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WOBBLE BOARD AND SWISS BALL TRAINING AMONG SCHOOL STUDENT: AN EXPERIMENTAL STUDY

***Dr. Jaswant Singh,**

Director Physical Education,

Government Model Senior Secondary School, Sector-56, Chandigarh

****Dr. Gaurav Dureja,**

Assistant Professor,

Department of Physical Education-TEL&R,

Post Graduate Government College, Sector-11, Chandigarh

ABSTRACT

This study was to examine the effects of wobble board and swiss ball training on the variable of agility among school students. A random group design was adopted for the investigation. Total Forty-five (N=45) student from seventh and eighth standard were selected as subjects on random basis and their age ranging between 13 to 14 years. The students were selected from the Government Model Senior Secondary School Sector-56, Chandigarh. Pre-test was conducted on the motor fitness variable of agility. An Experimental Group-I was exposed to wobble board training, where as the other experimental group-II was exposed to swiss ball training, control group was not exposed to do any specific training other than their daily routine activities. The training was given for six days a week for duration of twelve weeks. The Analysis of Covariance (ANCOVA) technique was used to test the adjusted post- test mean difference among school students on the variable of agility. After the twelve weeks, ANCOVA indicated that there was a positive effect of training on agility and the P-value (Sig.)02 was found lesser than.05 level of significant ($P < 0.05$). The result revealed that a significant differences have been observed among school students of different groups namely; wobble board, swiss ball and control group on the variable of agility.

Keywords: Agility, wobble board, swiss ball and school students

INTRODUCTION

Physical education should be started from kindergarten stage, under able and qualified leaders, as a compulsory and examinable subject with vigilant watch on the aspects of strength, stamina, speed, skill, agility and suppleness towards the late stage of the school career. The parents, teachers and the public should ensure that physical education is must for every child. The children must participate in different games and sports and shall be asked to take the tests in order to pass. The child through participation in physical education faces the situation, reacts to the same, and at the end, the modification takes place, which is the real education. A regular moderate workout regimen can improve general appearance. Numbers of new modalities are used by the physiotherapist and fitness trainers for rehabilitation and avoidance of injury to perform much workout like Mix martial arts (MMA), Cross Trainer, Plyometrics, Swiss ball, wobble board. Training is a controlled and planned way to improve the fitness and ability to perform a specific game/ sports.

Motor fitness considers the entire components which develop through different trainings. It helps an athlete to give his best performance in competitive sports. The most important variables are strength, power, speed, agility, coordination, muscular endurance, reaction time, cardiovascular endurance and flexibility for a sprinter. Since specific motor traits are speed, agility, power, co-ordination and reaction time. By the repeated practice of the different trainings for which they are required to be trained in the best way to develop these qualities. The motor traits which are essential to contribute are strength, Speed, agility, coordination, power and flexibility. The major components of physical fitness are muscular strength, speed, agility, balance and co-ordination. These qualities are not as directly vital as cardio-respiratory fitness for general health but play several important direct and indirect roles both in functional health and performance capacity. Fitness is a wider term to fulfilling our daily needs related to mental and emotional dynamic merits, social consciousness, spiritual and moral fiber organic health consistent with heredity (William,1985).

The World Health Organisation defines health as a state of complete physical, mental and social well being and not merely the absence of disease or infirmity. Health was not only the main motto of man fun olden days. They wanted to be with good built physique and optimum level of fitness. To survive in the competitive world we should be able to do the daily routine works. For that the fitness is important. The growth of the nation is in the hands of the fit and healthy people. Fitness is the term mostly used as synonymous of health in a less manner but it is denotes many factors of health (Rumsey & Orlooteson, 1981). The motor fitness components are very essential for the effective functioning in psychomotor domain of our body. These components are performance oriented and also depend upon the functioning of different body parts. Motor fitness is the key to success in running, jumping, dodging, falling, and climbing for good results. Fitness includes power, agility, speed, balance, strength, flexibility and endurance for an individual (Singh, 2016).

Training is a highly impactful method for a trainer to give his best in a particular time period. Our training improves functional movement to support the specific demand of specific sports. Through training a trainer can help an athlete to overcome from his/her weakness and to decrease the risk of injuries. Training also gives a competitive advantage to maintain high standard of a specific sports. The use of scientific method or technique

has helped to develop effective training methods which has now used by sports coaches in different parts of the world. Every athlete takes part in practice with a training which is structured and focused to achieve a specific goal. The aim of the sports training is to boost the athlete's skills and work proficiency to optimised athletes performance. A variety of variables like psychological, physiological and sociological are involved and also undertaken a long period of time. Day by day preparation of athletes is constantly evolving by using the science in sports. This evolution is mainly based upon an understanding about human body how it adapts to different physical and physiological stressors. The main intention of training is to organize a system that can enhance the physiological, psychological quality of individual sports. It follows that it is likely to adjust the adaptive process and direct specific training outcomes.

The goal of training is to bring physical and physiological adaptation of performance at particular time, mainly during the main competition of the year. To achieve this goal, the athlete's ensuring a better potential for a high level of performance by prepare all the skills and tactics at appropriate time, thus the athlete, level of preparedness is a multifaceted interaction of developing skills, bio-motor abilities, psychological traits and the management of fatigue.(Bompa, 1999). A positive experience in sports and competitions can effect in an active life style for many years, and this is more important being a champion athlete (Bompa, 2000). Far and often for immature athletes who lack the training experience and psychological maturity to bear intensive competitive schedules are used the annual training plans developed for elite athletes. The coach or trainer should consider the athlete's readiness for intensive competitive schedules. Therefore, the purpose of the present study was to investigate the effects of wobble board and swiss ball training on the variable of agility among school students.

METHODOLOGY

The study was conducted on forty five (N=45) students from Government Senior Secondary School, Sector-56, Chandigarh aged between 13 to 14 years. A random group design was adopted for the study and all the subjects were randomly divided in to three groups and each group had fifteen (N=15) subjects respectively An Experimental Group-I was exposed to wobble board training, where as the other experimental group-II was exposed to swiss ball training, control group was not exposed to do any specific training other than their daily routine activities. The experimental duration was of 12 weeks and after the experimental treatment, all the subjects were measured on the selected motor fitness parameter. The final test scores formed as Post-test scores of the subjects. Agility measurements were taken with Illinois test (Getchell,1979).The Analysis of Covariance (ANCOVA) at 0.05 level of significance was applied.

RESULTS

The data collected was analyzed by using descriptive statistics and scores of post mean of Agility was presented in table-1

Table:-1
Descriptive Statistic on Agility Test of Three Different Groups of School Students

Groups	Pre Test		Post Test		Adjusted Mean
	Mean	SD	Mean	SD	
Wobble Board Group	14.01	1.07	12.93	.84	13.16
Swiss Ball Group	14.96	1.31	14.31	1.20	14.02
Control Group	14.29	.63	13.61	.70	13.69

Table-1 revealed that mean and SD of pre test, mean and SD post test, and adjusted mean of three different groups namely; Wobble board Group, Swiss ball group and control group. The pre test mean and SD of wobble board group was 14.01 and 1.07, pre test mean and SD of Swiss ball group was 14.96 and 1.31 and pre test mean and SD of control group was 14.29 and .63. Post test mean and SD of Wobble board Group, Swiss ball group and control group were 12.93 and .84, 14.31 and 1.20 and 13.61 and .70 respectively. The adjusted mean of wobble board Group was 13.16, adjusted mean of Swiss ball group was 14.02 and adjusted mean of control group was 13.69.

Table:-2
Analysis of Co-Variance on Agility Test of Three Different Groups of School Students

	SS	Df	MSS	F-value	P-value(Sig.)
Treatment	5.00	2	2.50	4.33	.02*
Error	23.68	41	.57		

*Significant at 0.05 $F'_{0.05}(2,41) = 3.22$

Table 2, indicated that wobble board test perform for agility among school students of different groups, namely; wobble board group, swiss ball group and control group was found significant after implementing the 12 weeks of training as the F-value 4.33 was found higher than tabulated value 3.22 at .05 level of significance.

Hence the adjusted final mean F value was found statistically significant and the result was subjected to LSD post hoc test to find out the paired mean difference among the groups have been presented in table-3.

Table:-3

Pair Wise Mean Comparison on Agility Test of Three Different Groups of School Students

Wobble board	Swiss ball	Control group	Mean difference	P-value(Sig.)
13.16	14.02	-----	0.86	.00*
13.16	-----	13.69	0.53	.06
-----	14.02	13.69	0.33	.25

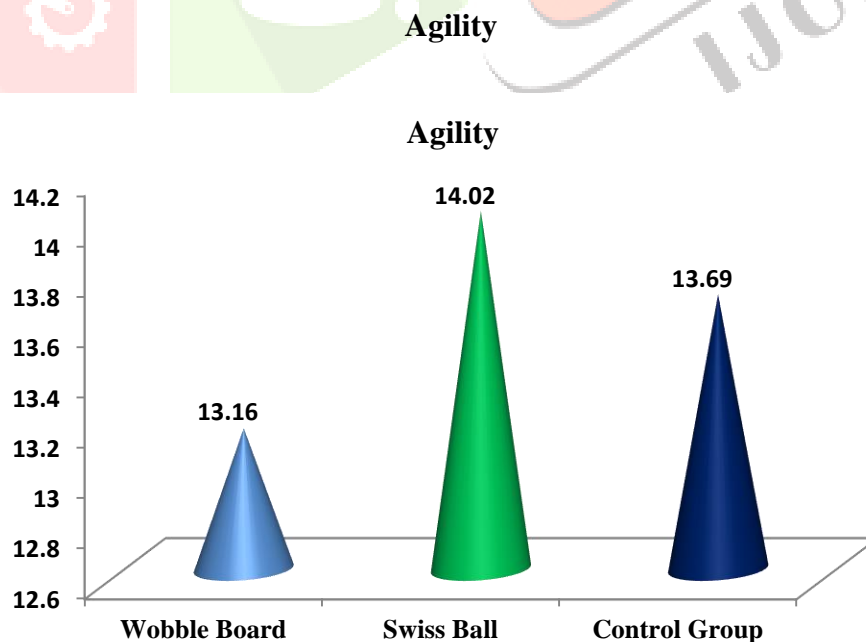
***Significant at 0.05**

Table 3 shows the mean difference between among wobble board and swiss ball school students was found 0.86. The P-value (Sig.) .00 revealed that wobble board training students had exhibited significantly better agility than their counterpart swiss ball training after imparting 12 weeks of training.

The mean difference between wobble board and control group school students was found 0.53. The P-value (Sig.) .06 revealed that wobble board students had exhibited better agility though not significant than their counterpart control group school students.

The mean difference between swiss ball and control group school students was found 0.33. The P-value (Sig.) .25 revealed that control group students had exhibited better agility though not significant than their counterpart swiss ball training school students.

Figure 1: Graphical Representation of Mean Scores With Regard to School Students on the Variables



Discussion

The pre-test and post-test scores of the subjects in the three different groups on agility were compared to determine if there were any changes between the groups and within each group. Pre-test for agility was conducted seven days before the training and Post-test was conducted on the very next day on completion of twelve weeks training program.

The result shows, wobble board group have better agility as compare to their counterpart swiss ball group and control group among male school students. In Wobble board group a significant mean differences was observed between pre and post test. It might be due to that wobble board is a new modality for fitness and subjects take keen interest during training. Dhanaraj (2014) studied that motor fitness variable of agility was found significant improvement among women handball players in ladder training group. Bloomfield (2007) conducted a study on the effectiveness of 2 methodologies, speed and agility on random, intermittent & dynamic activity sports and the requirement of specialized coaching equipments. He revealed that personal coaching (PC) with SAQ exercises to be a better way to improve speed and agility; on the other hand this investigation found that SAQ equipment was not the requirement to monitor significant improvement. Jain (2013) conducted a study to examine the impact of plyometric, power and combined training of bothon female basketball school national participants towards their fitness and performance. The present study also concluded that combined training exercise observed more positive effects on improvement of fitness and performance components of basketball players. Bondade et al. (2012) examined the study on Handball Players of Flexibility, Agility and Reaction Time. It was observed that in handball players as compared to their age matched controls flexibility, agility was significantly more and reaction time was significantly less However, these 29 handball players when compared with international handball players remain far behind. So it was revealed that handball players are at advantage with more flexibility, agility and less reaction time. Taheri et al. (2014) investigated a study to observe the impact of plyometric and power exercise in football athletes on agility, speed and explosive power. The outcomes concluded plyometric and resistance training exercises improve the agility and explosive power and improve speed in football game. Majhi et al. (2016) did the comparison to observe the effect of exercise on chosen physical fitness variables of B.P.Ed pupils and the football participants. The outcome of the study found significant difference of Speed, Agility and explosive leg strength between B.P.Ed and football participants. Jovanovic et al. (2011) examined the impact of SAQ training method on the professional football players on strength performance. The results of the study concluded that power performance in young soccer players during the in- session period of SAQ training program found effective. Shah et al. (2011) conducted a study to compare the effects of physical fitness training with Gym Ball and Medicine Ball. The findings of the study exhibited the no significant difference in the expansion of physical fitness by practicing with gym ball and Medicine ball.

Sharma (2010) conducted a study to explore the effects of bio-motor abilities on intensive and extensive interval training. The study revealed with regard to intensive interval training on the variables of speed, agility, leg power, that significant difference has been observed and significant difference has been also observed

with regard to intensive interval training and extensive interval training on the variables of cardiovascular endurance, resting pulse rate, systolic blood pressure, diastolic blood pressure, red blood cells and abdominal strength whereas on the variable of white blood cell and flexibility no significant difference has been observed with regard to intensive interval training and extensive interval training and control group. Slobodanka et al. (2018) explore the effects of proprioceptive training on explosive strength, agility and coordination in young rhythmic gymnasts a significant improvement observed in the entire motor ability test in experimental group, enhancement in coordination and one agility test of control group was also observed. It was concluded that implementation of proprioceptive training in rhythmic gymnast training can improve agility, but in comparison to other abilities we can't claim that proprioceptive training was not the direct product of this training.

Conclusion

It is observed from the findings of this study that a significant difference has been noticed between the pre and post-test scores among male students, there is significant improvement of wobble board training on agility except swiss ball and control group.

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