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EFFECT OF EIGHT WEEKS S.A.Q. TRAINING PROGRAMME ON SELECTED PHYSICAL FITNESS VARIABLES

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Abstract:-Objective: The purpose of the study was to investigate the effect of eight weeks S.A.Q. training programme on selected physical fitness variables. Method: For the purpose of study the subjects were 30 male cricket players from Bilaspur. The subjects were selected randomly from the group of students attending the regular cricket match practice sessions at GGU ground, Bilaspur. The researcher had been selected the following variables for the present study: physical fitness Variables: i.e. Speed, agility, Reaction Time, Explosive Strength, and Flexibility. The data was collected before and after eight weeks of training. The participant were tested on 50-metre sprint(speed), 4*10 meter shuttle run (agility), scale drop test (reaction time), standing broad jump (explosive strength) and sit and reach test (flexibility). The data was analyzed by applying paired t-test. The level of significance was set at 0.05. Result: The findings of the present study have indicated that S.A.Q. drills training of eight weeks have significant effect on selected physical fitness variables i.e., speed, agility, reaction time, explosive strength, and flexibility of cricket players. Hence the hypothesis earlier set that S.A.Q. drills training programme would have been significant effect on selected physical fitness variables in light of the same the hypothesis is accepted. Conclusion: Significant effect of S.A.Q. training was found on Reaction time, explosive strength and Flexibility. Significant effect of S.A.Q. training was found on Speed agility, Quickness.

Keywords:Speed, Agility, Quickness, Physical Fitness variables.

INTRODUCTION:

Speed, agility, and quickness (S.A.Q.) training has become a popular way to train athletes. Whether they are university players on a soccer field or professional in a training camp, or as they can all benefit from speed, agility, and quickness training. This method has been around for several years, but it is not used by all primarily due to a lack of education regarding the drills. SAQ training improves the physical fitness and performance parameters because of either better recruitment or neural adaptations. In a previous study of SAQ training, the authors speculated that improvements were result of enhanced motor unit recruitment patterns.

Speed, agility, and quickness training may be used to increase speed or strength, or the ability to exert maximal force during high-speed movements. Some benefits of speed, agility, and quickness training include increases in reaction, flexibility, muscular power in all multi planar movements; brain signal efficiency; kin-aesthetic. SAQ training can cover the complete area of training intensity, from low to high intensity. All individual will come into a training programme at a different level; thus training intensity must coincide with the individual's abilities. Low intensity speed, agility, and quickness drills can be used by everyone for different applications. SAQ drills can also be used to prepare the athlete for warm-up, conditioning, or in physical fitness programme. Higher intensity drills require a significant level of preparation. A simple approach to safe participation and increased effectiveness is to start a concurrent strength-training program when starting speed, agility, and quickness training (Mehrotra A. et.al 2011). Reaction and explosive strength is the integral part of speed, agility (Goran Sporis, et.al.2011). Athletic performance in soccer is a function of aerobic fitness, anaerobic fitness, speed, muscular strength, muscular power, and agility (Bangsbo, Mohr, Poulsen, Perez-Gomez, & Krstrup, 2006; Stolen, Charmari, Castagna, & Wisloff, 2005). During a match a player frequently performs activities that require rapid development of force, such as

sprinting or quickly changing direction (Bangsbo, 1996). Consequently, the SAQ (speed, agility and quickness) method has become dominant in soccer training (Pearson, 2001). High-speed actions in soccer have been categorized as requiring acceleration, maximal speed or agility skills (Gambetta, 1996) whilst Chapman et al. (2008) described speed in soccer as consisting of running speed, reaction speed and acceleration speed during the first steps (referred to as quickness). Both of these categorizations imply that the SAQ (speed, agility and quickness) training method should be a useful component of fitness training in soccer (Pearson, 2001).

OBJECTIVE OF THE STUDY

The purpose of the study was to find out the “Effect of eight weeks S.A.Q. Drills training program me on selected physical fitness variables”. It was hypothesized that there would have been a significant effect of Eight weeks S.A.Q. Drills training programme on selected physical fitness variables.

PROCEDURE AND METHODOLOGY

For the present study the subjects were 30 male cricket players from Guru Ghasidas University, Bilaspur. The subjects were selected randomly from the group of students attending the regular cricket practice at GGU ground at Bilaspur. The age group was from 20-25 years. For the present study the researcher had been selected the physical fitness Variables: i.e. Speed, Agility, Quickness, Explosive strength, Reaction time, and Flexibility. For the present study pre test – post test randomized group design which consists of experimental group was used. The data was collected before and after eight weeks of training. The data was analyzed by applying paired T-test Technique to find out the effect of S.A.Q. drills training program me on selected physical fitness variables. The level of significance was set at 0.05.

RESULTS AND DISCUSSIONS OF THE FINDINGS

The pre test and post test for Speed, Agility, Quickness, Explosive strength, Reaction time, and Flexibility were measured before and after eight weeks of training of experimental group. The data was analyzed by compare of mean, mean difference and standard deviation and t-value are highlighted in the table 1.

The SAQ group has significantly greater improvements in maximal isokinetic concentric strength for both the flexor and extensor muscles. SAQ training across all individuals elements are probably attributable to the specificity of strength or speed.

The specificity of exercises conducted in SAQ training program and fact that this group received drills to improvement mechanics might have resulted in the development of more functional and relevant motor programs that control the complex intramuscular coordination of associated movements like sprinting jumping etc.

SAQ drills included various plyo drills. Use of plyo drills has been advocated for several years as a means of improving performance in sports activities in which lower body power player a key role in success. During plyometric movements, the muscles undergo a very rapid of switch from the eccentric phase to the concentric phase. This stretch shortening cycle decrease the time of the amortization phase that in turn allows for greater them moral power production the muscles stored elastic energy and stretch reflex response are essentially exploited in this manner, permitting more work to be done by the muscle during concentric phase of movement."

Positive change in experimental group may be due to the fact that the recovery patterns in given exercise programme. Traditionally three work outs per week were found to be adequate for recovery. Rest periods between sets, will determine how much ATP/ CP energy source is resynthesized and how high lactic acid concentration become in the muscles and blood. Lactate contributed to muscle fatigue, loss of coordination and decrease force production. By altering rest period's influences metabolic hormonal and cardiovascular responses to an acute bout of exercise and each subsequent set are affected. Careful manipulation of rest periods was key in the prescription process

Table-1: Mean, Standard Deviation, Mean Difference, and t-value of Experimental group.

Physical Fitness Variable	Test	Mean	SD	Mean Difference	t-value
Speed	Pre	7.693	.412	-0.119	4.477*
	Post	7.574	.380		
Agility	Pre	9.972	.185	0.098	4.226*
	Post	9.874	.159		
Reaction time	Pre	2.003	.122	-0.018	2.557*
	Post	1.946	.140		
Explosive Strength	Pre	2.206	.115	0.071	-3.929*
	Post	2.278	.112		
Flexibility	Pre	31.937	2.082	3.262	-6.254*
	Post	35.200	3.075		

*significant at 0.05 level of confidence

Table 1 shows the mean, SD, mean difference and t-values of experimental group. In this analysis mean value of agility, explosive strength, and flexibility were improved in the post test. This increase indicates the effect of SAQ training, where as the speed and reaction time was decreased in the post test. This decrease also shows the effect of training. This increase and decrease indicates the higher efficiency of physical fitness parameters. It was observed by the paired t-test, that finding of experimental group improved significantly, in all physical fitness parameters. Because of all the t-value is the above the table value of 2.12 and were significant at 0.05 level of confidence.

CONCLUSIONS

Within the research sample and the available possibilities, we can conclude that SAQ exercises have positive effect on the selected physical fitness variables (speed, agility, reaction time, explosive strength, and flexibility) under research. This effect may be the result of participating in a SAQ training programme regularly, which declares that SAQ exercises induce changes in various physiological and biochemical parameters. In view of the fact that physiological and biochemical statistics on GGU, students are insufficient, the recent study might supply useful data help to promote SAQ training for cricketers. The study of the physical fitness demands through sport activity helps in designing training programmes on a biological foundation. SAQ variables are considerable indicators of changes in physical fitness variables as a result of training. In conclusion, detecting the effects of training on physical fitness aspects adding new dimensions that can assist in evaluating, directing and developing athletic training programmes.

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