



EFFECT OF YOGIC INTERVENTION ON VARIOUS DIMENSION OF MEMORY AMONG 21 TO 25 YEARS MALE PARTICIPANTS

Devarshi H. Trivedi

(M.Sc. in Ashtanga Yoga)
Research Scholar
Lakulish Yoga University
Ahmedabad, Gujarat
Email : dehit.yoga@gmail.com

Abstract

The main aim of the present research is to study the effect of yogic intervention on the various sub test of memory. For this research twenty 21 to 25 years male participants were randomly selected from the different yogic centers of Ahmedabad city. P.6.I. Memory scale by Pershad and N. N. Wig was used for data collection. To analyze the data t test was used. Results indicate the yogic intervention could significantly help in increasing remote memory, recent memory, mental balance attention concentration, delay recall, immediate recall, and retention to similar pair, dissimilar pair, visual retention and recognition among 21 to 25 years participants.

INTRODUCTION

Yoga is to the spiritual discipline that includes meditation, exercises, physical postures, breathing techniques. Yoga is a science that harnesses the innate capability of the body to improve its power and functioning. It is done to improve physical health, mental health, relaxation, and overall well-being of the individual. The practice of yoga is, indeed, very much about disciplining the body and mind. Those who practice yoga regularly find that they are in greater control of their thoughts and emotions. It paves way for healthier life and is considered an easy way to stay fit, that other forms of exercise. Yoga and meditation often go hand in hand. A study done by the University of Pennsylvania found that even a few minutes of daily meditation could improve the practitioner's focus and performance. The level of memory can depend on the activity of the brain. The yoga techniques are to stimulate the brain and nervous system, which in turn improves memory and concentration. Dharna, the sixth limb of yoga is a state of focus attained through asana, pranayama and mediation practices and the memory is the power to store experiences and to bring them into the field of consciousness sometime after the experience and to bring them into the field of consciousness sometime after the experience has occurred. Out mind has the power of conserving experiences and mentally receiving them whenever such an analysis of it reveals involvement of three different activities are learning, retention and remembering. Learning may be by any of the methods like imitation, verbal, motor, conceptual, trial and error, insight, etc. Hence, whatever may be the type of learning; we much pay our attention to retain what is learnt.

Memory is something that all humans have experienced, yet it is not easy to explain, define, or understand. Humans can remember some childhood experiences for decades; other times, they struggle to remember a phone number only seconds after reading it. This lesson will explain how memory works, the three types of memory, and its three stages. But first, let us define the term "memory."

According to most psychologists, memory is defined as an organism's ability to acquire, store, retain, and eventually retrieve information. For humans, short-term memories last anywhere from 18-30 seconds, while long-term memories can last decades.

Psychologists often refer to three types of memory: sensory, short-term, and long-term. These are also sometimes referred to as stages of memory. But regardless of how memories are classified, the three types of memory deal with differences in how humans encode memory and how long they recall them.

The three types of memory fit the general definition of memory; they deal with an organism's ability to acquire, store, retain, and eventually retrieve information. But how those memories are acquired, stored, retained, and retrieved is a slightly different topic. Psychologists usually refer to this as the stages of memory.

The three stages are encoding, storage, and retrieval. For example, even a simple memory, like whether you have taken your morning medicine, is something that must be encoded (while taking the pill), stored (so that it can be recalled), and retrieved (later in the day). An inability to perform one of these three stages could result in a person repeatedly taking the same medicine. The three stages of memory are essential to everyday life.



REVIEW OF LITERATURE

Tiwari, 2015 research on how yoga practices affect students' levels of memory, focus, and exam stress. A total of 200 students made up the sample. It was evident from the results that practicing yoga improved memory. Positive increases in the degree of concentration were also observed. The stress level related to the exam decreased. This gave rise to the idea that regular yoga practice would benefit students greatly.

Crooks et al., (1991) results reveals that memory is an ability to recall or remember past events or previously learnt information or skills. A power of recalling (memory) are the major factors in learning. The term "Memory" has a dual meaning. It refers to the process or processes whereby we store and preserve newly required information for later recall.

Sheela Joice P. P., (2018) says that the authors suggest that one of the best strategies for improving academic performance is expanding the use of yoga techniques in medica colleges as the daily yoga practice for a short duration helps to improve attention, concentration and memory of medical students.

Eyre H. A., et al., (2016) Reduced the stress level of students in examination time and its also irrespective of sex. Even in this respect the scientists given the same importance to yoga as MET (memory enhancement training).

Samajdar & Mukherjee et al., (2020) 45 athletes participated in the prospective study, which was split into three study arms of 15. Two of the arms practiced regular meditation with or without the addition of GM Chanting, while the third arm served as a control group. All subjects underwent evaluations (at baseline and after three months) for mental state using the MMSE, anxiety using the state trait anxiety inventory, memory using the digit span test (forward, backward), and attention using the six-letter cancellation and substitution method. Statistics were used to analyze the results. The attention and memory domains significantly improved in subjects who practiced guided meditation. It was observed that the GM group made fewer mistakes and responded faster to both visual and auditory cues when using the multiple-choice apparatus. The digit cancellation test requires sustained visual attention, distraction- free scanning, and improved focus. The GM chanters showed significant improvements in their anxiety, both in terms of state and trait. When compared to the control group, both meditation groups showed improved mental health.

P et al., (2018) The purpose of this study is to assess how yoga affects medical students' focus, attention span, and memory. both the population and the sample For the study, a total of 100 aggressive medical students between the ages of 17 and 23 were taken into consideration. They received 12-week yoga training, and before and after the intervention at Annapoorna Medical College, Salem, Tamil Nadu, India. their attention, concentration, and memory were evaluated using the Postgraduate Institute memory scale. Experimental Research Method Sampling Method used. Postgraduate Institute memory scale used for Data Analysis. When comparing the yoga group's attention, concentration, and memory to the control group, the results

STATEMENT OF PROBLEM

In present research researcher has tried to know the effect of Yogic Intervention on various dimensions of memory such as Remote Memory, Recent Memory, Mental Balance, Attention Concentration, Delayed Recall, Immediate Recall, Retention for Similar Pair, Retention for dissimilar pair, Visual Retention, Recognition among 21 to 25 years Male participants. The exact problem of the present research is "Effect of Yogic Intervention on various dimension of memory among 21 to 25 years male participants."

OBJECTIVE

The main objective of the present research is to study the effect of Yogic Intervention on various dimensions of memory such as Remote Memory, Recent Memory, Mental Balance, Attention Concentration, Delayed Recall, Immediate Recall, Retention for Similar Pair, Retention for dissimilar pair, Visual Retention, Recognition among 21 to 25 years male participants.

HYPOTHESIS

There is no significant effect of Yogic Intervention on various dimensions of memory such as Remote Memory, Recent Memory, Mental Balance, Attention Concentration, Delayed Recall, Immediate Recall, Retention for Similar Pair, Retention for dissimilar pair, Visual Retention, Recognition among 21 to 25 years male participants.

SAMPLE

In present research Twenty, 21 to 25 years age group of participants were randomly selected from different Yoga Center of Ahmedabad City.

- **Inclusion Criteria**

1. Participants were selected between the age group of 21 to 25 years only.



2. Participants were selected who wants to participants voluntarily in this research.
3. Participants were selected from the Yoga Classes of Ahmedabad City.
- **Exclusive Criteria**
1. Participants with diagnosed any chronic physical and mental illness.
2. Incomplete scale was excluded.
3. Participants of other than Ahmedabad were excluded.

RESEARCH DESIGN

In present research in single group pre and post research design were used.

Variable of the Study

- **Independent Variables**

In present research yogic practice were taken as an independent variable.

- **Dependent Variables**

In present research scores of various dimensions of memory such as Remote Memory, Recent Memory, Mental Balance, Attention Concentration, Delayed Recall, Immediate Recall, Retention for Similar Pair, Retention for dissimilar pair, Visual Retention and Recognition were taken as an dependent variables.

Tools for Data Collection

In present research P.G.I. Memory Scale by D. Pershad and N.N. Wig. Scale were used for data collection.

PGI Memory Scale contains ten sub-tests.

1. Remote Memory
2. Recent Memory
3. Mental Balance
4. Attention Concentration
5. Delayed Recall
6. Immediate Recall
7. Retention for Similar Parts
8. Retention for Dissimilar Pairs
9. Visual Retention
10. Recognition

- **Reliability**

So far reliability of the Scale is concerned, It was re-administered on 40 subjects after and interval of one week. The test-retest reliability ranged between .70 and .84 for organic-psychotic groups, .48 and .84 for 'neurotic-normal' group. Mean differences were not significant for many of the sub-tests (Pershad, 1977). On the whole however, an increase of 4 points was observed on repeated testing. For these two groups split half reliability was found to be .91 and .83 respectively.

- **Validity**

PGI Memory Scale (PGIMS) was found to have a correlation of .71 with Boston Memory Scale and .85 with Wechsler Memory Scale.

- **Administration**

Administration of the test is simple and similar to other memory tests and clinical evaluation of memory. Broad hints for administration are provided in test blank itself. It is however, advised to consult the Bhargava Research Monograph Series No. 2 (Pershad, 1977) for more details. Administration takes nearly 15-20 minutes.

Procedure for Data Collection

Data collection of present research was done in two phase.

In first phase of research after establishing the rapport with participant P.G.I. memory scale was administered in small manageable group of participant and after completion of data collection of first phase scoring was done as per the manual of scale.

In second phase of the research four days in a week daily 50 minute for 4 months yogic practice was given in small manageable group of participants. After completion of the yogic practice for 4 months again P.G.I. memory scale was administered to selected participants.

Scoring of each scale was done as per the scoring key of the scale. Data of both phase was arranged in tabulated form for data analysis.

Statistical Analysis

To find out the effect of yogic practice on various dimensions of P.G.I. Memory Scale such as Remote Memory, Recent Memory, Mental Balance, Attention Concentration, Delayed Recall, Immediate Recall, Retention for Similar Pair, Retention for dissimilar pair, Visual Retention and Recognition of various group of participants means, SD and 't' test was used. Each hypothesis was tested at 0.01 and 0.05 level of significant.

RESULTS AND DISCUSSION

Table – 1
Mean SD and t value of Pre and Post Yogic Intervention on
Various sub test of Memory among 21 to 25 years male

Sub Test	Group	N	Mean	SD	t value	Level of Significance
Remote Memory	Pre	20	4.95	1.39	3.80	0.01
	Post	20	5.90	0.31		
Recent Memory	Pre	20	4.30	1.08	2.90	0.01
	Post	20	5.00	0.00		
Mental Balance	Pre	20	3.05	2.04	11.71	0.01
	Post	20	5.75	1.97		
Attention Concentration	Pre	20	4.85	1.42	16.05	0.01
	Post	20	8.55	1.23		
Delayed Recall	Pre	20	6.80	1.91	11.10	0.01
	Post	20	10.50	1.93		
Immediate Recall	Pre	20	6.00	1.62	9.37	0.01
	Post	20	9.35	1.14		
Retention for Similar Pair	Pre	20	4.95	1.85	11.86	0.01
	Post	20	9.10	2.00		
Retention for dissimilar Pair	Pre	20	4.10	1.12	3.60	0.01
	Post	20	5.00	0.00		
Visual Retention	Pre	20	5.35	1.63	10.50	0.01
	Post	20	10.00	1.97		
Recognition	Pre	20	4.20	2.67	10.81	0.01
	Post	20	8.20	2.98		

The results of Table No. 1 show that t value of pre and Post Yogic Intervention on various sub scales of memory of 21 to 25 years male participants.

In these table the t value of Pre and Post Yogic Intervention on Remote memory of 21 to 25 years male participants is 3.80. The mean scores of Remote memory of 21 to 25 years male participants were 4.85 and 5.90 respectively on Pre and Post Yogic Intervention with SD 0.39 and 0.31. The results indicates that mean scores of Pre and Post Yogic Intervention on remote Memory among 21 to 25 years male participants were significantly differ at 0.01 level. So, the null hypothesis “There is no significant effect of Yogic Intervention on remote memory among 21 to 25 years male participants” is rejected. So, the significant effect of Yogic Intervention is found on remote memory among 21 to 25 years male participants it indicates that Yogic Intervention could significantly help in increasing remote memory among 21 to 25 years male participant.

In these table the t value of Pre and Post Yogic Intervention on Recent memory of 21 to 25 years male participants is 2.90. The mean scores of Recent memory of 21 to 25 years male participants were 4.30 and 5.00 respectively on Pre and Post Yogic Intervention with SD 1.08 and 0.00. The results indicates that mean scores of Pre and Post Yogic Intervention on Recent Memory among 21 to 25 years male participants were significantly differ at 0.01 level. So, the null hypothesis “There is no significant effect of Yogic Intervention on recent memory among 21 to 25 years male participants” is rejected. So, the significant effect of Yogic Intervention is found on recent memory among 21 to 25 years male participants it indicates that Yogic Intervention could significantly help in increasing recent memory among 21 to 25 years male participant.

In these table the t value of Pre and Post Yogic Intervention on Mental Balance of 21 to 25 years male participants is 11.71. The mean scores of Mental Balance of 21 to 25 years male participants were 3.05 and 5.75 respectively on Pre and Post Yogic Intervention with SD 2.04 and 1.97. The results indicates that mean scores of Pre and Post Yogic Intervention on Mental Balance among 21 to 25 years male participants were significantly differ at 0.01 level. So, the null hypothesis “There is no significant effect of Yogic Intervention on Mental Balance among 21 to 25 years male participants” is rejected. So, the significant effect of Yogic Intervention is found on Mental Balance among 21 to 25 years male participants it indicates that Yogic Intervention could significantly help in increasing Mental Balance among 21 to 25 years male participant.

In these table the t value of Pre and Post Yogic Intervention on Attention Concentration of 21 to 25 years male participants is 16.05. The mean scores of Attention Concentration of 21 to 25 years male participants were 4.85 and 8.55 respectively on Pre and Post Yogic Intervention with SD 1.42 and 1.23. The results indicates that mean scores of Pre and Post Yogic Intervention on Attention Concentration among 21 to 25 years male participants were significantly differ at 0.01 level. So, the null hypothesis “There is no significant effect of Yogic Intervention



on Attention Concentration among 21 to 25 years male participants” is rejected. So, the significant effect of Yogic Intervention is found on Attention Concentration among 21 to 25 years male participants it indicates that Yogic Intervention could significantly help in increasing Attention Concentration among 21 to 25 years male participant. In these table the t value of Pre and Post Yogic Intervention on Delayed Recall of 21 to 25 years male participants is 11.10. The mean scores of Delayed Recall of 21 to 25 years male participants were 6.80 and 10.50 respectively on Pre and Post Yogic Intervention with SD 1.91 and 1.93. The results indicates that mean scores of Pre and Post Yogic Intervention on Delayed Recall among 21 to 25 years male participants were significantly differ at 0.01 level. So, the null hypothesis “There is no significant effect of Yogic Intervention on Delayed Recall among 21 to 25 years male participants” is rejected. So, the significant effect of Yogic Intervention is found on Delayed Recall among 21 to 25 years male participants it indicates that Yogic Intervention could significantly help in increasing Delayed Recall among 21 to 25 years male participant.

In these table the t value of Pre and Post Yogic Intervention on Immediate Recall of 21 to 25 years male participants is 9.37. The mean scores of Immediate Recall of 21 to 25 years male participants were 6.00 and 9.35 respectively on Pre and Post Yogic Intervention with SD 1.62 and 1.14. The results indicates that mean scores of Pre and Post Yogic Intervention on Immediate Recall among 21 to 25 years male participants were significantly differ at 0.01 level. So, the null hypothesis “There is no significant effect of Yogic Intervention on Immediate Recall among 21 to 25 years male participants” is rejected. So, the significant effect of Yogic Intervention is found on Immediate Recall among 21 to 25 years male participants it indicates that Yogic Intervention could significantly help in increasing Immediate Recall among 21 to 25 years male participant.

In these table the t value of Pre and Post Yogic Intervention on Retention for Similar Pair of 21 to 25 years male participants is 11.86. The mean scores of Retention for Similar Pair of 21 to 25 years male participants were 4.95 and 9.10 respectively on Pre and Post Yogic Intervention with SD 1.85 and 2.00. The results indicates that mean scores of Pre and Post Yogic Intervention on Retention for Similar Pair among 21 to 25 years male participants were significantly differ at 0.01 level. So, the null hypothesis “There is no significant effect of Yogic Intervention on Retention for Similar Pair among 21 to 25 years male participants” is rejected. So, the significant effect of Yogic Intervention is found on Retention for Similar Pair among 21 to 25 years male participants it indicates that Yogic Intervention could significantly help in increasing Retention for Similar Pair among 21 to 25 years male participant.

In these table the t value of Pre and Post Yogic Intervention on Retention for Dissimilar Pair of 21 to 25 years male participants is 3.60. The mean scores of Retention for Dissimilar Pair of 21 to 25 years male participants were 4.10 and 5.00 respectively on Pre and Post Yogic Intervention with SD 1.12 and 0.00. The results indicates that mean scores of Pre and Post Yogic Intervention on Retention for Dissimilar Pair among 21 to 25 years male participants were significantly differ at 0.01 level. So, the null hypothesis “There is no significant effect of Yogic Intervention on Retention for Dissimilar Pair among 21 to 25 years male participants” is rejected. So, the significant effect of Yogic Intervention is found on Retention for Dissimilar Pair among 21 to 25 years male participants it indicates that Yogic Intervention could significantly help in increasing Retention for Dissimilar Pair among 21 to 25 years male participant.

In these table the t value of Pre and Post Yogic Intervention on Visual Retention of 21 to 25 years male participants is 10.50. The mean scores of Visual Retention of 21 to 25 years male participants were 5.35 and 10.00 respectively on Pre and Post Yogic Intervention with SD 1.63 and 1.97. The results indicates that mean scores of Pre and Post Yogic Intervention on Visual Retention among 21 to 25 years male participants were significantly differ at 0.01 level. So, the null hypothesis “There is no significant effect of Yogic Intervention on Visual Retention among 21 to 25 years male participants” is rejected. So, the significant effect of Yogic Intervention is found on Visual Retention among 21 to 25 years male participants it indicates that Yogic Intervention could significantly help in increasing Visual Retention among 21 to 25 years male participant.

In these table the t value of Pre and Post Yogic Intervention on Recognition of 21 to 25 years male participants is 10.81. The mean scores of Recognition of 21 to 25 years male participants were 4.20 and 8.20 respectively on Pre and Post Yogic Intervention with SD 2.67 and 2.98. The results indicates that mean scores of Pre and Post Yogic Intervention on Recognition among 21 to 25 years male participants were significantly differ at 0.01 level. So, the null hypothesis “There is no significant effect of Yogic Intervention on Recognition among 21 to 25 years male participants” is rejected. So, the significant effect of Yogic Intervention is found on Recognition among 21 to 25 years male participants it indicates that Yogic Intervention could significantly help in increasing Recognition among 21 to 25 years male participant.

CONCLUSIONS

- Yogic Intervention could significantly help in increasing remote memory among 21 to 25 years male participant.
- Yogic Intervention could significantly help in increasing recent memory among 21 to 25 years male participant.



- Yogic Intervention could significantly help in increasing Mental Balance among 21 to 25 years male participant.
- Yogic Intervention could significantly help in increasing Attention Concentration among 21 to 25 years male participant.
- Yogic Intervention could significantly help in increasing Delayed Recall among 21 to 25 years male participant.
- Yogic Intervention could significantly help in increasing Immediate Recall among 21 to 25 years male participant.
- Yogic Intervention could significantly help in increasing Retention for Similar Pair among 21 to 25 years male participant.
- Yogic Intervention could significantly help in increasing Retention for Dissimilar Pair among 21 to 25 years male participant.
- Yogic Intervention could significantly help in increasing Visual Retention among 21 to 25 years male participant.
- Yogic Intervention could significantly help in increasing Recognition among 21 to 25 years male participant.

REFERENCES

1. Crooks, R. L. and Stein, J. (1991). Psychology, Science, Behaviour and Life. London, Halt Rinchart and Winston INC.
2. Eyre H.A., Acevedo B., Yang H., Siddarth P., Dyk K.V., Ercoli L. Leaver A. M. Cyr N.S., Narr K., Baune B. T., Khlasa D. S., Lavretsky H. (2016) "Changes in Neural Connectivity and Memory Following a Yoga Intervention for Older Adults: A Pilot Study Journal of Alzheimer's Disease" 52 673-684.
3. P, S., Manik, K., & K, S. (2018). "Role of yoga in attention, concentration, and memory of medical students". National Journal of Physiology, Pharmacy and Pharmacology, 8(9), 1526. <https://doi.org/10.5455/njppp.2018.8.0723521082018>
4. Samajdar, S. S., & Mukherjee, S. (2020). "Effect of Gayatri Mantra Chanting on Attention, Memory, Anxiety and Mental State in Young Athletes: A Prospective Study". International Journal of Current Research in Physiology and Pharmacology, 5-7. <https://doi.org/10.31878/ijcrpp.2020.43.02>
5. Sheela Joice P.P., Manik K.A., Sudhir P. K. (2018). "Role of Yoga in attention, concentration and memory of medical students", National Journal of Physiology, Pharmacy and Pharmacology, , Vol 8, Issue 11 : 1526-1528.
6. Tiwari, D. R. K. (2015). "Benefits of Yoga Practices on High school student"s memory and concentration in relation to Examination stress". 4(2).