



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

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ABSTRACT

The aim of the present study was 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 were selected as samples from the age group of 15 to 17 years school boys. The selected subjects were divided in to two groups equally with 15 each as experimental group with Taekwondo practice and control group. The experimental group was given 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 were conducted on speed, agility and flexibility before and after the eight weeks experimental training. Analysis of covariance (ANCOVA) was used as a statistical tool to determine the significant difference, if any existing between pre and post test data on speed, agility and flexibility. The level of significance was fixed at 0.05 levels. The statistical findings of the study revealed that the experimental group done the Taekwondo practice significantly improved the speed, agility and flexibility.

KEYWORDS: Taekwondo, Speed, Agility and Flexibility.

INTRODUCTION:

Taekwon-Do or Tae Kwon 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 is a defining characteristic of taekwondo and has its origins in analyses undertaken by Choi Hong Hi. Practicing taekwondo provides an aerobic workout, improving cardiofitness 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 health-related physical fitness in martial arts and combat sports practitioners and they found martial arts training influences 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-1 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, thigh



muscles, keep muscles strong symmetry, so as to provide an effective exercise way to meet girls' need in pursuit of physical beauty. Xianzhu He (2015) conducted a study on the Influences of Taekwondo of Nursing School in Beihai City on the Comprehensive Development of Health School Girls and he found taekwondo Beihai Health School girls can be cultured to be gritty-minded and body.

The present study was intended to found out 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. Their age group between 15 to 17 years and the selected subjects were divided in to two groups equally with 15 each as experimental group with Taekwondo practice and Control Group. The experimental group practiced 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 selected health related physical fitness variables of 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, if any existing between pre and post test data on speed, agility and flexibility. The level of significance was fixed at 0.05 levels.

RESULTS AND DISCUSSIONS

The analysis of covariance on the data obtained on 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	1.505	2.562
			W	16.446	28	0.587	
Adjusted Mean	8.00	8.55	B	2.309	1	2.309	12.570*
			W	4.959	27	0.183	

*Significant at 0.05 level of confidence

It was observed from the Table-I that there was 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 was observed in adjusted posttest ($F=12.570 > 4.21$) for df 1 and 27 at 0.05 level of confidence. It discussion clearly indicated that there was an influence on speed through Taekwondopractice among adolescent boys. The mean value clearly indicated that the experimental group was higher improvement on speed due to eight weeks Taekwondopractice

Figure-1: Bar diagram showing the pre and posttest mean value of speed

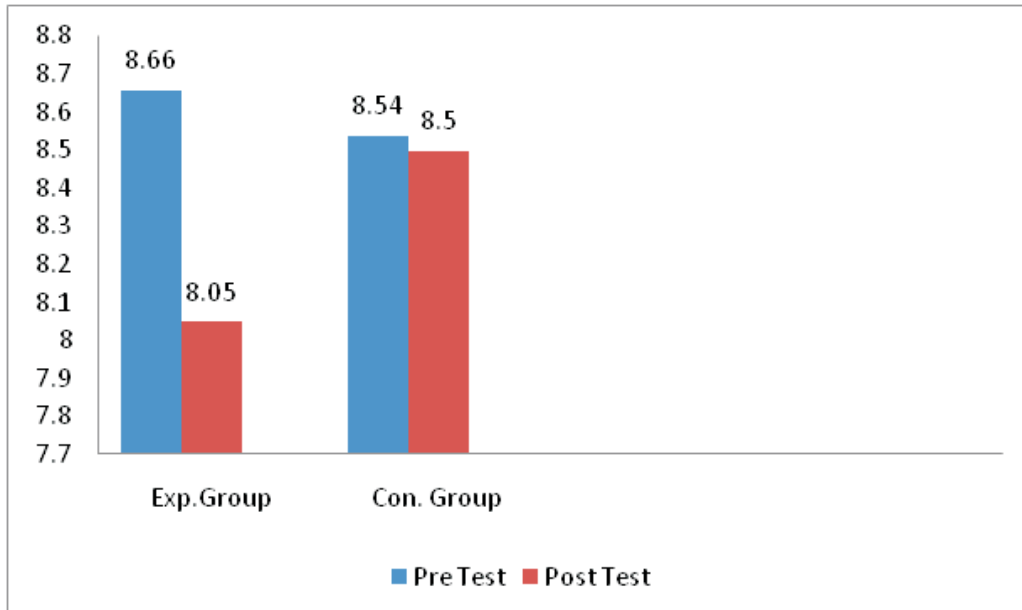


Table-II: Computation of analysis of covariance on Agility

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 at 0.05 level of confidence

It was observed from the Table-II that there were no significant difference in the pretest ($F=0.262 < 4.20$). The significant differences were observed in posttest ($F=8.175 < 4.20$) for df 1 and 28 at 0.05 level of confidence and adjusted posttest ($F=9.236 < 4.21$) for df 1 and 27 at 0.05 level of confidence. It discussion clearly indicated that there was a significant improvement in agility due to eight weeks taekwondo practice among adolescent boys. The mean value clearly indicated that the experimental group was higher improvement on agility due to eight weeks taekwondo practice

Figure-2: Bar diagram showing the pre and posttest mean value of agility

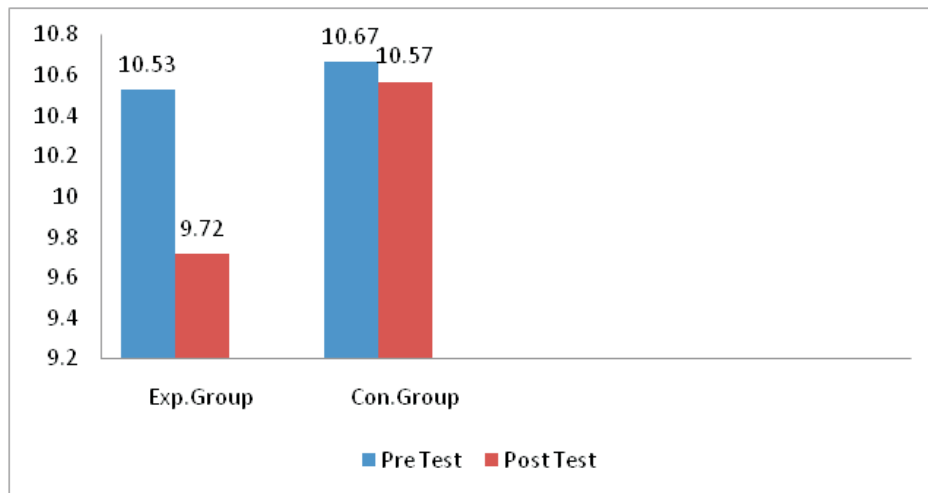


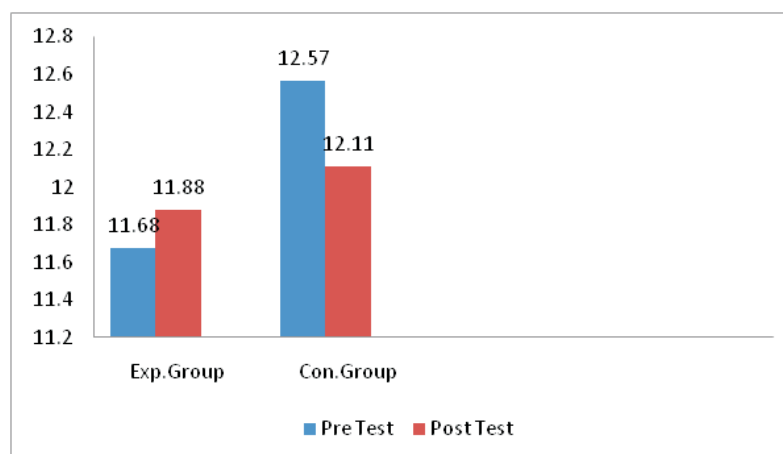
Table-III: Computation of analysis of covariance on Flexibility

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	27	0.300	

*Significant at 0.05 level of confidence

It was observed from the Table-III that there was no significant difference in the pretest ($F=0.408 < 4.20$). A significant difference in the post test ($F=4.293 < 4.20$) for df 1 and 28 and adjusted posttest ($F=6.849 > 4.21$) for df 1 and 27 at 0.05 level of confidence. It discussion clearly indicated that there was an influence on flexibility through eight weeks taekwondo practice among adolescent boys. The mean value clearly indicated that the experimental group was higher improvement on flexibility due to eight weeks taekwondo practice.

Figure-3: Bar diagram showing the pre and posttest mean value of Flexibility



CONCLUSIONS

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

- + The Taekwondo practice is useful to improve the physical fitness qualities of a speed, agility and flexibility among adolescent boys.
- + Further the result of the study indicated that the martial art training particularly Taekwondo can be included the school curriculum to improve Physical fitness of the students.

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