

EFFECT OF CORE EXERCISES AND WEIGHT TRAINING PROGRAMME ON THE BASIS OF UPPER BODY STRENGTH, ENDURANCE AND POWER OF STATE LEVEL MALE BOXERS

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ABSTRACT

The purpose of this study was to determine whether eight weeks Core Exercises and Weight Training Programme (CEWTP) could improve the Upper Body Muscular Strength, Endurance and Power of state level boxing players. To achieve this purpose 40 state level Boxers belonging to 16 to 19 years age group were selected. These players were divided into two equal groups viz. the Experimental Group (Core Exercises and Weight Training Programme Group, N=20) and the Controlled Group (N=20). The CEWTP Group was provided training for 8 weeks, 6 days a week, every day for 4 hours (morning 2 hours and evening 2 hours). The data were collected before and after training for both groups. The data were analyzed by using One Way ANCOVA. The result of the study showed that the Core Exercises and Weight Training Programme (CEWTP) has significantly improved the Upper body muscular Strength, Endurance and Power of the boxers of the Experimental Group. The study concluded that the Core Exercises and Weight Training Programme designed by the researcher is found effective for the promotion of Upper body muscular Strength, Endurance and Power of male boxers.

Keywords: *Upper Body Muscular Strength & Endurance, Power, Weight Training Programme.*

Introduction

Boxing is a combat sport that requires the unique combination of Upper Body Muscular Strength and Endurance as well as Power. Upper Body Strength is the ability of body to exert a maximum force against an object external to the body in one maximum effort of the upper body muscles. Upper body strength is important to have because the upper body controls the ability to perform effectively in the game of boxing. Upper body strength is the ability to push, pull and press with the arms, shoulders, back and chest in multiple directions while having full control of the range of motions. It can be typically build up with core exercises. Whereas Power is the ability or capacity to do something or act in particular way. Power in boxing is a crucial component for any fighter in training.

In boxing through core exercises we can train the muscles in pelvis, lower back, hips and abdomen to work in harmony. Strong and stable Core Muscles are very important in the game of boxing. At the basic stage of learning, sports training of 13-14 years old boxers should maintain the interest in a chosen type sports activity with regard to motivation. This predetermines the necessity of searching for new approaches to the sports training of boxers, finding external and latent properties, abilities and capacities of the organism to achieve future goals in sports. (Lyudmila.D.et al 2017)

Further it has been also noticed that there is a positive impact of boxing training intervention on general and specific physical fitness variables. (Said El-Asheker 2018)

In the present study the researcher has taken the cognizance of two important components of physical fitness viz. – Upper Body Muscular Strength and Endurance and Power as both are the basic requirements in the game of boxing & designed a Core Exercises and Weight Training Programme (CEWTP) for the promotion of the said components.

Materials and Methods

• Subjects and Variables

In this Study 40 male Boxers of state level belonging to Trimurti Public School, Ahmednagar were selected randomly. The selected subjects were assigned into two groups viz. the Specific Training Group (N=20) and the Controlled Group (N=20). All subjects were instructed to refrain from participation in other form of training during the testing and training period that might improve their Upper Body Muscular Strength and Endurance and Power. The criterion of this study is Core Exercises and Weight Training Programme (CEWTP). The training was imparted for a period of eight weeks, six days a week and for 96 sessions of two hours each (192 hours). The Pre Test and Post Tests were conducted for data collection.

• Protocol

The designed protocol of Core Exercises and Weight Training Programme (CEWTP) consists of six days in a week, 4 hours in a day (i.e. Morning 2 hours and evening 2 hours) for period of eight weeks.

The Training Programme was divided in three periods viz. Preparatory Period (2 weeks), Competition Period (4 weeks) and Transition Period (2 weeks). The Core Exercises and Weight Training Programme (CEWTP) for the improvement of Upper Body Muscular Strength and Endurance and Power. The CEWTP includes various exercises viz. –Half squat, bench press, heel raise, military press, dumbbell press, pike sit ups with medicine ball, the boxing footwork, high knees, alternate leg lift, bounding, skipping, kneeling as well as selected exercises of weight training. The intensity of exercises was increased in every week as well as by taking into consideration the various periods (phases) as mentioned above.

The Upper Body Muscular Strength and Endurance and Power was measured by using standardized tests viz. Pull ups Test and Standing Broad Jump Test, respectively. The tests were conducted for both the group before and after the Training Programme.

• Statistical Technique

The data collected through Pre Test and Post Test before and after eight weeks Core Exercises and Weight Training Programme Program were analyzed with the help of standard statistical technique viz. One Way ANCOVA.

Results

Result on Upper Body Muscular Strength and Endurance

The data were analyzed by following the treatment wise comparison of adjusted mean scores of Upper Body Muscular Strength and Endurance by taking Pre-Speed as covariate when measured by Pull Ups Test.

The Adjusted Mean Scores of Upper Body Muscular Strength and Endurance due to Core Exercises and Weight Training Programme, as obtained from ANCOVA test, revealed that –

Table 1: Summary of One Way ANCOVA of Speedby taking Pre-Upper Body Muscular Strength and Endurance as Covariate

Source of Variance	df	SSy.x	MSSy.x	Fy.x	Remark
Treatment	1	661.02	661.02	38.23	p<0.01
Error	37	639.77	17.29		
Total	39				

From Table 1 it can be seen that there is significant difference between mean score of Upper Body Muscular Strength and Endurance of State Level Male Boxers of the Core Exercises and Weight Training Programme Group and the Controlled Group by taking Pre- Upper Body Muscular Strength and Endurance as a Covariate ($F_{y,x}=38.23$, df 1/37, $p<0.01$). Thus, the overall performance of adjusted Mean Scores of Upper Body Muscular Strength and Endurance of the Core Exercises and Weight Training Programme Group which is 21.76 and the Controlled Group is 13.09 are not equal. The same results also presented in figure 1.

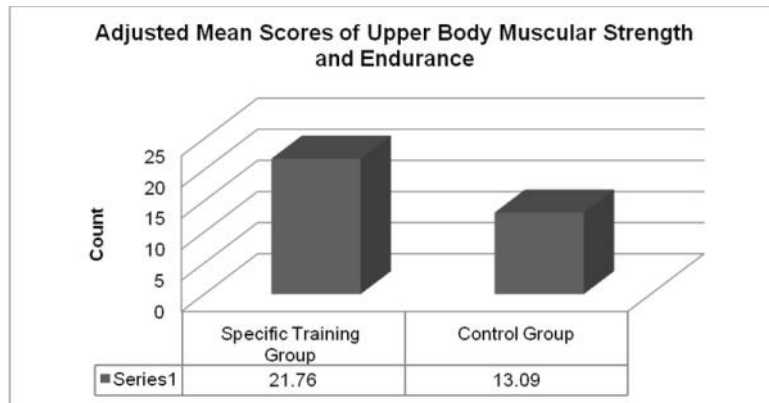


Figure 1: Comparison of Adjusted Mean Scores of Upper Body Muscular Strength and Endurance between Core Exercises and Weight Training Programme Group and the Controlled Group

The above results help to interpret that the Core Exercises and Weight Training Programme Module is useful in developing Upper Body Muscular Strength and Endurance of State Level Male Boxers significantly when measured by Pull Ups Test.

Result on Power

The data were analyzed by following the treatment wise comparison of adjusted mean scores of Power by taking Pre-Speed as covariate when measured by Standing Broad Jump Test.

The Adjusted Mean Scores of Power due to Core Exercises and Weight Training Programme, as obtained from ANCOVA test, revealed that –

Table 2: Summary of One Way ANCOVA of Speed by taking Pre-Power as Covariate

Source of Variance	df	SSy.x	MSSy.x	Fy.x	Remark
Treatment	1	1946.50	1946.50	165.08	p<0.01
Error	37	436.27	11.79		
Total	39				

From Table 2 it can be seen that there is significant difference between mean score of Power of State Level Male Boxers of the Core Exercises and Weight Training Programme Group and The Controlled Group by taking Pre-Power as a Covariate ($F_{y.x}=165.08$, $df\ 1/37$, $p<0.01$). Thus, the overall performance of adjusted Mean Scores of Power of the Core Exercises and Weight Training Programme Group which is 179.83 and the Controlled Group is 164.62 were not equal. The same results are presented in figure 2.

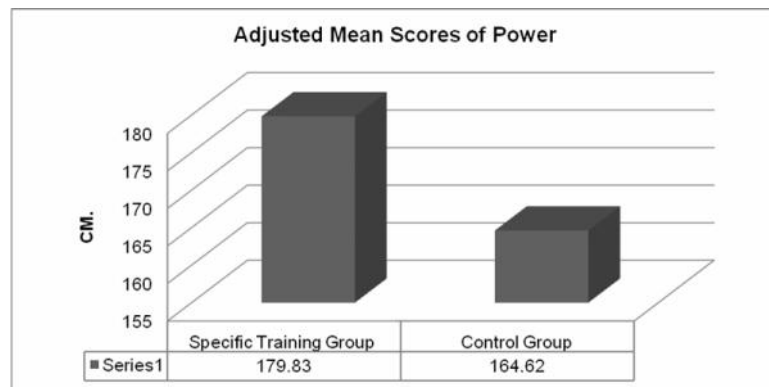


Figure 2: Comparison of Adjusted Mean Scores of Power between Core Exercises and Weight Training Programme Group and the Controlled Group

The above results help to interpret that the Core Exercises and Weight Training Programme Module is useful in developing Power of State Level Male Boxers significantly when measured by Standing Broad Jump Test.

Discussion on Findings

The aim of this research was to investigate the effect of eight weeks Core Exercises and Weight Training Programme on Upper Body Muscular Strength and Endurance and Power of state level boxers. In the present study the improvement was noticed in the experimental group for both the variables. These findings are in accordance with the earlier similar research studies conducted by McGill et al (2010), Hristovski R. et al (2006), Musulin et.al (2002), Khanna G.L et al (2006), Katic R et al (2006), SAED El-Asher (2018) and Lyudmila D.Nazareko et al. Thus the study contributes to the exiting knowledge pertaining to the training of players in the game of boxing.

Conclusion

It is concluded that the Core Exercises and Weight Training Programme designed by the researcher is significantly contributing to the improvement of Upper Body Muscular Strength and Endurance and Power of Male state level boxers.

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