



# EFFECT OF YOGA PRACTICES ON SELECTED NEUROPSYCHOLOGICAL VARIABLES OF SWIMMING PLAYERS

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## Abstract :

The main objectives of the study is to measure the level of some selected neuropsychological variable. To prepare yoga considering its impact towards improvement of the selected variables. To evaluate the effect of Yoga intervention. Researcher hypothesized that H<sub>1</sub> – In case of Short Term Memory, there would be positively significant effect of yoga interventions on male Swimming players. H<sub>2</sub> – There would be positively significant effect of yoga interventions on Reaction Time among the male Swimming players. H<sub>3</sub> – Yoga training intervention may contribute to improve Balancing ability of the male Swimming player. The delimitation of the study was 60 male Swimming players from Pune city and there age ranged between 12 to 16 years. For the study, selected variables are short-term memory, reaction time and balance. Pre-test was applied on the experimental and control group. A yoga training-intervention was imparted for a period of six weeks on experimental group and then again post test was applied on both groups. t-test was employed to see the effect of yoga. The result of the study is insignificance difference observed in short term memory, reaction time and balance.

Keywords: Yoga, Short Term Memory, Reaction Time, Balance.

## Introduction:

Yoga, being an ancient traditional science, has multiple benefits in human. Earlier literature revealed that yoga training helps to improve various factors of health and fitness. Although such improvement in health and fitness depends upon one's neuropsychological bondage, the impact of yoga on such neuropsychological complex is not recorded. It is therefore thought desirable to undertake this research entitled, "*Effect of yoga practices on selected neuropsychological variables of swimming players*".

## Objectives

To measure the level of selected neuropsychological variable of male school level swimming players. To prepare Yoga training programme considering its impact towards improvement of the selected neuropsychological ability of the subjects. To evaluate the effect



of Yoga intervention on the selected neuropsychological attributes viz., short term memory, reaction time and balancing ability of the male Swimming players.

### **Significance**

Study highlighted the status of short-term memory, reaction time and balance of male Swimming players. This also may help to design the yoga-training schedule. The results of the study might be helpful to players to know their status of short-term memory, reaction time and balancing abilities. The result may suggest that Yoga training be included in the training schedule of swimmers.

### **Hypothesis**

H<sub>1</sub> – Researcher hypothesized that, there would be positively significant effect of yoga interventions on Short Term Memory of male Swimming players.

H<sub>2</sub> – Researcher hypothesized that There would be positively significant effect of yoga interventions on Reaction Time among the male Swimming players.

H<sub>3</sub> – Researcher hypothesized that Yoga training intervention would contribute to improve Balancing ability of the male Swimming player

### **Delimitation**

The present research 60 male Swimming players from Pune city were selected and there age ranged between 12 to 16 years. The variables for the study are short-term memory, reaction time and balance.

### **Methodology**

School level 60 Swimming male players were selected as subjects by using simple random method. Based on pre-test, researcher formed two homogeneous groups' namely experimental group and Control group. Yoga training was given to the experimental group only and no training was given to control group. Again, data was collected after six weeks training on both the groups' i.e. post-test data on short-term memory, reaction time and balance. Short-term memory was measured by using 24 CVC (Consonant Vowel Consonant) test and recorded in numbers. Reaction time was measured by adopting Ruler Drop Test and recorded in seconds and Balance was measured by adopting Y Balance test kit Test and recorded in centimeters.

### **Analysis of Data**

The data were analyzed by applying 't'-test in order to determine the significant difference among the tests score of both the groups for each variable. Level of significance was set at 0.05 level. Findings of the statistical analysis have been shown in the following table.



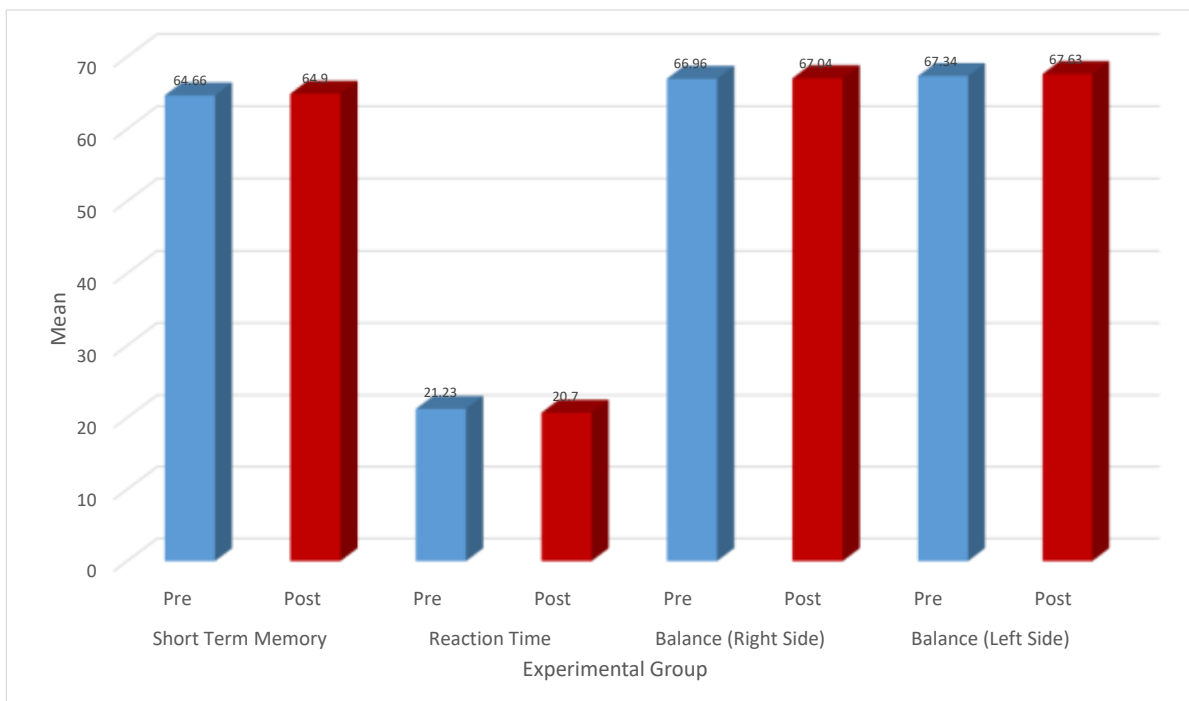
Table 1

**Summary of Mean, Standard Deviation and t-ratio for the Pre-test and Post-test Data of Experimental Group of Swimming Players**

Variable	Test	Mean	Standard Deviation	t-value
Short Term Memory	Pre	64.66	1.33	0.74 <sup>@</sup>
	Post	64.90	1.49	
Reaction Time	Pre	21.23	0.93	1.59 <sup>@</sup>
	Post	20.70	1.33	
Balance (Right Side)	Pre	66.96	0.43	0.72 <sup>@</sup>
	Post	67.04	0.50	
Balance (Left Side)	Pre	67.34	0.35	1.07 <sup>@</sup>
	Post	67.63	1.46	

@ Not Significant at 0.05 level

Tab  $t_{0.05 (29)} = 2.045$



**Figure 1: Showing Means of Pre-test and Post-test Data of Experimental Group of Swimming Players**



Table 2

**Summary of Mean, Standard Deviation and t-ratio for the Post-test Data of Control and Experimental Groups of Swimming Players.**

Variable	Group	Mean	Standard Deviation	t-value
Short Term Memory	Experimental	64.90	1.49	1.97 <sup>@</sup>
	Control	52.90	1.33	
Reaction Time	Experimental	20.70	1.33	1.78 <sup>@</sup>
	Control	24.70	1.17	
Balance (Right Side)	Experimental	67.04	0.50	1.72 <sup>@</sup>
	Control	61.09	0.40	
Balance (Left Side)	Experimental	67.03	1.46	1.98 <sup>@</sup>
	Control	62.00	1.33	

@ Not Significant at 0.05 level

Tab  $t_{0.05(58)} = 2.001$

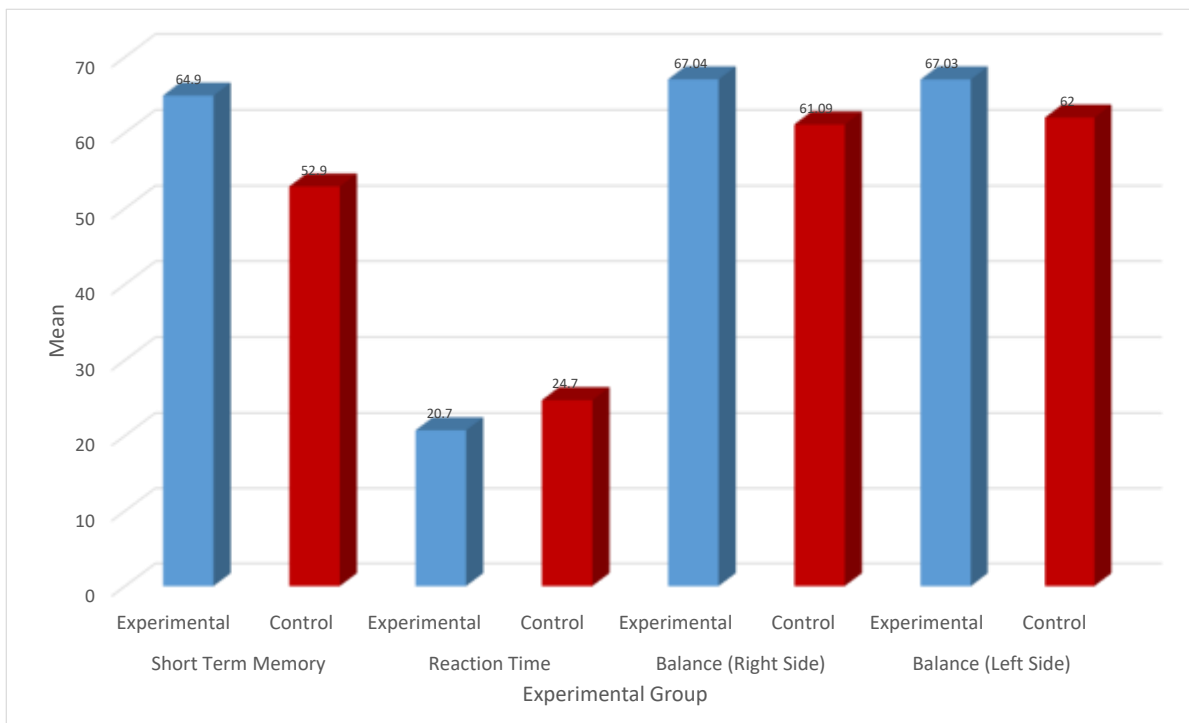


Figure 2 : Summary of Means of Post-test Data of Control and Experimental Groups of Swimming Players.

**Discussion of the Findings**

- From table-1 it reveal that, the six week yoga training showed insignificant difference in short term memory (t = 0.74), reaction time (t = 1.59), balance right side (t = 0.72)



and balance left side ( $t = 1.07$ ) in experimental group because the obtained t-values are less than the tabulated t-value 2.045 at 0.05 level and 29 degree of freedom.

- From table-2 it reveal that, the six week yoga training showed insignificant difference in short term memory ( $t = 1.97$ ), reaction time ( $t = 1.78$ ), balance right side ( $t = 1.72$ ) and balance left side ( $t = 1.98$ ) in experimental group because the obtained t-values are less than the tabulated t-value 2.001 at 0.05 level and 58 degree of freedom.

### Justification of Hypothesis

From the statistical analysis there is no significance difference found in selected variables. Researcher hypothesized earlier was not accepted.

### Conclusion-

- Insignificant effect of yoga interventions on Short Term Memory of male Swimming players in experimental group.
- Insignificant effect of yoga interventions on Reaction Time of male Swimming players in experimental group.
- Insignificant effect of yoga interventions on Balance (right and left) of male Swimming players in experimental group.
- Insignificant difference found in posttest of control and experimental groups in Short Term Memory of male Swimming players.
- Insignificant difference found in post test of control and experimental groups in Reaction Time of male Swimming players
- Insignificant difference found in post test of control and experimental groups in Balance (right and left) of male Swimming players

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