were 21.05 and 25.35 respectively. The mean values of pre and posttest of control group were 21.45 and 21.85. The obtained 't' ratio on experimental group were 15.79 respectively. The required table value was 2.14 for the degrees of freedom 1 and 14 at the 0.05 level of significance. Since the obtained' values were greater than the table value it was found to be statistically significant. The result clearly proved that the throwing accuracy better improvement on loop band and ladder training on performance variables among handball players.

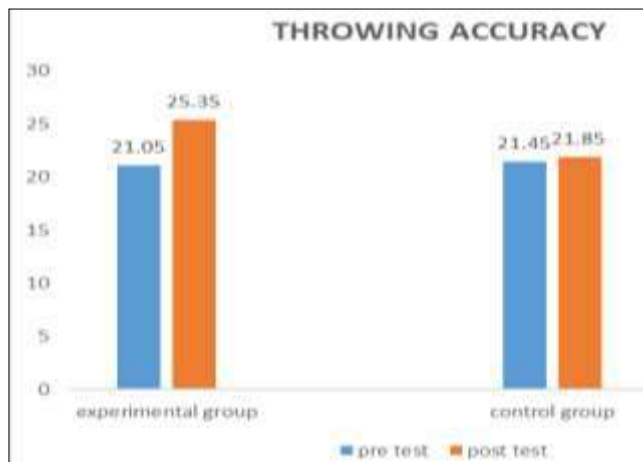


Fig 2: Bar diagram showing the mean values of throwing accuracy pre and posttest for experimental group and control group.

Discussion on Findings

The present study experimented with the impacts of eight weeks combination of loop band and ladder training on performance variables among handball players. The results of this study indicated that loop band and ladder training was more efficient to bring out desirable changes over the passing and throwing accuracy among handball players. Investigators have extended their interest to consider the passing and throwing accuracy commencement from the way a performance variable among handball players approaches the loop band and ladder training. Pre and post-test vital passing and throwing accuracy scores between the experimental and control groups were examined, there was a significant difference in posteromedial and posterior directions.

Conclusions

1. It was concluded that combined impacts of loop band and ladder training group showed a statistically significant positive sign over the course of the treatment period on passing and throwing accuracy among handball players.
2. It was concluded that individualized effect of control group showed a statistically insignificant over the course of the period on loop band and ladder training among handball players.

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