



# Effectiveness of Ashtangayoga Programme on the Memory Ability and Academic Achievement of Primary Students

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## Abstract:

*Today's in era of information & Technology, students are under a lot of stress. So they lose the concentration in what they are doing. Sometimes they can't remember what they learnt. They become lower achievers. It can be improve by yoga. The objective of the present study was "effectiveness of Patanjali Ashtangayoga programme on Primary student's memory ability and academic achievement." For that researchers prepared a twenty days programme based on Patanjali Asthanga Yoga. The daily 30 minutes workout consisted seven components: deep utterance of Aumkara, inspirational events or play based on Yama & Niyama, some exercises of Yoga relaxation, some selected yogasana, pranayama, Dharna (meditation) and Shantipath. The programme was conducted daily early in the morning before they start their study. The memory test for measuring memory ability was developed and standardized. For measurement of academic achievement the marks obtained in the six months and annual examinations were considered. Two experiments were conducted; one was on primary boys students and second was on primary girls students. There were two groups one was experimental and second was control group. The Yoga programme was implemented on experimental group only. The data were collected from both the groups of each experiment before and after implementing the yoga programme using memory test and examination scores. The data were analyzed by analysis of covariance. Conclusions of the study suggested that the present programme was significantly effective on the memory ability and academic achievement of boys and girls students.*

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**Keywords:** Academic achievement, Asana, Ashtangayoga, Effectiveness, Memory

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## 1. Introduction

Science has led the world to the peak of a volcano through its achievements. This is the reason all human beings are horrified at the very thought of world war students are also living under stress in the age of information and technology. They cannot concentrate on their study. Sometimes they cannot remember what they have learnt. Gradually they become weak in their achievements. Restoration can be brought by yoga.

The history of yoga is very ancient. The word 'Yoga' derives from the Sanskrit word. 'Yuj'. It means to consolidate, yoga is to consolidate the powers of body, mind and soul in to what is to be achieved. Yoga sutra by Patanjali is an authorized and basic source for Indian Psychology. Many solutions to control our mind are given in the Ashtangayoga by Patanjali. Yama and Niyama purify the inner conscience (mind/soul). Regular practice of Yogasana develops agility, steeliness of mind, patience and conscience. Pranayama purifies blood and vein. By razing lusts it purifies inner conscience. Pratyahar withdraws senses. Dharana makes a person active towards the goal. Dhyana can achieve concentration. Samadhi throws the external forms and enlightens him eternal.

## 2. Objectives

The main objectives of the present study are as under:

1. To prepare a Ashtanga Yoga Programme for boys and girls studying in Primary School.
2. To prepare a memory test for measuring memory ability.
3. To study the effect of yoga programme on the memory ability and academic achievement of primary students.

## 3. Null Hypotheses

Following null hypotheses were framed and tested:

**Ho<sub>1</sub>** There is no significant difference in the mean scores on the memory test between those students who were implemented yoga programme and those who were not implemented yoga programme.

**Ho<sub>2</sub>** There is no significant difference in the mean scores on the academic achievement between those students who are implemented yoga Programme and those who were not implemented yoga programme.

Above two hypotheses tested for boys and girls also.

## 3. Variables involved in the Study

Following variables were involved in the present study.

### 3.1 Independent Variables

1. Yoga Programme (There were two levels of Yoga programme)
2. Treatment of Yoga programme
3. No treatment of Yoga Programme

### 3.2 Dependent Variables

1. Memory ability
2. Academic achievement

### 3.3 Controlled Variables

1. Effect of following two variables were control while experimentation
2. The standard of study
3. School environment

### 3.4 Moderator Variables

1. Sex was the moderator variable of the present study
2. Two experiments: One was on boys and another was on girls were carried out

### 3.5 Intervening Variables

1. It was assume that following variable might be affected
2. The difference in inter-personality of students
3. Interest and enthusiasm towards yoga
4. The demonstration ability of a yoga teacher

## 4. Research Method

Experimental research method was selected for studying the effect of independent variable on two dependent variables. In the present study as a research method randomized two groups, pre-test post-test experimental research design was utilized which is presented as follow:

**Table 1. Randomized two groups, pre-test post-test experimental design**

Randomized Group	Pre-test	Independent Variable (treatment)	Post-test
Experimental	T <sub>1</sub>	Implementation of Yoga Programme	T <sub>2</sub>
Control Group	T <sub>1</sub>	No implementation of Yoga Programme	T <sub>2</sub>

By using above experimental research design two experiments; (one on boys and another on girls) were conducted. For the measuring memory ability the same memory test (as T<sub>1</sub> and T<sub>2</sub>) was conducted on the subjects of the experiments. For the measuring academic achievement as T<sub>1</sub>, total score on six monthly examinations was considered and as T<sub>2</sub> total score on annual examination was considered.

### 5. Area of Research

The area of present research was health education.

### 6. Type of Research

This was an applied and quantitative type of research.

### 7. Ashtanga Yoga Programme

A twenty days yoga programme of 30 minutes each day was prepared. This programme was prepared by (1) studying the theoretical literature on yoga (2) discussion with yoga experts and (3) piloting on some students. The following components were included in this yoga programme.

**Table 2. Ashtanga Yoga Programme**

No.	Components	Time
1.	Deep utterance of Aomkara (3 time)	2 Minutes
2.	Inspirable events or play based on Yama & Niyama	3 Minutes
3.	Some exercises of yoga relaxation	4 Minutes
	Deep utterance of Aomkara (1 times)	1 Minutes
4	Some selected yogasana	10 Minutes
5	Pranayama	5 Minutes
6	Dharana (meditation)	4 Minutes
7	Shantipath	1 Minutes
	Total	30 Minutes

The programme was implemented on experimental group of students in the morning before they start their study.

### 8. Tools for Collecting Data

The memory test was developed for measuring dependent variable memory ability, involved in the study. There were three sub-tests in the memory test.

1. Picture retention test.
2. Shape & colour identify test
3. Event -picture test.

For measuring second dependent variable (academic achievement) score on six- monthly and annual examination were obtained.

### 9. Sampling

The population of the present study was primary students of Rajkot District's Gujarati Medium Government School. One co-educational primary school was selected for the study. Two groups, fifteen students in each, were selected randomly in both the experiments. One group considered experimental and another was controlled group.

### 10. Implementation of Experiments

Two experiments were conducted. First was on boys and second was on girls. There were two groups in each experiment. One was experimental group and another was controlled group. Experimental group treated with yoga programme and controlled group was not treated with yoga programme. Before and after treatment of yoga programme, pre tests and post tests given to the subjects of each group and scores of dependent variables were collected.

### 11. Analysis and Interpretation of Data

After experimentation collected data on dependent variables were analyzed by using analysis of co-variance. Analyses are presented in various tables. In these tables, sequence of data is source of variance of Adjusted SS, adjusted MS and F value. The adjusted means of experimental group and controlled group are also reported.

**Table 1**  
**Effect of Yoga Programme on Memory Ability of Primary Boys Students**

Source of Variance	df	Adj. ss	Adj. ms	F-Value
Between group	1	81.202	81.202	18.624** (Sign. at 0.01 level)
Within group	27	117.747	4.361	
Total	28	198.949		
<b>Experimental group</b>			<b>Control group</b>	
Number	15		15	
Adjusted	14.45		11.15	

Table 1 suggested that obtained F-value is significant at 0.01 level. The mean of experimental group is higher than the mean of controlled group.

**Table 2**  
**Effect of Yoga Programme on Memory Ability of Primary Girls Students**

Source of Variance	df	Adj. ss	Adj. ms	F-Value
Between group	1	98.735	98.735	20.734** (Sign. at 0.01 level)
Within group	27	128.571	4.762	
Total	28	227.306		
<b>Experimental group</b>			<b>Control group</b>	
Number	15		15	
Adjusted	13.78		10.15	

Analysis reported in Table 2 suggested that same result accrued for girls students also. So null hypothesis no.1 is rejected for boys and girls. It can be concluded that yoga programme is effective for increasing memory ability of primary students.

**Table 3.**  
**Effect of Yoga Programme on Academic Achievement of Primary Boys Students**

Source of Variance	df	Adj. ss	Adj. ms	F-Value
Between group	1	4418.265	4418.265	102.383** (Sign. at 0.01 level)
Within group	27	1165.168	43.154	
Total	28	5583.433		
<b>Experimental group</b>			<b>Control group</b>	
Number	15		15	
Adjusted	402.379		377.888	

Table 3 suggested that obtained F-value is significant at 0.01 level. The mean of experimental group is higher than the mean of controlled group.

**Table 4.**  
**Effect of Yoga Programme on Academic Achievement of Primary Girls Students**

Source of Variance	df	Adj. ss	Adj. ms	F-Value
Between group	1	3971.913	3971.913	57.031** (Sign. at 0.01 level)
Within group	27	1880.423	69.645	
Total	28	5852.336		
<b>Experimental group</b>			<b>Control group</b>	
Number	15		15	
Adjusted	400.26		376.21	

Analysis reported in Table-4 suggested that same result obtained for girls students also. So null hypothesis no.2 is rejected for boys and girls. It can be concluded that yoga programme is effective for increasing academic achievement.

## 12. Implications

Yoga Programme should be used to develop memory power and to get higher achievement in academic subjects at school level. The principal should introduce Yoga Programme in regular time table. Parents should take care for their children to take interest towards Yoga in routine life.

## 13. Conclusions

Very important results were found from the present study.

1. Systematic yoga programme based on Patanjali Ashtanga Yoga increases the memory ability of boys and girls students of primary schools.
2. This Yoga programme also helps to increase the academic achievement of students of both the sexes of primary schools.

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