

INTERVENTION OF CONCURRENT WITH SKILL TRAINING ON SKILL VARIABLES OF MEN HANDBALL PLAYERS

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ABSTRACT

To achieve these study thirty male handball players were selected from the Ramakrishna Mission Vivekananda Educational and Research Institute, Faculty of General and Adapted Physical Education & Yoga, in Coimbatore, Tamil Nadu. Their age ranged between 18 to 25 years. These subjects were split into two groups: Group-I (CWSTG), consisting of fifteen players, underwent concurrent with skill training, and Group-II (CG), fifteen players, served as the control group. The training for a duration of eight weeks. The selected skill tests were dribbling and shooting, assessed using the Zinn Hand Ball test (1980). Pre and post-test data were collected and analyzed using the dependent 't' test, with a confidence level set at 0.05. The findings of the study revealed significant improvements in dribbling and shooting skills following the intervention of concurrent with skill training. The control group did not exhibit any notable enhancements in the selected criterion variables among male handball players.

Keywords: Concurrent With Skill Training, Dribbling And Shooting.

I. INTRODUCTION

The very purpose of the training program is to aid in the development of acceptable levels of health – and health related physical fitness and promote in acquisition of basic movement skills. To achieve these things, training should have some basic principles. Of these the most basic principle of training is overload. Most physiological systems can adapt to functional demands that exceed the ones encountered in normal daily life. Training often systematically exposes the selected physiologic systems to intensities of work or function that exceed those to which the system is already adapted. To avoid excessive overload physiologic systems cannot adapt to stresses to extreme consistency and they refer to most physiologic systems requiring exposure to overloading activities three times a week or more. The required frequency of training however depends on the season, the athlete, activity and the specific component of fitness. There is no substitute for consistency in a training program. The major aim of sports training is to achieve higher level performance. The sports performance depends largely on physical fitness and motor fitness (**Hardayal Singh, 1991**)

Performing aerobic and strength training concurrently is an integrative part of physical training aimed at improving both athletic performance and health. The recommendation to perform both aerobic and strength training is important because these activities to some extent induce distinct adaptations and health benefits (**Li et al., 2018**) Aerobic training promotes increased aerobic capacity (i.e. central adaptations) and metabolic changes in skeletal muscle, such as increased mitochondrial density and capillarisation. Conversely, regular strength training results in muscle hypertrophy and increased strength and power, but may also improve bone mineral density (**Hawley JA. (2002)** Concurrent training, which combines strength and endurance modalities, Is a widely recognized approach to enhance aerobic capacity and muscle strength among diverse age groups. However, distinct biological adaptations arise from strength and endurance training: strength training can decrease, while endurance training tends to increase muscle mitochondrial density and quantity. (**Markov et al., 2023**) Concurrent training is defined as the combination of resistance and endurance training in a systematic program to maximize all aspects of physical performance. Resistance training is a form of physical activity that is designed to improve muscular fitness by exercising a muscle or a muscle group against external resistance. Resistance training is any exercise that causes the muscles to contract against an external resistance with the expectation to increase strength, power, hypertrophy, and/or endurance. The external resistance can

be dumbbells, exercise tubing, our own body weight or any other objects. Aerobic exercise encompasses any physical activity that induces sweating, increases individuals breathing rate, and elevates the heart rate above its resting level. This type of exercise enhances the strength and endurance of individual’s heart and lungs, improving the efficiency with which is our cardiovascular system transports oxygen throughout the body. Aerobic activities engage large muscle groups and typically involve rhythmic movements that can be sustained for at least 10 minutes without interruption.

Strength and endurance training regimes represent and induce distinctly different adaptive responses when performed individually. Typically, strengthtraining programmes involve large muscle group activation of high-resistance, lowrepetition exercises to increase the force output ability of skeletal muscle (Sale et al., 1990). In contrast, endurance-training programmes utilize low-resistance, high-repetition exercises such as running or cycling to increase maximum O2 uptake (VO2 max). Accordingly, the adaptive responses in skeletal muscle to strength and endurance training are different and sometimes opposite (Tanaka and Swenson 1998). Many competitive endurance athletes incorporate resistance training into their training in a hope to improve endurance performance. However, as previously mentioned adaptations to exercise are generally considered to be specific to the training type of stimulus (Nelson et al., 1990). Although, many adaptations are specific to the type of training, some changes that occur with resistance training could influence endurance performance, which include: muscle fibre transformations and muscle fibre (type-I) hypertrophy, which may alter fibre recruitment patterns and help prevent muscle fatigue, as less motor units need to be activated for the same work load (Roberts et al., 2012).

Handball is complex sports coordination, endurance, strength, and an ability to tactically plan and recognize strategy in the game. The game handball composed of repeated sprint of players for fast breaks and quick counter attacks which require great aerobic capacity

II. METHODOLOGY

To achieve these study thirty male handball players were selected from the Ramakrishna Mission Vivekananda Educational and Research Institute, Faculty of General and Adapted Physical Education & Yoga, in Coimbatore, Tamil Nadu. Their age ranged between 18 to 25 years. These subjects were split into two groups: Group-I (CWSTG), consisting of fifteen players, underwent concurrent with skill training, and Group-II (CG), fifteen players, served as the control group. The training for a duration of eight weeks. The selected skill tests were dribbling and shooting, assessed using the Zinn Hand Ball test (1980). Pre and post-test data were collected and analyzed using the dependent ‘t’ test, with a confidence level set at 0.05.

Training Program

Concurrent Training: Morning session 1 Hr/day -5 days up to eight weeks

Skill training: Evening session 1/Hr/day -5 days up to eight weeks

III. RESULTS

Table 1: Computation With ‘T’ Test Of Dribbling On Experimental And Control Group On Men Handball Players

Variable	Group	Test	Mean	S.D	D.M	σ DM	‘t’
Dribbling	Experimental	Pre Test	35.2	3.14	5.86	0.41	14.29*
		Post Test	41.06	2.89			
	Control Group	Pre Test	34.93	3.12	0.47	0.29	
		Post Test	34.46	3.24			

*Significant

Level of significant was fixed at 0.05 with df 14 Table value 2.14

Table-I Indicates that experimental and control group of dribbling on mean and standard deviation of men handball players. The experimental group pre and post test mean values are 35.2 and 41.06 and standard deviation values are 3.14 and 2.89 and obtained ‘t’ value is 14.29 which is greater than table value 2.14 with df

14. And control group mean values are 34.93 and 34.46 and standard deviation 3.12 and 3.24 and obtained 't' value 1.62 which is lesser than table value 2.14. The finding of the study indicates that experimental group significant improvement on dribbling due to concurrent training with skill training on college men handball ball players.

Figure-1 The Mean Values Are Experimental And Control Groups Of Pre And Post Test Of Dribbling On Men Handball Players.

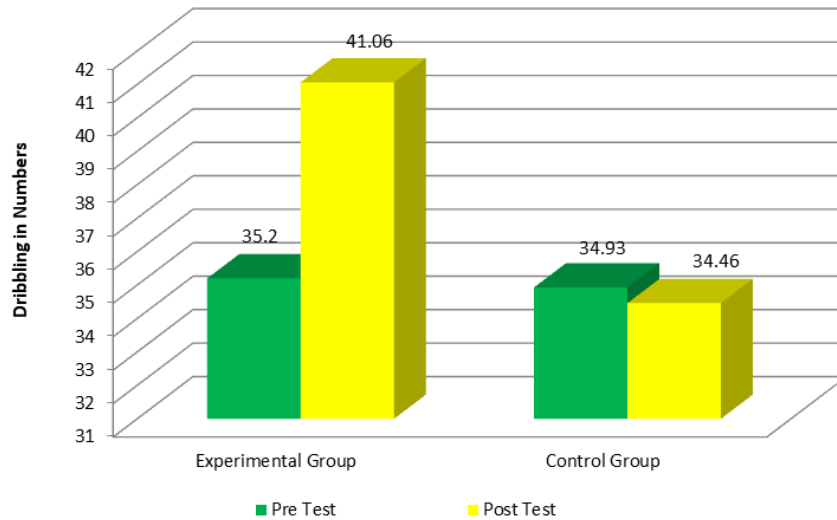


Figure 1: Clearly indicate that experimental group compared with control group with significant improvement on dribbling of men handball players.

Table 2: Computation With 'T' Test Of Shooting On Experimental And Control Group On Men Handball Players

Variable	Group	Test	Mean	S.D	D.M	σDM	't'
Shooting	Experimental	Pre Test	5.53	1.42	3.37	0.30	11.23*
		Post Test	8.90	0.91			
	Control Group	Pre Test	5.43	1.04	0.10	0.13	0.72
		Post Test	5.33	1.17			

*Significant

Level of significant was fixed at 0.05 with df 14 Table value 2.14

Table-II Indicates that experimental and control group of shooting on mean and standard deviation of men handball players. The experimental group pre and post test mean values are 5.53 and 8.90 and standard deviation values are 1.42 and 0.91 and obtained 't' value is 11.23 which is greater than table value 2.14 with df 14. And control group mean values are 5.43 and 5.33 and standard deviation 1.04 and 1.17 and obtained 't' value 0.72 which is lesser than table value 2.14. The finding of the study indicates that experimental group significant improvement on shooting due to concurrent training with skill training on college men handball ball players.

Figure-2 The Mean Values Are Experimental And Control Groups Of Pre And Post Test Of Shooting On Men Handball Players

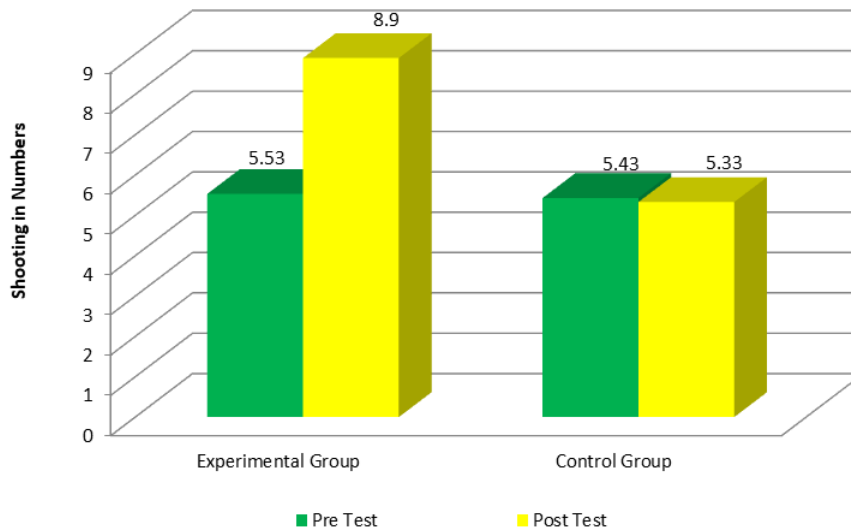


Figure 2: Clearly indicate that experimental group compared with control group with significant improvement on shooting of men handball players.

IV. DISCUSSION ON FINDINGS

The results of the study indicates that significant improvement of the intervention of concurrent with skill training on skills variables of dribbling, shooting on men handball players. Combined And Individualized Effect Of Cross Training And Game Specific Exercises On Selected Physical Physiological Anthropometrical And Performance Variables Of Men University Hand Ball Players In Tamil Nadu, the skill variables improved (**Sridhar Thangadurai J. and Robert Alexandar C.(2015)**). Impact of concurrent training versus aerobic or resistance training on cardiorespiratory fitness and muscular strength in middle-aged to older adults are improved (**Khalafi et.al.,2022**) and) Concurrent aerobic plus resistance exercise versus aerobic exercise alone to improve health outcomes. (**García-Hermoso et.al., 2022**)

The major finding of this study showed that there was significant difference between the two group performance level in those variables (cardiovascular endurance, muscular strength, jumping shoot, accuracy and dribbling) (**Biniyam Gebreabe Abebe et.al 2021**).

V. CONCLUSION

1. It is concluded that experimental group significant improvement of dribbling and shooting on men handball players due to the concurrent with skill training.
2. It is concluded that control did not show that any significant changes in skill variables of dribbling and shooting men handball players.

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