

Effect of Strength Training on Physical Ability of Secondary School Students in Kalaburagi Town

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Abstract: The key areas to be strengthened to make outstanding sports persons, players to participate at the major international events were speed, endurance, agility etc. For this study the students on the rolls of class 9 of secondary schools of Kalaburagi city of Karnataka form the universe. The study period for data collection was May 2015 to June 2015. To analyse the data, Mean, Standard Deviation and t-test were used. The study found there is no significant effect of strength training on the speed ability of secondary school students in Kalaburagi town and also there is no significant effect of strength training on the agility of secondary school students in Kalaburagi town. The probable reasons were the schedule of three days a week for six eight weeks may not be enough time, the seriousness in the training, ability of trainers and future benefits may not inspire the participants in the training to register the significant impact in the domain of improving speed and agility skills. Hence the investigators suggest that these programs do go hand in hand with academics regularly with the same pace as the policy makers and academicians have the seriousness in academics in schools.

Keywords: Agility, Physical Activities, Secondary Schools, Speed, Strength Training.

INTRODUCTION

It's surprising to see India's performance at the major international multisport event i.e, Summer Olympics held at London in 2012. In this mega event India has participated in just Thirteen sports events out of three hundred two events and managed to bag 6 medals in total. Sports analysts say this Olympics was the most successful Olympics in terms of total medal tally because of this nation's previous record of 3 medals in 2008 Beijing Olympics. Even after about 65 years of independence we are unable to produce world class sports persons, players even to participate and also to compete the world at the highest platforms. Hence we have to introspect seriously the policies and practices adopted in this field. As we know that the key areas to be strengthened to make outstanding sports persons, players to participate at the major international events were speed, endurance, agility etc., Therefore the strength training at all levels preferably from the schooling days should made compulsory to produce better players from this holy land.

Physical activities enhance muscular strength, physical fitness, social health, mental health, emotional health and it important to good and healthy life style. Physical activities easily is incorporated into a holistic

learning body and mind unit it can help students learn about different cultures and it also provides physical and psychological benefits. These activities enhance the promotion of healthy lifestyles, helps to maintain ideal body weight and control obesity, reduce feeling of stress, improve posture and physical appearance, regulates and improves overall body functions, helps to control of emotions, commitment, leadership and improves physical fitness components viz., strength, speed, endurance, flexibility etc.,

In general strength training is a type of physical exercise specialising in the use of resistance to induce muscular contraction which builds the strength, anaerobic endurance and size muscles. When strength training is properly performed, it can provide significant functional benefits and improvement in overall health and well-being including increased bone, muscle, tendon and ligament strength and toughness, improved joint function, reduced potential for injury, increased bone density, increased metabolism etc., while as this training for students yield students muscle strength, endurance, protect the child from sport relate injuries, improves child's performance in all kinds of sports and games, improves child's confidence and self esteem etc.,

Mravaz M, et.al [1] concluded in their article that 18-week strength training program can improve maximal and explosive strength to low – handicap golfers’ and these increases can be transferred to the driving performance of low-handicap golfers.

Bastiaans, J. J et.al [2] have concluded in their article that replacing a portion of endurance training by explosive strength prevents a decrease in short-term performance without compromising gains in endurance performance of trained cyclists.

Nora Shields and Nicholas F Taylor [3] in their article examined progressive resistance training muscle strength and physical function in adolescents with Down syndrome. They have found in their study that there were no significant differences between the groups for upper limb muscle strength or physical function measure.

Hamdy Kaseem Shallaby. [4] in his article observed that a significant progress in the improvement percentages for the experimental group in all study tests compared to the improvement percentages of the control group viz., tests of vertical jump at 27.01 percent, shuttle running at 7.53 percent and running at 1.62 percent which led to an improvement in the skilful performance.

Rajamohan.G, et.al [5] in their study argued that use of contrast training to improve the upper and lower body explosivity levels in young players and suggested contrast training is a useful working tool for coaches in strength training domain and is equally contributing to better time efficient training.

Tucker Larry,A [6] in his study found that significant curvilinear relations between relative strength and neuroticism and between relative strength and self-concept. Further stated that muscular strength is significantly correlated to body cathexis, extraversion, neuroticism and self - concepts.

Therefore the above studies suggest that strength training has certain effect on physical ability of every individual. Hence the present study “Effect of

strength training on physical ability of secondary school students in Kalaburagi town.

OBJECTIVES

The objectives of the present study are

- To study the effect of strength training on the speed ability of secondary school students in Kalaburagi town.
- To study the effect of strength training on the agility of secondary school students in Kalaburagi town.

In order to study the above objectives the following hypotheses were formulated for the study-

HYPOTHESES

- H₀₁: There is no significant effect of strength training on the speed ability of secondary school students in Kalaburagi town.
- H₁₁: There is a significant effect of strength training on the speed ability of secondary school students in Kalaburagi town.
- H₀₂: There is no significant effect of strength training on the agility of secondary school students in Kalaburagi town.
- H₁₂: There is a significant effect of strength training on the agility of secondary school students in Kalaburagi town.

METHODOLOGY

For this study the students on the rolls of class 9 of secondary schools of Kalaburagi city of Karnataka form the universe. Twelve students were randomly chosen for data collection. Strength training for these students was conducted three days a week for six eight weeks viz., 50 m Yard Dash and Shuttle Run to assess speed ability and agility respectively as a part of physical ability. Data collected through Pre test and post test. The study period for data collection was May 2015 to June 2015. To analyse the data, Mean, Standard Deviation and t-test were used.

PHYSICAL ABILITY WITH RESPECT TO SPEED AND AGILITY IN PRE AND POST TEST OF STRENGTH TRAINING GROUP

Table -1 Statistical Values of Selected Physical Ability With Respect to Speed in Pre and Post Test of Strength Training Group

		Paired Samples Test							
		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
Lower	Upper								
Pair 1	50 m Yard Dash (Sec) - Pre Test - 50 m Yard Dash (Sec) - Post Test	0.42500	0.23039	0.06651	0.27861	0.57139	6.390	11	0.000

Source: Primary Data

Table-1 shows the statistical values of selected physical ability with respect to speed by 50m yard dash (sec) in pre and post test of strength training group to test the hypothesis H_{01} . For the sample group in this ability had obtained the mean difference of .0425, standard deviation of 0.23. The related t-ratio was 6.390 at 0.05 significance level. Hence the null hypotheses H_{01} was accepted i.e., there is no significant effect of

strength training on the speed ability of secondary school students in Kalaburagi town. The probable reasons were strength training for these students was conducted three days a week for six eight weeks may not be enough training in register the significant impact in the domain of improving speed skill among the sample participants.

Table -2: Statistical Values of Selected Physical Ability With Respect to Agility in Pre and Post Test of Strength Training Group

		Paired Samples Test							
		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Shuttle Run (Sec) - Pre Test - Shuttle Run (Sec) - Post Test	.18167	.06043	.01744	.14327	.22006	10.414	11	.000

Source: Primary Data

Table-2 shows the statistical values of selected physical ability with respect to agility by shuttle run (sec) in pre and post test of strength training group to test the hypothesis H_{02} . For the sample group in this ability had obtained the mean difference of 0.18167, standard deviation of 0.06043. The related t-ratio was 10.414 at 0.05 significance level. Hence the null hypotheses H_{02} was accepted i.e., there is no significant effect of strength training on the agility of secondary school students in Kalaburagi town. The probable reasons were the schedule of three days a week for six eight weeks may not be enough time, the seriousness in the training and future benefits may not inspire the participants in the training to register the significant impact in the domain of improving agility skill among the sample participants.

FINDINGS AND CONCLUSIONS

The study found there is no significant effect of strength training on the speed ability of secondary school students in Kalaburagi town and also there is no significant effect of strength training on the agility of secondary school students in Kalaburagi town. The probable reasons were the schedule of three days a week for six eight weeks may not be enough time, the seriousness in the training, ability of trainers and future benefits may not inspire the participants in the training to register the significant impact in the domain of improving speed and agility skills.

Occasionally if we conduct the programs like summer camps, winter camps etc., may inspire the students to participate in those training programs but certainly do not stimulate them to achieve the benchmarks set to become world class sport persons or players. Hence the investigators suggest that these

programs do go hand in hand with academics regularly with the same pace as the policy makers and academicians have the seriousness in academics in schools. Therefore we have to introspect earnestly the policies and practices adopted in this field.

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