



EFFECT OF RESISTANCE TRAINING ON SHOOTING ACCURACY OF ADOLESCENT MALE BASKETBALL PLAYERS

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ABSTRACT

The study was designed to investigate the effect of resistance training on shooting accuracy of adolescent male basketball players. To investigate the study, thirty adolescent male basketball players were randomly selected from National sports school, Coimbatore and their age were ranged between 14 and 17 years. The subjects were randomly assigned to two equal groups (n=15). All the subjects were divided in to two groups with 15 subjects each as experimental and control group. Group-I underwent resistance training for a period of twelve weeks and group-II acted as control who did not participate in any special training other than the regular routine. The skill based variables such as shooting accuracy were selected as dependent variables. Pre and post-test random group design was used for this study. The dependent 't' test was applied to determine the difference between the means of two groups. To find out whether there was any significant difference between the experimental and control groups. To test the level of significant of difference between the means 0.05 level of confidence was fixed. The result of the study shows that, there was a significant improvement takes place on shooting accuracy of adolescent male basketball players due to the effect of twelve weeks of resistance training. And also concluded that, there was a significant difference exists between experimental and control groups in shooting accuracy. The control group did not improve the selected criterion variables.

KEYWORDS: *Resistance Training, Shooting accuracy.*

INTRODUCTION

Today basketball is considered the most popular sport in the world. It is played and watched by more people than any game, extending to more than any game, extending to more than 170 countries around the globe. Dr. James Naismith is known world-wide as the inventor of basketball. The game basketball although needs all the physical qualities to play but some of the important components needed are speed, arm strength, agility, endurance, flexibility, explosive power participate without under strain and fatigue. While fast break one should maintain his balance without falling for which he should bring maintain his centre of gravity between two legs. He should perform the throwing with the flexion of elbow which has lever system acted, so that the balls travel to long distance with max speed. In the game of basketball all the movement are involved like passing, throwing, change of direction, quick turn and sudden stop, jumping and maintain the opponent both offensive and defensive also. All these require rapid movements demanding frequent changes in direction. For one to respond to such situation a player should possess good cardio respiratory power, power, agility, speed. (Abraham) Thus, this study reveals the effect of resistance training on arm strength and shooting accuracy of adolescent male basketball players. To investigate the study, thirty adolescent male basketball players. Resistance training has been shown across the literature to be beneficial to a

variety of athletes. Benefits range from injury prevention, power development and sprint performance amongst others.

RESISTANCE TRAINING

Resistance training programme can improve measures of strength and power in adult. In children and adolescents, it is well-established that training-induced gains in strength and power are indeed possible following participation in a resistance training programme. Resistance training during a training cycle should be structured to allow maximal efficacy and physical improvement. Since young Basketball player are often encouraged to perform static stretching prior to resistance exercise. Resistance training has been used extensively to increase fitness and sport performance. It has been demonstrated to augment maximum strength, power and jumping ability. It is well known that a variety of resistance training programs can stimulate and increase in one repetition maximum strength. It is important to ascertain efficacious method for enhancing fitness performance in children and adolescents (Kraemer (1997)

METHODOLOGY

The purpose of the study was to find out the effect of resistance training. To achieve the purpose of the study, thirty adolescent male basketball players were adolescent male basketball players from National sports school, Coimbatore. The subjects were randomly assigned in to two equal groups namely,



Resistance training group (PTG) (n=15) and Control group (CG) (n=15). A pilot study was conducted to assess the initial capacity of the subjects in order to fix the load. The respective training was given to the experimental group the 3 days per weeks (alternate days) for the training period of twelve weeks. The control group was not given any sort of training except their routine.

DESIGN

To evaluate skill based variable shooting accuracy was field goal speed test in counts. The parameters were measured at baseline and after twelve weeks of resistance training were examined.

TRAINING PROTOCOL

The training programme was conducted for 45 minutes for session in a day, 3 days in a week for a period of twelve

weeks duration. These 45 minutes included 10 minutes warm up, resistance training for 25 minutes and 10 minutes warm down. Every three weeks of training 5% of intensity of load was increased from 65% to 80% of work load. The volume of sports specific prescribed based on the number of sets and repetitions. The equivalent in resistance training is the length of the time each action in total 3 day per weeks (Monday, Wednesday and Friday).

STATISTICAL ANALYSIS

The collected data before and after training period of twelve weeks on the above said variables due to the effect of resistance training was statistically analysed with 't' test to find out the significant improvement between pre and post-test. In all cases the criterion for statistical significance was set at 0.05 level of confidence. (P<0.05)

Table I

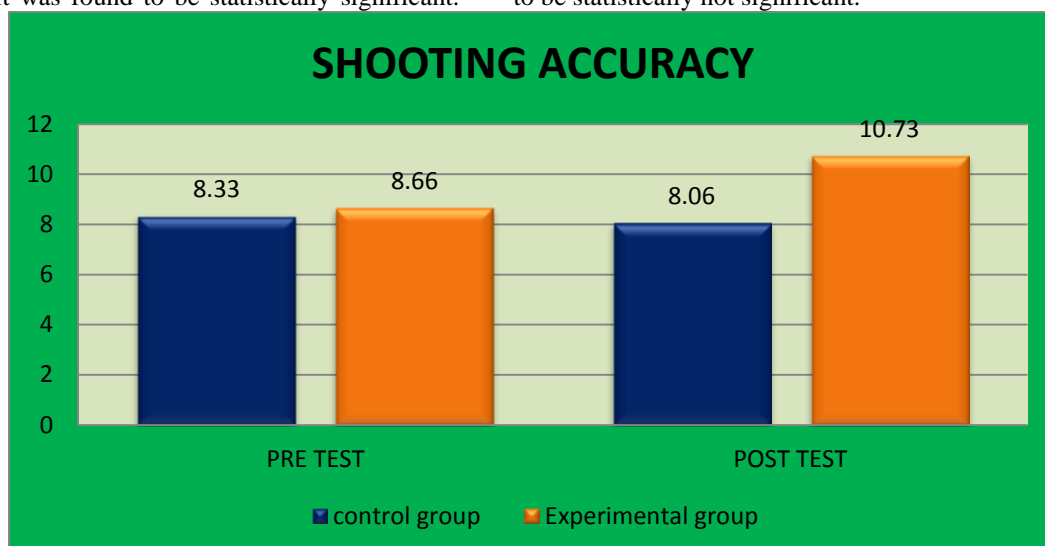
Computation of 'T' Ratio on experimental group and Control group selected skill based variables of adolescent male badminton players.

Group	Variables		Mean	N	Std. Deviation	Std. Error Mean	t ratio
Experimental group	Shooting accuracy	Pre test	8.66	15	1.23	0.33	6.25*
		Post	10.73	15	1.48		
Control group	Shooting accuracy	Pre test	8.33	15	1.39	0.35	0.74
		Post test	8.06	15	1.33		

*Significant level 0.05 level degree of freedom (2.14, 1 and 14)

Table I reveals the computation of mean, standard deviation and 't' ratio on selected skill based variable namely shooting accuracy of experimental group. The obtained 't' ratio on shooting accuracy were 6.25 respectively. The required table value was 2.14 for the degrees of freedom 1 and 14 at the 0.05 level of significance. Since the obtained 't' values were greater than the table value it was found to be statistically significant.

Further the computation of mean, standard deviation and 't' ratio on selected skill based variables namely shooting accuracy of control group. The obtained 't' ratio on short service were 0.74 respectively. The required table value was 2.14 for the degrees of freedom 1 and 14 at the 0.05 level of significance. Since the obtained 't' values were lesser than the table value it was found to be statistically not significant.





DISCUSSION AND FINDINGS

The result of the present showed the effect of resistance training on shooting accuracy variable of adolescent male badminton players. And there was a difference between experimental group and control group. The findings of the present study are in line with investigator referred in this study. shooting accuracy skill is developed due to the resistance training after 12 week training period (**joji varghesea**) 2014 reported that the resistance training was a significant difference among the experimental and control group on shooting performance. (**Freitas 2016**) reported that the effect of two different resistance circuit training was significant changes 3-points shooting accuracy. (**Eduardo 2011**) effect of resistance training increased exclusivity levels and strength levels, which are essential to a better basketball performance, with no extra overload on adolescent boys. investigated done by completely different specialists within the field of sports sciences. Shadow training significantly improved shooting accuracy of school level basketball players. From the result of the present study, it is speculated that the observed changes in shooting accuracy may properly designed resistance training which are suitable for adolescent male basketball players.

CONCLUSION

Based on the findings and within the limitation of the study it is noticed that practice of resistance training helped to improve shooting accuracy of adolescent male basketball players. It was concluded that the significant improvement in the shooting accuracy of adolescent male basketball players due to the influence of resistance training. Further it also concluded that the twelve weeks of resistance training significant improvement in the shooting accuracy of adolescent male basketball players.

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