

EFFECT OF WEIGHT TRAINING AND PRANAYAMA ON LEFT WING SHOOTING ABILITY OF HANDBALL PLAYERS

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Abstract: The objectives of the study were to determine the effects of weight training and pranayama on shooting ability of handball players. Two groups were targeted experimental & control, fifty handball players consider as a experimental group and 50 other players as a control group would be selected as subject for present study and their age ranged between 14-19. Only training was given to the experimental groups. This study involves the effects of Pranayama and weight training on the performance of handball players in an experimental design. The data was collected through respondents in the form of different experimental tests. The demographic information about Age, height, weight etc. was obtained before seeking responses. Training program would be planned as 12 weeks 4 days a week and 60min. The Pranayama and Weight training the demonstration was given to the Players. Data was taken from the 50 handball players as a experimental group of similarly Pre and Post Test was taken from 50 other players as a control group. The training was given to the experimental group only. Mean, Standard Deviation and Analysis of Covariance (ANCOVA) was utilized by the investigator. The level of significant was set up at 0.05 level. The results of the study reveals that there was significant effects of weight training and Pranayama was found in shooting ability of handball players with respect to Left wing ($P > .05$). The weight training and Pranayama was increase the shooting ability of handball with respect to left wing.

Key Words : Left wing, Shooting, weight training, Pranayama, Handball

INTRODUCTION

Left wing players is fast players who excel at ball control and wide jumps from the outside of the goal perimeter in order to get into a better shooting angle at the goal. Teams usually try to occupy the left position with a right-handed player and vice versa Left wing shooting ability is one of the most important terms in order to reach optimum result in team handball because of being high intensity intermittent types of sport Handball is sometimes called the complete game because nearly every part of the body is exercised (Gorostiaga EM, Granados C, Ibañez J, et al., 2006; Volossovitch A, 2005)

It is a game that can be enjoyed by individuals regardless of their age or sex. Although the game is primarily dominated by men, women in recent years are being introduced to it and more and more playing every day (Singh, 2018; Singh & Nadeem (2017). The handball game is not only influenced by physical fitness. As any physical activity it is performed and generated by thinking (Gorostiaga et al. 2006; Gorostiaga et.al 2004; Volossovitch, 2005). A player has to - in strenuous action - rapidly see, retain, estimate, conclude and act relevantly Weight training is an essential component of exercise programs for increasing muscular strength and size. Weight training is an effective tool for improving or maintaining strength, endurance, and overall fitness. It involves controlled movements of skeletal muscle in an effort to move an external load (Singh and Firdous 2014; Singh & Tuteja 2013),. weight training program as part of a complete fitness plan will contribute to increased weight loss/control, balance and coordination, and a better overall sense of well-being (Fahey, 2005, Gorostiaga E, Granados M, Ibañez J, Izquierdo, 2004).

METHODS

Two group were targeted experimental & control .50 handball players consider as a experimental group and 50 other players as a control group would be selected as subject for present study and their age ranged between 14-19. Only training was given to the experimental groups. This study involves the effects of Pranayama and weight training on the performance of handball players in an experimental design. The data was collected through respondents in the form of different experimental tests. The demographic information about Age, height, weight etc. was obtained before seeking responses.

ASSESSMENT OF JUMP SHOT TEST IN HANDBALL – LEFT WING

To measure the jump shot ability of handball from left. On signal the same ready to the position marked for jump shot shooting and shoots into the goal post. The scoring were awarded to the respective boxes on the assumption that at the

time of jump shot shooting from the left, the ‘defender goal keeper’ would guard the goal at the extreme right side of the goal post to block the ball. When the shooter shoots the ball from the left the goal keeper attempt to the left side of the goal post.

Training Programme:

Training program would be planned as 12 weeks 4 days a week and 60min. training programme that use large muscles groups that can be maintained continuously and are aerobic in nature. Warm - up period was approximately 10 min., this was combine callisthenic– type stretching, exercise and progressive aerobic activity. However, cool down period were 5 to 10 min. The yogic Pranayama includes Kapalbhathi ,Anulom Vilom ,Bhastrika and nadi shodhan before starting above Yogic Pranayama the demonstration was given to the Players.

Collection of data:

Data was taken from the 50 handball players a experimental group of similarly Pre and Post Test was taken from 30 other players as a control group. Yogic Pranayama was given to the experimental group only.

Statistical Analysis:

The obtained data Mean, Standard Deviation and Analysis of Covariance (ANCOVA) was utilized by the investigator. The level of significant was set up at 0.05 level.

RESULTS AND DISCUSSION

The results and discussion have been presented in concise and comprehensive manner that is easy to comprehend starting with selected physical parameter.

**Table-1
Morphological characteristics of Control groups**

Sr. No.	Components	Means Scores	Standard Deviations
1.	Age (Year)	14.50	3.15
2.	Weight (Kg)	60.27 kg	8.67
3.	Height (cm)	160.06cm	13.12

Table -1 depicted the morphological characteristics of control group, the Mean Scores (S.Ds.) age of control group was 14.50(3.15) years, mean scores (S.Ds.) weight was 60.27(8.67) Kg, mean scores (S.Ds.) and height was 160.06 (13.12) cm

**Table-2
Shows Means &SDs of Morphological characteristics of the Experimental groups**

Sr. No.	Components	Means Scores	Standard Deviation
1.	Age (Year)	14.83	3.23
2.	Weight (Kg)	60.76	8.87
3.	Height (cm)	160.17	13.19

Table -2 depicted the morphological characteristics of experimental group, the Mean Scores (S.Ds.) age of control group was 14.83(3.23) years, mean scores (S.Ds.) weight was 60.76(8.70) Kg, mean scores (S.Ds.) and height was 160.17 (13.19) cm.

**Table 3
Means &SDs of shooting ability in hand ball with respect to left wing in pre and post-test of control group.**

Shooting ability	Test	Number	Mean	S.D.
Left wing	Pre Test	50	2.67	0.74
	Post Test	50	2.70	0.73

Table -3 Shows that Means &SDs of shooting ability in hand ball with respect to left wing in pre and post-test of control group.

With regards to shooting ability in hand ball with respect to left wing of pre and post-test of control group they have obtain the mean value of 2.67 and 2.70 respectively.

Table 4
Means &SDs of shooting ability in hand ball with respect to left wing in pre and post-test of Experimental group.

shooting ability	Test	Number	Mean	S.D.
Left wing	Pre Test	50	2.65	0.70
	Post Test	50	3.40	0.89

Table -4 Shows that **Means &SDs of shooting ability in hand ball with respect to left wing in pre and post-test of experimental group.**

With regards to **shooting ability in hand ball with respect to left wing** of pre and post-test of Experimental group they have obtain the mean value of **2.65** and **3.40** respectively.

Table-4.1

Analysis of Covariance of effects of Pranayama and weight training on shooting ability in handball with respect to left wing

source of variation	Degree of freedom	Ssx	Ssy	Ssxy	Ssyx	mssyx	F-ratio
Treatment Group	3	0.22	20.52	4.51	24.60	20.74	9.87*
Errors Group	196	16.60	17.6	6.89	14.5	2.10	

* *Significant at .05 level.*

Table-5, Illustrates the statistical information of analysis of co- variance of shooting ability in handball with respect to left wing. Above table indicates that statistically significant effects of effects of Pranayama and weight training on shooting ability with respect to left wing as above observed in F-ratio was 9.87 at 0.05 level of significance.

DISCUSSION

Handball is a sport from the category known as sport games, and is becoming more and more popular in the world. A relatively rapid learning of this game, based on natural human motion, has allowed it to be popularized quickly. Handball is a team sport in which two teams of seven players (six outfield players and a goalkeeper) pass a ball with their hands, with the aim of throwing it into the opposing team’s goal to score. A competitive handball match is played on a large rectangular court that is 40 m long by 20 m wide, with a goal in the centre of each end. Shots are one of the most important elements of handball. They are vital elements that decide the scores. While shooting the muscles of the lower and upper limbs, pelvic region and trunk are extremely engaged. One can assume that shooting is performed similarly to passing, but with a stronger action of the trunk and upper limbs. The shot power is conditioned by the distance and hand action time on a ball. The greater the distance that the hand on the ball covers in the time unit the stronger the shot will be (a ball reaches a higher velocity) performed. The results of the study reveals that there was significant effects of weight training and pranayama was found in shooting ability of handball players with respect to Left wing ($P > .05$). The weight training and pranayama was increase the shooting ability of handball with respect to left wing. Wagner & Müller, (2008) stated that, in elite team handball, shooting on goal is one of the most important aspects of the game. For a shot to be successful, it requires maximum ball velocity and precision as well as an element of surprise for the defensive players and goalkeeper.(Volossovitch 2005). They also claimed that the internal shoulder rotation angular velocity at ball release, maximal elbow extension and the timing of the maximal pelvis angle are important contributors to the ball velocity. Wagner & Müller, (2008) stated that, in elite team handball, shooting on goal is one of the most important aspects of the game. For a shot to be successful, it requires maximum ball velocity and precision as well as an element of surprise for the defensive players and goalkeeper Gorostiaga EM, Granados C, Ibañez J, et al.(2006), Gorostiaga E, Granados M, Ibañez J, Izquierdo M (2004),. Weight training is a very important aspect of sports training or physical body training and everybody is aware of their effects on the body’s muscles and tendons Singh S.K and Firdous (2014), Singh S.K, & Tuteja (2013),.

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