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IMPACT OF SILAMBAM PRACTICE ON MOTOR SKILLS AND PHYSIOLOGICAL VARIABLES AMONG SCHOOL BOYS

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Abstract:

Silambam practice aims to enhance self-defense skills, physical fitness, and mental discipline. It preserves cultural heritage, improves coordination and balance, boosts confidence, and fosters spiritual growth. This study was designed to impact of silambam practice on motor skills and physiological variables among school boys to achieve the purpose of the study twenty school boys were selected randomly from St. John's Matriculation Higher Secondary School. Kochadai in Madurai, Tamil Nadu consider as subjects. The age of the school boys ranged between 14 and 17 years. The selected school boys were divided into two equal groups consists of 10 each. Group I underwent the silambam practice, and Group II acted as control group. The training was given to the group I for three days per week for the period of twelve weeks. The selected motor skills such as namely co-ordination, reaction time and physiologival variables namely breath holding time and resting pulse rate have been examined at baseline and 12 weeks. The group II was not given any sort of training except their routine work. The data were collected from the subjects was statistically analyzed with dependent 't' test. The statistical test was set to be significant if p0.05. level of confidence. The results speculated that the co-ordination and reaction time and breath holding time and resting pulse rate of school boys improved significantly due to the silambam practice with the limitations.

Key Words: Silambam Practice, Co-Ordination, Reaction Time, Breath Holding Time and Resting Pulse Rate.

Introduction:

Silambam is a common word now used in Tamil Nadu, for the Martial art of stick- fencing. In other parts of South India it is called by different names, such as Kolu Varasayor Dhonay Varasay in Karnataka, Kolu Aatta or Karadi Aatta in Andhra pradesh, Neduvari in Kerala. Generally in silambam includes single stance (otrai suvado) separate stances, (pereevusuvado) double swing, weapons sequences, locks, throws long stick and short sticks series techniques are there (Arunachalam,1995). Motor development refers to the changes that occur in our ability to move and our movement in general as we proceed through the lifespan (Payne VG 2012). Physiology is the study of organs, systems, tissue, cells and molecules with in cells and their functions. It also mention that specific activity that athlete performing during exercise may be different activity make different demands upon the organism with respect to respiratory system, circulatory system, neurologic and metabolic(Ajmer Singh, 2007).

Materials and Methods:

To achieve the purpose of the study twenty school boys were selected randomly from St. John's Matriculation Higher Secondary School. Kochadai in Madurai, Tamil Nadu, India consider as subjects. The age of the school boys ranged between 14 and 17 years and they were divided into two equal groups consists of 10 each. Group I underwent the silambam practice and Group II acted as control group (CG). The training was given to the group I for three days per week for the period of twelve weeks. The selected motor skills such as namely co-ordination and reaction time were measured by Alternate hand wall toss test and Penny cup test, respectively. The physiological variables namely breath holding time and resting pulse rate were measured by breath holding test and bio monitor test respectively have been examined at baseline and twelve weeks. The group II was not given any sort of training except their routine work. The data were collected from the schoolboys were statistically analysed with dependent 't test. The statistical test was set to be significant if p0.05. level of confidence.

Table 1: The t- Ratio for Silambam Practice Group on Motor Skills and Physiological Variables

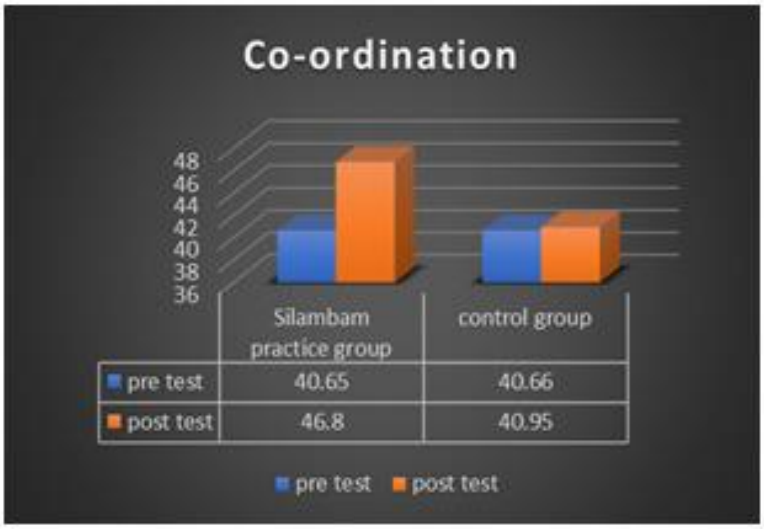
Variable	Group	Test	Mean	SD	SEM	t- ratio
Co Ordination	Silambam Practice Group	Pre	40.65	2.51	0.56	10.90*
		Post	46.80			
	Control Group	Pre	40.66	1.65	0.15	2.0
		Post	40.95			

Reaction Time	Silambam Practice Group	Pre	8.10	1.17	0.4	13.74*
		Post	7.49			
	Control Group	Pre	8.12	1.0	0.16	0.90
		Post	8.13			
Breath Holding Time	Silambam Practice Group	Pre	31.45	0.76	0.17	16.31*
		Post	34.25			
	Control Group	Pre	32.15	0.36	0.08	1.83
		Post	32.31			
Resting Pulse Rate	Silambam Practice Group	Pre	82.10	1.14	0.33	15.03*
		Post	89.0			
	Control Group	Pre	82.55	1.12	0.24	1.99
		Post	83.10			

Significance at 0.05 level of confidence for df of (1,19) is 2.14.

Mean standard deviation and t-value were calculated for each outcomes measure can be found in table 1. The results of the study shows that the pre-test mean values of motor skill son silambam practices group and control group (40.65,40.66) and (8.10,8.12) respectively and the post test mean values are (46.80,40.95)and (7.49,8.13) respectively and pre-test mean values of physiological variables on silambam practices group and control group (31.45,32.5) and (34.25,32.31) respectively and the post test mean values are (82.10,82.55)and (89,83.10) respectively. The obtained dependent t-test value on coordination (t=10.90*) and reaction time (t=13.74*) and breath holding time (16.31*) and resting pluse rate (t=15.03*) of silambam practices group respectively. The table value required for significant difference with degrees of freedom (1, 19) at0.05 level of confidence. The obtained 't' test value of silambam practices group was greater than the table value 2.14. The results clearly indicated that the coordination, Reaction time, breath holding time and resting pulse rate of the silambam practice group improved due to impact of silambam practices among school boys.

Figure 1: Bar Diagram of Silambam Practice Group and Control Group on Co-Ordination and Reaction Time



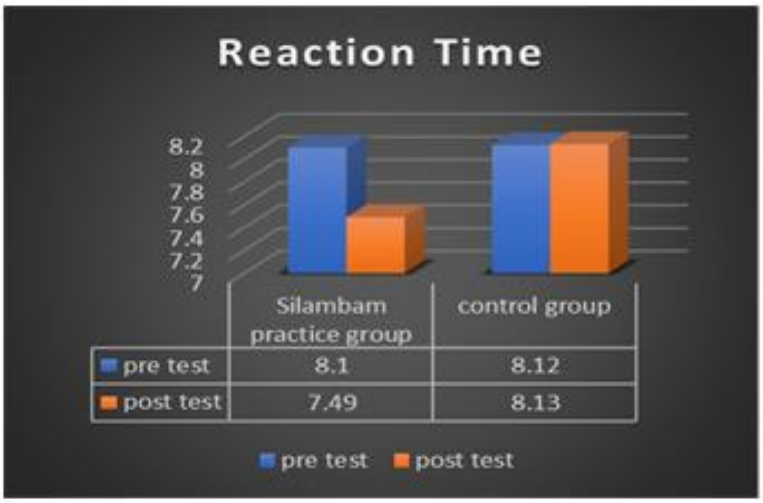
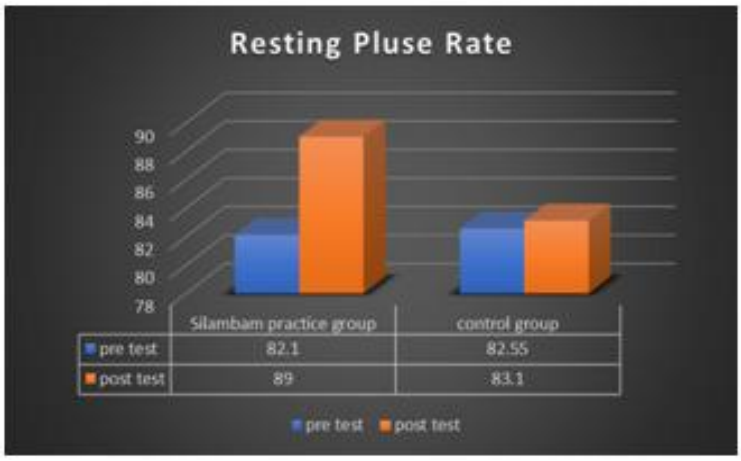


Figure 2: Bar Diagram of Silambam Practice Group and Control Group on Breath Holding Time and Resting Pulse Rate



Discussion on Findings:

The findings of the present study indicates that the silambam practice group is positive impact due to the silambam practice. The silambam practice group showed significant improvement in motor skills and physiological variables among school boys. Based on this study deals with the silambam with yogic training improved the agility, arm explosive power better than the karate with yogic training, silambam training karate training of collegiate male students conducted by S. Suthakar (2014). It was concluded that jallikattu participants than the silambam participants were better on selected psychological variables namely pulse rate and breath holding time according to P. Atheeskumar (2023) study.

Conclusions:

The results of the study concluded that the Silambam practice group have significant improvement on motor skills namely co-ordination and reaction time and improved significantly physiological variables namely breath holding time and resting pulse rate due to the impact of 12 weeks systematic silambam practice among school boys.

References:

1. Suthakar S., & Pushparajan, A. (2014). Effects of Silambam and Karate with Yogic Training on Agility and Arm Explosive Power of Collegiate Male Students. International Journal of Innovative Research and Development.
2. Dr. Selvam M, Dr. Ganesh Babu T, Influence of silambam practices and yogic practices on speed and flexibility among U-17 female sprinters, International Journal of Physical Education, Sports and Health 2016; 3(2): 136-139.
3. Dr. K Murugavel, N Kodeeswaran and Dr. RG Giridhraprasath, Functional response to the purpose of silambam practice after yogic practice, International Journal of Physical Education, Sports and Health 2021; 8(6): 208-211.
4. Atheeskumar, P., & Anbalagan, P. (2023). Comparison on selected physiological variables components among traditional events participants of jallikattu and silambam. Epra International Journal of Research and Development (IJRD), 8(6), 250-253.

5. P. Jayalakshmi1, Dr. K. Sreedhar, Dr. Mahadevan (2016) Effect of Sedikuchi silambam practice on selected Biomotor variables among college girls, International Journal of Research in Economics and Social Sciences (Impact Factor - 6.225) Volume 6, Issue 5 (May, 2016) (ISSN 2249-7382).
6. Kumar, N. (2013). Effect of abdominal strength training on strength endurance and explosive power of women players. International Journal of Physical Education, Fitness and Sports, 2(4), 49-52.
7. P. Mohanavallia, K. Sreedharb, and Jothyc (2013) effect of silambam practice on body composition agility and cardiovascular endurance among college girls, international journal of physical education, fitness and sports | vol.2. No. 4 | December 2013 | issn 2277-5447.