



EFFECT OF SPECIFIC DRILLS WITH VISION TRAINING ON SELECTED SKILL PERFORMANCE VARIABLES AMONG TABLE TENNIS PLAYERS

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Abstract:

The purpose of the study was to investigate the effect of specific drills with vision training on selected skill performance variables among table tennis players. For this study, forty table tennis players were selected from Coimbatore Table Tennis Foundation & Academy and Paddlerz Table Tennis Academy in Coimbatore district, Tamil Nadu, India. They were divided into two equal groups of twenty subjects each, namely the experimental group and the control group. The selected subjects were under 14 to 17 years of age school boys. The experimental group (Group-I) underwent specific drills with vision training three days per week for eight weeks. The control group (Group-II) did not undergo any special training apart from their regular activities. The following dependent variables were selected for this study: serving ability, push stroke and counter stroke. Data on these selected dependent variables were collected both prior to and immediately after the eight-weeks of experimental period as pre-test and post-test, respectively. The data were analyzed using the dependent 't'-test to determine the significant differences among the groups. A confidence level of 0.05 was fixed to test the level of significance, which was considered appropriate. The results of the study showed that the specific drills combined with vision training program led to significant improvement in the skill performance variables.

Keywords: Specific drills, vision training, serving ability, push stroke and counter stroke, table tennis Players.

Introduction

Table tennis, known for its rapid pace and intricate strategies, demands a unique blend of physical prowess, technical proficiency and cognitive agility from players. To achieve peak performance in this highly competitive sport, players must continually refine their skills and strategies through structured training methodologies. Among these methodologies, specific drill training and vision training have emerged as integral components in enhancing selected skill performance variables among table tennis players. Specific drill training encompasses targeted practice sessions designed to improve specific aspects of a player's game, such as stroke technique, footwork, serve and return, spin control, and consistency. These drills provide players with opportunities to develop muscle memory, refine their technique, and gain mastery over various strokes and movements essential for competitive play. For instance, drills focusing on stroke technique help players hone their forehand and backhand strokes, enabling them to produce controlled and precise shots during matches. Additionally, footwork drills enhance players' agility, speed, and balance, allowing them to move efficiently around the table and maintain optimal positioning during rallies. By engaging in structured and repetitive drills, players can systematically improve their technical skills and enhance selected skill performance variables crucial for success in table tennis. In parallel, vision training has emerged as a complementary approach to player development in table tennis, aiming to enhance visual processing speed, tracking abilities, depth perception, and anticipation skills. Vision training involves a series of specialized exercises and drills designed to sharpen players' visual acuity and cognitive processing, thereby improving their ability to perceive and react to visual stimuli more effectively. For example, ball tracking exercises challenge players to track the ball's trajectory from the opponent's racket to the table, enabling them to anticipate shot placement and prepare for effective returns. Similarly, anticipation drills require players to read opponents' body language and racket positioning, allowing them to predict shot trajectory and adjust their positioning accordingly. By honing their visual acuity and cognitive processing through vision training, players can enhance their ability to make split-second decisions and gain a competitive edge in table tennis matches.

Methods and Materials

The purpose of this study was to examine effect of specific drills with vision training on selected skill performance variables among table tennis players. For this study, forty Boys table tennis players were selected from Coimbatore Table Tennis Foundation & Academy and Paddlerz Table Tennis Academy in Coimbatore district, Tamil Nadu, were selected as subjects. Among them, 20 subjects were chosen for the experimental group. The

subjects were informed about the objectives of the study and the tasks they would be performing. Their table tennis coaches were requested to motivate and advise them to fully cooperate during the research study. The experimental group participated in the training programme, while the remaining 20 subjects were taken as the control group, and they did not undergo any training. The selected variables were tested using target service test for serving ability, alternate push test for push stroke, alternate counter test for Alternate counter test. The training programme for the experimental group lasted for eight weeks, with 60-minute sessions held on three alternative days each week. Each training session started with 10 minutes of strength exercises, followed by 15 minutes of warm-up, 25 minutes of training workout with rest intervals of 30 seconds between sets, and finally, a 10-minute cool-down.

Statistical Analysis

The collected data before and after the eight-week training period on the aforementioned variables, under the influence of specific drills combined with vision training, were statistically analyzed using the dependent 't' test to determine the significant improvements between the pre-test and post-test. The derived results are discussed in the following tables.

Table I: Computation of 't' ratio on skill performance variables of table tennis players.

Group	Variables		Mean	SD	SE	t- ratio
Experimental group	Serving ability	Pre-test	7.30	1.62	0.48	7.80*
		Post-test	11.05	1.46		
	push stroke	Pre-test	18.75	4.26	0.69	6.04*
		Post-test	22.95	3.37		
	Counter stroke	Pre-test	18.95	3.48	0.66	12.36*
		Post-test	27.15	2.68		
Control group	Serving ability	Pre-test	7.95	1.46	0.23	0.64
		Post-test	7.80	1.05		
	push stroke	Pre-test	19.65	2.39	0.38	1.92
		Post-test	20.40	2.56		
	Counter stroke	Pre-test	19.40	3.20	0.16	1.83
		Post-test	19.70	2.93		

* Level of Significance 0.05, Degree of freedom (2.09, 1 and 19)

Table I shows the computation of the mean, standard deviation and 't' ratio on the selected variables, namely serving ability, push stroke and counter stroke, for the experimental group. The obtained 't' ratios for serving ability, push stroke and counter stroke were 7.80, 6.04 and 12.36 respectively. The required table value for the degrees of freedom 1 and 19 at the 0.05 level of significance was 2.09. Since the obtained 't' values were greater than the required table value, they were found to be statistically significant for the experimental group. Furthermore, the computation of mean, standard deviation and 't' ratio on the selected variables, namely serving ability, push stroke and counter stroke was conducted for the control group. The obtained 't' ratios were 0.64, 1.92 and 1.83 respectively. The required table value for the degrees of freedom 1 and 19 at the 0.05 level of significance was 2.09. Since the obtained 't' values were less than the required table value, they were found to be statistically insignificant for the control group.

Fig I: Bar Diagram Showing the Mean Value on Serving ability of Table Tennis Players on Experimental Group and Control Group

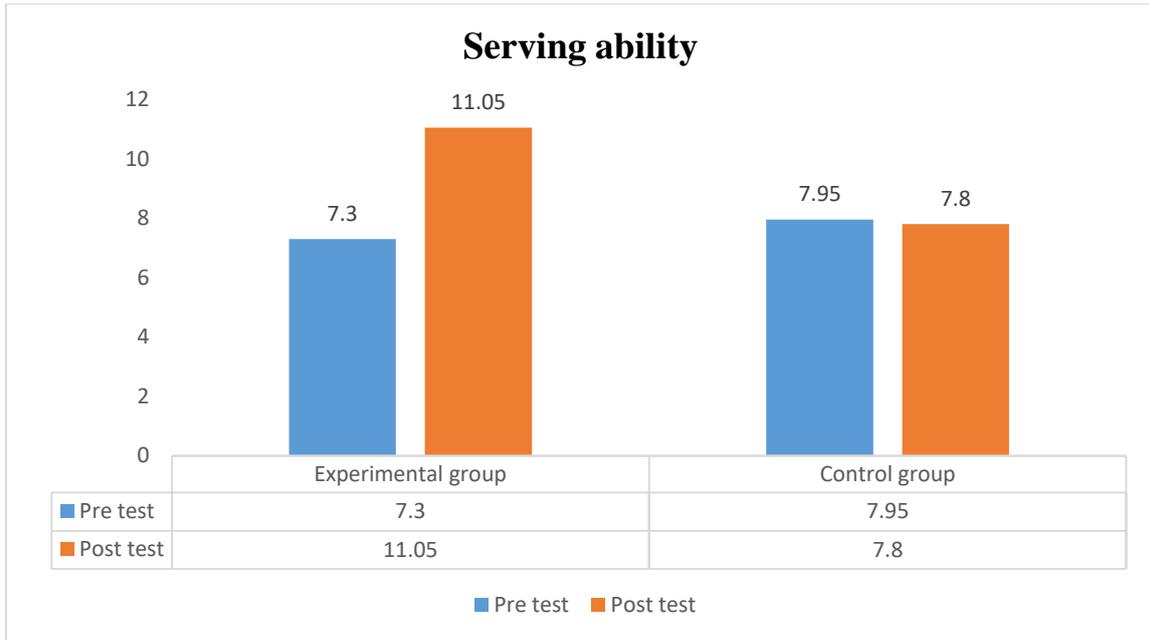


Fig II: Bar Diagram Showing the Mean Value on Push stroke of Table Tennis Players on Experimental Group and Control Group

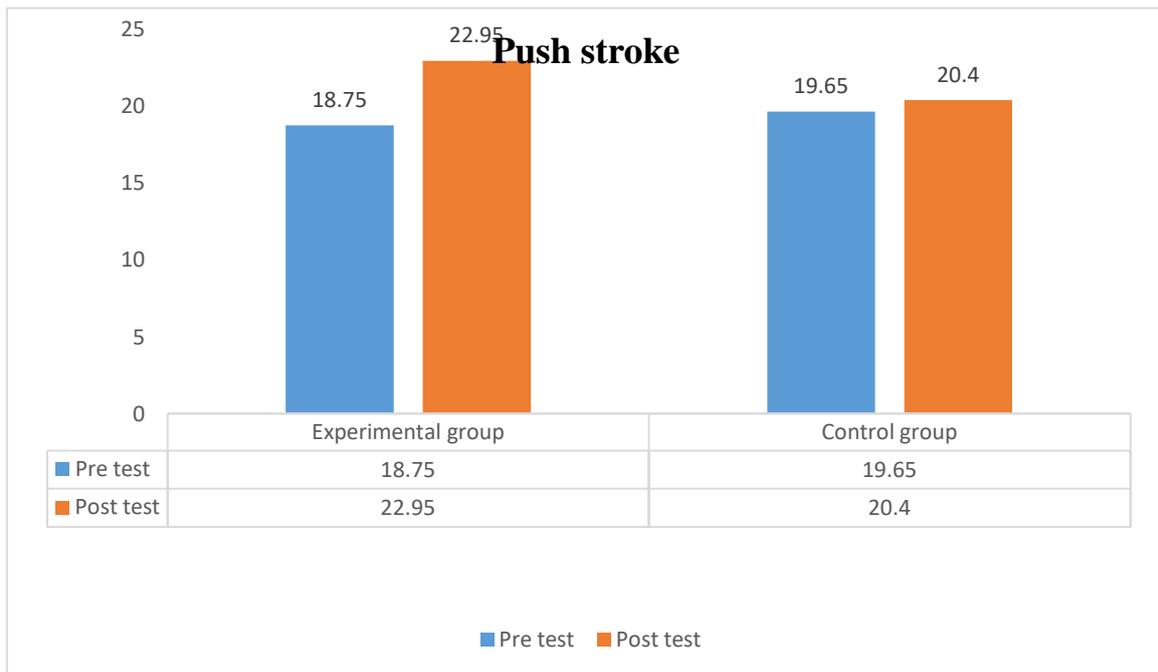
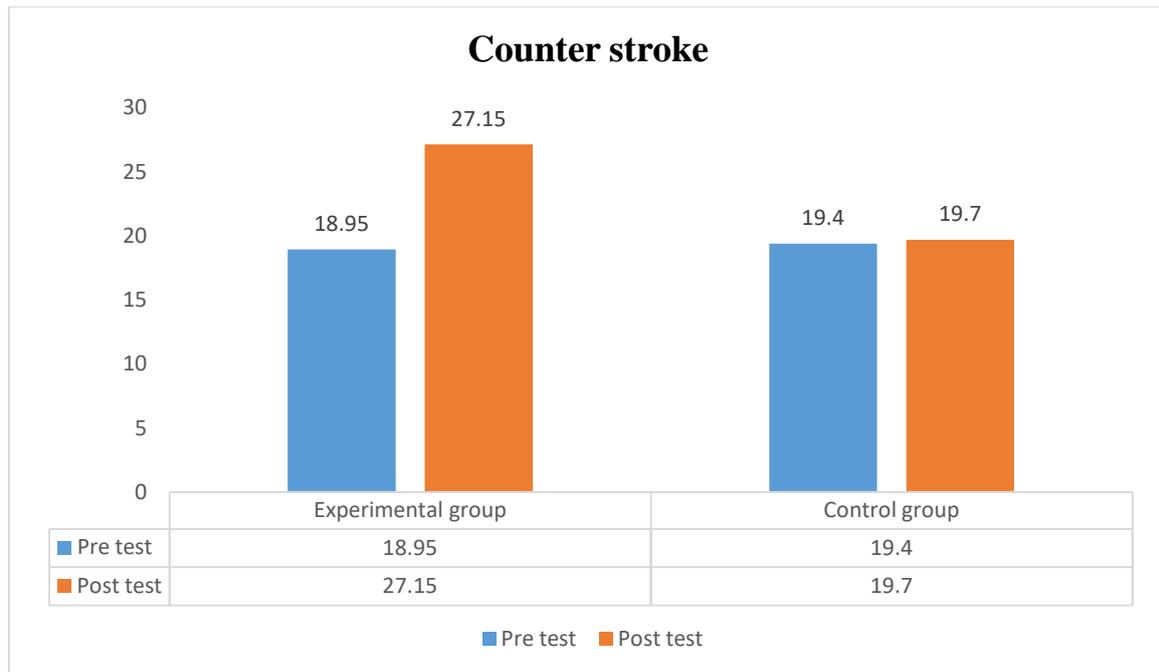


Fig III: Bar Diagram Showing the Mean Value on Counter stroke of Table Tennis Players on Experimental Group and Control Group



Discussion on Finding:

The results of this study indicated that specific drills with vision training is more efficient to bring out desirable changes over the serving ability, push stroke and counter stroke. Especially with a training duration of eight weeks, three days per week. Such improvements in skill performance variables are beneficial for table tennis players who require quick movements during their sports and these results are supported by findings from other studies. The result of this study is in line with the findings of (Basiri, 2020), (Rohadi, M., Sugiharto, S. R., 2021), (Mondal, S.,2016) and Kamalussadad, A. F., Pramono, H., & Hanani, E. S. (2022). Therefore, it was advised that methodically created drills, together with vision training, such as an eight-week training program, aid in enhancing skill performance variables, which are necessary for improved performance.

Conclusion:

Drawing upon the study's findings and considering its essential limitations, it becomes evident that the integration of specific drills with vision training has a noticeable positive influence on improving skill performance variables among table tennis players. Furthermore, significant progress was observed within the skill performance variables of the specific drills with vision training group, evident after an eight weeks period of specialized training. This solidifies the notion that this training regimen is effective in enhancing both Serving ability, Push stroke and Counter stroke.

1. It can be inferred that the personalized implementation of specific drills with vision training demonstrated statistically significant and positive effects throughout the intervention period, contributing to the improvement of skill performance variables among table tennis players.
2. It is apparent that the individualized interventions applied by the control group, while showing a positive trend and did not yield statistically significant results within the given timeframe. This applies to skill performance variables among table tennis players.
3. Upon comparison, the comparative outcomes lead to the conclusion that the skill performance variables such as serving ability, push stroke and counter stroke. Concluded that the specific drills with vision training group was better than control group. This in turns helps to develop to the table tennis players.

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