



EFFECT OF SPECIFIC PREPARATORY TRAINING PROGRAMME ON SPEED AMONG COLLEGE STUDENTS

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Abstract:

The purpose of the study was to investigate the effect of specific preparatory training programme on speed among college students. For the present study the 30 male college students from Mannaniya College of Arts and Science, Thiruvananthapuram, Kerala were selected at random and their age ranged from 18 to 25 years. For the present study pre test - post test random group design which consists of control group and experimental group was used. The subjects were randomly assigned to two equal groups of fifteen each. Group 'A' underwent specific preparatory training programme only, group 'B' have not underwent any training. The data was collected before and after twelve weeks of training. The data was analyzed by applying Analysis of Co-Variance (ANCOVA). The level of significance was set at 0.05. It was observed that the twelve weeks of specific preparatory training have significantly improved the speed of college students.

Key Words: Specific Preparatory Training, Speed, College Students.

Introduction:

Sports training is a programme of exercise designed to improve the skills and increase the energy capacities of an athlete for a particular event. Sports activities consist of motor movement and action and their success depends to a great extent on how correctly they are performed. Techniques of training and improvement of tactical efficiency play a vital role in a training process (Fox, 1984). Bompa (1999) suggested that the physiological goal of training is to improve body function and optimize athletic performance. Training is primarily a systematic athletic activity of long duration, which is progressively and individually graded. Human physiological functions are modeled to meet demanding tasks.

Physical training refers to the processes used in order to develop the components of physical fitness, as for example, how to improve aerobic endurance, to strength and relax muscles, to increase arm and shoulder strength, to relate exercises and programmes to the specific requirements or individual sports. On the other hand, sports training aims at achieving high performance in sports competition. In order to achieve high performance, sports training is done in a planned and systematic manner. Sports training is based on systematic facts and principles. A system most suitable for achieving high performance has to be first made on the basis of the sports training which is planned. It is always assessed, planned, organised and implemented by a coach or a sports teacher or some other person. The sports training aims at finding out hidden reserves and makes the sportsperson aware of it. It also aims at further development of these reserves. The sportspersons control their day to day routine in such a manner that they are able to do training once or twice a day with high effect. Sports training is basically an educational process. So, it strives to develop all the aspects of personality. It is a continuous process of perfection, improvement and creation of means and methods of improving sports performance and factors of performance (Singh, 1991).

The concept of training is reflected in words or terms, which are given to separate components of training (technique training, strength training) or separate methods of procedures of doing physical exercise (interval training and circuit training). Training means are various physical exercises and their objects, methods and procedures, which are used for the improvement, maintenance and recovery of performance capacity and performance readiness. Specific preparatory training programme phase consists of the general preparation and specific preparation. Usually which can be subdivided into three different phases. One should always remember that this is a base creation phase with the objective to attain the previous training state, and the longest period of periodization must be devoted towards the preparatory period. The performance depends on preparatory period (Dick, 1997).

Periodization:

The roots of periodization come from Hans Selye's model, known as the General adaptation syndrome. The GAS describes three basic stages of response to stress: (a) the Alarm stage, involving the initial shock of the stimulus on the system, (b) the Resistance stage, involving the adaptation to the stimulus by the system, and (c) the Exhaustion stage, in that repairs are inadequate, and a decrease in system function results. The foundation of periodic training is keeping one's body in the resistance stage without ever going into the exhaustion stage. By adhering to cyclic training the body is given adequate time to recover from significant

stress before additional training is undertaken. The response to a new stress is to first respond poorly and the response drops off. For example when the body is first exposed to sun a sunburn might develop. During the resistance stage adaptation improves the response to a higher level, called super compensation, than the previous equilibrium. The example would be that a suntan develops. The exhaustion stage is a continuation of the stimulus at too high a level and the increase gained from adaptation is now offset and all gains are lost. The example would be that wrinkles, spots, or even skin cancer develop. The goal in sports periodization is to reduce the stress at the point where the resistance stage ends so the body has time to recover. In this way the exhaustion stage does not reduce the gains achieved, the body can recover and remain above the original equilibrium point. The next cycle of increased stimulus now improves the response further and the equilibrium point continues to rise after each cycle.

Review of Literature:

Avinash & Vivek (2016) speed is easily defined as the rate of motion or the velocity of the body, or any one of its parts. Speed as the rate at which a person can propel his body or part of his body through space. First objective of the study was to characterize the level of Speed among Kabaddi players in relation to level of achievement. (2) Second objective of the study was to compare the Speed among Kabaddi players in relation to level of achievement. 90 male Kabaddi players, 30 from each level of achievement i.e. National, State and District were selected as subjects in 2014 from different clubs in Indore. To assess the Speed of the subjects 30 meters Sprint was used to measure the Speed. Mean and SD of National (4.497333 ± 1.156372), State (4.527667 ± 0.0771780), District (4.606667 ± 1.328295) level Kabaddi Players in relation to Speed and obtained F-ratio was 7.755, which was higher value than the value 3.09, required for F ratio to be significant at .05 level with (2, 87) degree of freedom. (1) National Level Players were having greater Speed (4.49 sec.) in comparison to State level (4.52 sec.) and Districts level (4.62sec.). (2) Significant difference was found in National, State and District Kabaddi Players in relation to Speed.

Lloria et al. (2016) modern coaches experience a drastic reduction of the available training time with an increasingly large number of competitions during the competitive season. Thus, they must choose wisely the most efficient methods to improve the physical fitness of their players during the preseason. Among all the methods, this study compared the effects of plyometric training (PT), sprint interval training (SIT), and small-sided games (SSGs) on the performance of recreationally trained soccer players. Seventy-three participants were randomly assigned in one of the three experimental groups (i.e., PT [n = 23], SIT [n = 26] or SSGs [n = 24]) and completed two sessions per week for a total of 3 weeks. Meanwhile, the whole group maintained their habitual soccer-specific training program who do not interfere in the preparation of the season. Repeated sprint ability (RSA), maximal aerobic speed (MAS), and a 30-m sprint were assessed at baseline (PRE) and post-training (POST). Performance in SSGs decreased for the average speed from 0 to 10 m (V_{0-10m} : -0.84 km h^{-1} , $-4 \pm 5\%$, $p < 0.001$), the maximal distance (D_{max}) covered in the 30-s RSA test (-3.65 m , $-3 \pm 6\%$, $p < 0.01$) and MAS (-0.52 km h^{-1} , $-3 \pm 6\%$, $p < 0.01$). PT increased the mean distance (D_{mean}) covered in the 30-s RSA test ($+5.98 \text{ m}$, $5 \pm 4\%$, $p < 0.001$) and MAS ($+0.58 \text{ km h}^{-1}$, $7 \pm 5\%$, $p < 0.01$) while an improvement of all parameters but the maximal sprint speed reached during the 30-m trip (V_{max}) was found in the SIT group (V_{0-10m} : $+1.462 \text{ km h}^{-1}$, $8 \pm 5\%$, $p < 0.001$; D_{max} : $+7.89 \text{ m}$, $6 \pm 5\%$, $p < 0.001$; D_{mean} : $+8.69 \text{ m}$, $7 \pm 5\%$, $p < 0.001$ and MAS: $+1.74 \text{ km h}^{-1}$, $12 \pm 8\%$, $p < 0.001$). All SSG POST values were significantly lower than PT and SIT ($p < 0.01$). D_{mean} and MAS in POST were also significantly higher in SIT than in the PT group ($p < 0.001$). This study suggests that both PT and SIT could be a better alternative to SSGs to boost performances during preseason. Moreover, SIT seems to produce higher improvements in physical performances than PT.

Srinivasa (2016) studied the effect of training on improvement of the speed and explosive power of students. Speed is the capacity to travel or move very quickly. It means the whole body moving at maximum running speed, as in the sprinter. Speed is a scalar quantity that refers to how fast an object is moving. Speed can be thought of as the rate at which an object covers the distance. Explosive strength refers to the ability to develop max force in minimal time without the use of the plyometric stretch-reflex. The main purpose of the study was "the effect of training on improvement of Speed and explosive strength ability". Then the data were analyzed with reference to the objectives and hypothesis by using independent t-test to find out the improvement of speed and explosive strength through the training by using SPSS 15.0 statistical software and the results obtained thereby have been interpreted.

Methodology:

The purpose of the study was to investigate the effect of specific preparatory training programme on speed among college students. For the present study the 30 male college students from Mannaniya College of Arts and Science, Thiruvananthapuram, Kerala were selected at random and their age ranged from 18 to 25 years. For the present study pre test - post test random group design which consists of control group and experimental group was used. The subjects were randomly assigned to two equal groups of fifteen each. Group 'A' underwent specific preparatory training programme only, group 'B' have not underwent any training. The data was collected before and after twelve weeks of training. The data was analyzed by applying Analysis of Co-Variance (ANCOVA). The level of significance was set at 0.05.

Results:

Table 1: Computation of Mean and Analysis of Covariance of Speed of Experimental and Control Groups

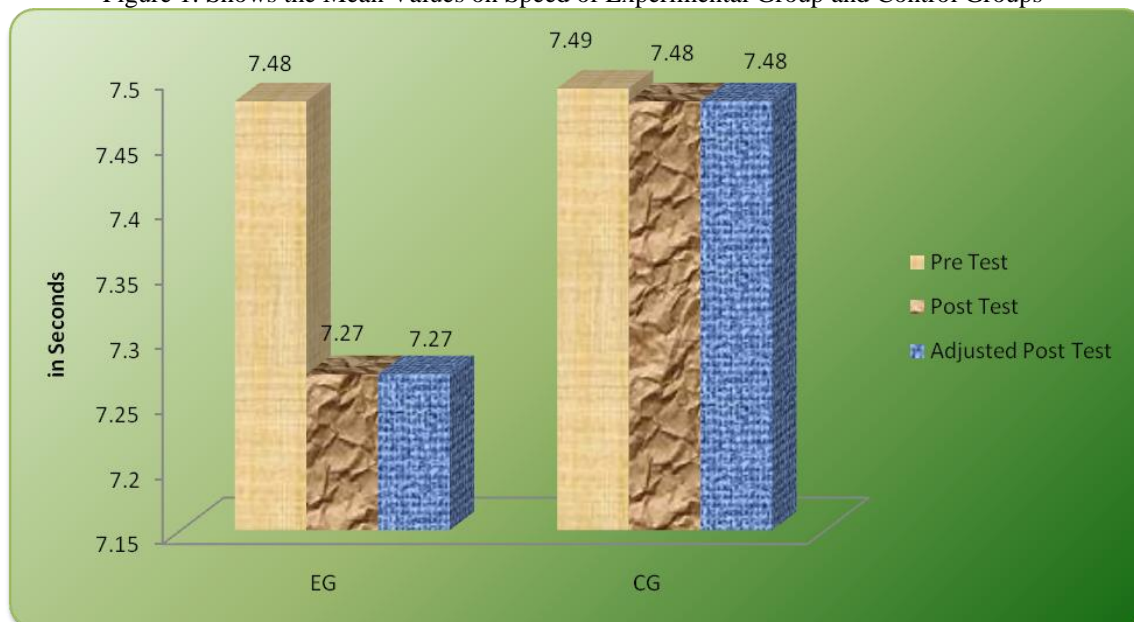
	Experimental Group	Control Group	Source of Variance	Sum of Squares	df	Mean Square	F
Pre Test Mean	7.48	7.49	BG	0.001	1	0.001	0.44
			WG	0.04	28	0.002	
Post Test Mean	7.27	7.48	BG	0.34	1	0.34	133.01*
			WG	0.07	28	0.003	
Adjusted Post Mean	7.27	7.48	BG	0.35	1	0.35	155.63*
			WG	0.06	27	0.002	

* Significant at 0.05 level

Table value for df 1 and 28 was 4.20, 1 and 27 was 4.21

The above table indicates the adjusted mean value of speed of experimental and control groups were 7.27 and 7.48 respectively. The obtained F-ratio of 155.63 for adjusted mean was greater than the table value 4.21 for the degrees of freedom 1 and 27 required for significance at 0.05 level of confidence. The result of the study indicates that there was a significant difference among experimental and control groups on speed. The above table also indicates that both pre and post test means of experimental and control groups differ significantly. The pre, post and adjusted post mean values of speed of both experimental and control groups are graphically represented in the figure 1.

Figure 1: Shows the Mean Values on Speed of Experimental Group and Control Groups



Conclusion:

It was observed that the twelve weeks of specific preparatory training group have significantly improved the speed of college students.

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