



EFFECT OF TAEKWON-DO PRACTICE ON SPEED, AGILITY AND FLEXIBILITY AMONG ADOLESCENT BOYS

S. RAJAMONY¹, Dr. S. SUTHAKAR² & Dr.A.M.MOORTHY³

¹Vice – Principal, Mother Teresa College of Physical Education & Research Scholar, Karpagam University, Karpagam Academy of Higher Education, Coimbatore, Tamilnadu, India.

²Head i/c, Department of Physical Education. Karpagam University, Karpagam Academy of Education, Coimbatore, Tamilnadu, India.

³Vice-Chancellor, Tamilnadu Physical Education and Sports University, Chennai.

ABSTRACT

The aim of the present study is to find out the effect of Taekwondo practice on Speed, Agility and Flexibility among adolescent boys. For achieving the purpose of the study, total of 30 subjects are selected as samples from the age group of 15 to 17 years school boys. The selected subjects are divided into two groups equally with 15 each as an Experimental Group with Taekwondo training for a period of eight weeks in a schedule of weekly five days for the duration of two hours each. The pre and posttest are conducted on Speed, Agility and Flexibility before and after the eight weeks of experimental training. Analysis of Covariance (ANCOVA) is used as a statistical tool to determine the significant difference between pre and post test data on Speed, Agility and Flexibility. The level of significance is fixed at 0.05 levels. The statistical findings of the study reveal that the Experimental Group done the Taekwondo practices and significantly improved on the Speed, Agility and Flexibility.

KEYWORDS: Taekwondo, Speed, Agility and Flexibility.

INTRODUCTION

Taekwon- Do or Tae Known Do is a Korean martial art with a heavy emphasis on kicks, Taekwondo was developed during the 1940s and 1950s by various Korean martial artists, as a combination of Shotokan karate and the indigenous traditions of taekkyeon, gwonbeop, and subak. This emphasis on speed and agility. Practicing taekwondo provides an aerobic workout, improving cardio fitness and also enhancing strength and balance. The present study is with the sole aim to find out the effect of Taekwon-Do practice on the development of selected physical fitness qualities of adolescent school boys. Juliano Schwartz et al. (2015) evaluated the health related physical fitness in martial arts and combat sports practitioners and they found martial arts training influenced the health related to physical fitness. Bonghan Lee and Kijin Kim (2015) conducted a study on the effect of Taekwondo Training on Physical Fitness and Growth Index According to IGF-I Gene Polymorphism in Children and they found that the taekwondo training is beneficial for certain physical fitness qualities. Wang (2013) found out that the taekwondo can be a good exercise to attack WHR, and thigh muscles, keep muscles 'strong symmetry, an effective exercise is provided to meet girls' need in the pursuit of physical beauty. Xianzhu He (2015) conducted a study to know the influences of Taekwondo in the Nursing School in Beihai City on the Comprehensive

Development of Health School Girls, he found that through taekwondo training Beihai Health School girls can be cultured to be gritty-minded and body. The present study is intended to find the effect of Taekwondo practice on Speed, Agility and Flexibility among adolescent boys.

METHODOLOGY

For achieving the purpose of the study, total of thirty subjects were selected as samples from the school in Kanyakumari District. Their age group was between 15 to 17 Years and the selected subjects were divided into two groups equally with 15 subjects as the Experimental Group with Taekwondo practice and Control Group with no practice. The experimental Taekwondo for a period of eight weeks in a schedule of weekly five days for the duration of two hours each. The pre and posttest were conducted on the selected health related physical fitness variables on Speed, Agility and Flexibility. The speed was assessed through 50 meter dash, agility was assessed through 4x10 meter shuttle run and flexibility was assessed through sit and reach test. Analysis of Covariance (ANCOVA) was used as a statistical tool to determine the significant difference, between pre and post test data on Speed, Agility and Flexibility. The level of significance was fixed at 0.05 level.

RESULTS AND DISCUSSIONS

The analysis of covariance on the data obtained on the Speed, Agility and Flexibility of pre and post tests are tabulated and presented in the tables, I, II and III.

TABLE I
COMPUTATION OF ANALYSIS OF COVARIANCE ON SPEED

Test	Group		SV	Sum of Squares	Df	Mean Square	F value
	Exp.	Con.					
Pre test	8.66	8.54	B	0.1153	1	0.1153	0.217
			W	14.873	28	0.5311	
Post test	8.05	8.50	B	1.505	1	0.505	2.562
			W	14.873	28	0.587	
Adjusted Mean	8.00	8.55	B	2.309	1	2.309	12.570*
			W	4.959	27	0.183	

*Significant 0.05 level of confidence

It was observed from the Table – 1 that there is no significant difference in the pretest ($F=0.217 < 4.20$) and posttest ($F=2.562 < 4.20$) for df 1 and 28. However a significant difference is observed in adjusted posttest ($F=12.570 > 4.21$) for df 1 and 27 at 0.05 level of confidence. In discussion, the result clearly indicates that

there is an influence on speed through Taekwondo practice among adolescent boys. The mean values clearly indicate that the Experimental Group Shows higher improvement on Speed due to eight weeks Taekwondo practice.

FIGURE I
BAR DIAGRAM SHOWING THE PRE AND POSTTEST MEAN VALUES OF SPEED

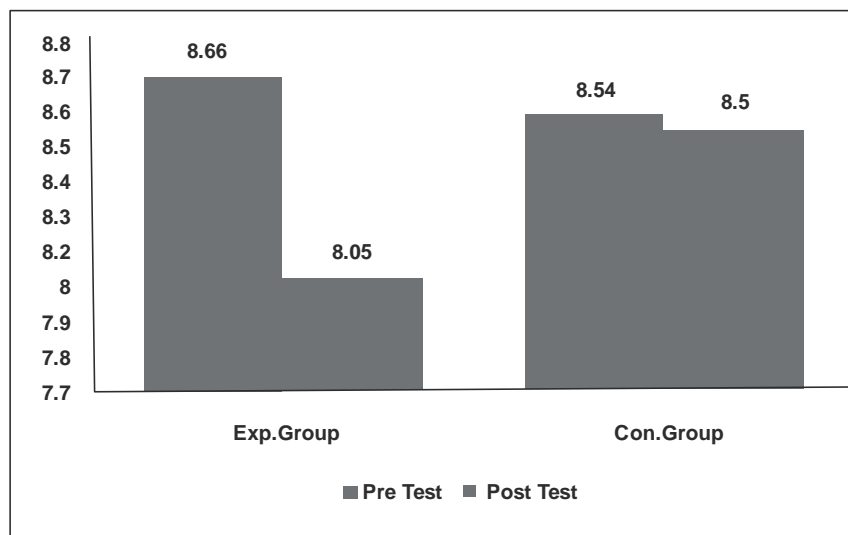


TABLE II
COMPUTATION OF ANALYSIS OF COVARIANCE ON AGILITY

Test	Group		SV	Sum of Squares	Df	Mean Square	F value
	Exp.	Con.					
Pre test	10.53	10.67	B	0.1526	1	0.1526	0.262
			W	16.2960	28	0.582	
Post test	9.72	10.57	B	5.3932	1	5.3932	8.175*
			W	18.4705	28	0.6596	
Adjusted Mean	9.76	10.52	B	4.321	1	4.3213	9.236*
			W	12.632	27	0.4678	

*Significant 0.05 level of confidence

It is observed from the Table – II that there are no significant differences in the pretest ($F=0.262<4.20$). The significant differences are observed in posttest ($F=8.175>4.20$) for df 1 and 28 at 0.05 level of confidence. In discussion, the result clearly indicates

that there is a significant improvement in agility due to eight weeks of taekwondo practice among the adolescent boys. The mean values clearly indicates that the Experimental Group Shows higher improvement on Agility due to eight weeks of Taekwondo practice.

FIGURE II
BAR DIAGRAM SHOWING THE PRE AND POSTTEST MEAN VALUES OF AGILITY

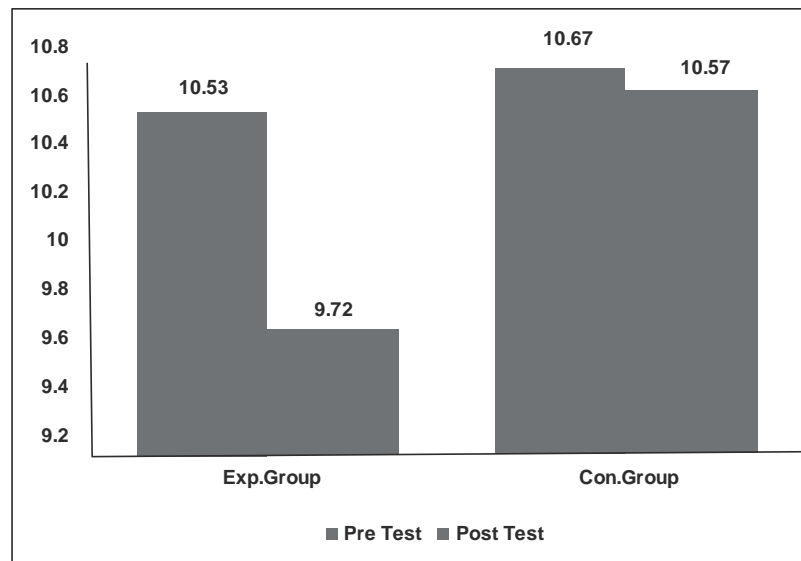
Test	Group		SV	Sum of Squares	Df	Mean Square	F value
	Exp.	Con.					
Pre test	11.68	11.88	B	0.320	1	0.320	0.408
			W	21.973	28	0.784	
Post test	12.57	12.11	B	1.591	1	1.591	4.293*
			W	10.380	28	0.370	
Adjusted Mean	12.60	12.07	B	2.055	1	2.054	6.849*
			W	8.100	28	0.300	

*Significant 0.05 level of confidence

It is observed from the Table – III that there is no significant difference in the pretest ($F=4.293<4.20$) for df 1 and 28 and adjusted posttest ($F=6.849>4.21$) for df 1 and 27 at 0.05 level of confidence. In discussion, it clearly indicates that there is an influence on flexibility

through eight weeks of Taekwondo practice among the adolescent boys. The mean values clearly indicates that the Experimental Group Shows higher improvement on Flexibility due to eight weeks of taekwondo practice.

FIGURE III
BAR DIAGRAM SHOWING THE PRE AND POSTTEST MEAN VALUES ON FLEXIBILITY



CONCLUSION

From the analysis and discussions of the present study, the following conclusions are drawn

1. The Taekwondo practice is useful to improve the physical fitness qualities like Speed, Agility and Flexibility among the adolescent boys.
2. Further the result of the study indicates that the martial art training particularly Taekwondo can be included in the school curriculum to improve the Physical fitness of the students.

REFERENCES

1. Juliano Schwartz, Monica Y. Takito, Fabricio B. Del Vecchio, Leandro S. Antonietti and Emerson Franchini (2015). Health – related physical fitness in martial arts and combat sports practitioners, Sport 6 Science for Health, available at <http://link.springer.com/article/10.1007/s11332-015-0220-6?no-access=true>
2. Bonghan Lee and Kijin Kim (2015). Effect of Taekwondo Training on physical fitness and Growth Index According to IGF - 1 Gene Polymorphism in Children, Korean Journal of Physiology & Pharmacology, 19(4) : 341-347.
3. Wang, D.Q. (2010) Role of college Students Learn Taekwondo. Management & Technology (On Xunkan), 5,143.
4. Xianzhu He (2015). Influences of Taekwondo of Nursing School in Beihai City on the Comprehensive Development of Health School Girls. Advances in Physical Education, 05(01).