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## **Effectiveness of Bacopa Monnieri mother tincture in improving memory of individuals with memory complaints above 15 years of age using memory complaint scale - A case series**

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### **Abstract**

This case series investigated the effectiveness of the Bacopa Monnieri (Brahmi Q) mother tincture, in alleviating memory complaints among individuals aged 15 years and above. Conducted over six months in Nashik, the study involved a sample of 15 participants whose memory was assessed using the Memory Complaint Scale (MCS). The results of a paired *t*-test demonstrated a highly statistically significant improvement in memory complaint scores after treatment ( $p$ -value:  $8.8451 \times 10^{-8}$ ). The mean percentage improvement was 47.15%, with a large effect size (Cohen's  $d_z = 2.5934$ ). The findings suggest that Bacopa Monnieri mother tincture is effective and a viable therapeutic option for improving memory complaints.

### **Introduction: Addressing the Burden of Memory Impairment**

Memory, a crucial faculty of the brain, involves the encoding, storage, and retrieval of information. Memory Impairment is a widespread issue, with millions suffering globally. It is characterized by a reduced ability to recall details like names and dates, leading to increased forgetfulness. While memory problems are typically associated with aging, studies also note a prevalence of Subjective Memory Complaints (SMC) in young adults. Furthermore, Mild Cognitive Impairment (MCI) is considered a prodromal phase of dementia. Conventional medicine currently offers no definitive treatment for MCI. Homoeopathy offers an alternative approach. *Bacopa Monnieri*, commonly known as Brahmi, is an herb used in Ayurvedic medicine for nearly 3000 years to manage mental conditions, including poor cognition and lack of concentration. This study aimed to validate the traditional use of *Bacopa Monnieri* in its homoeopathic mother tincture (Q) form for addressing memory complaints.

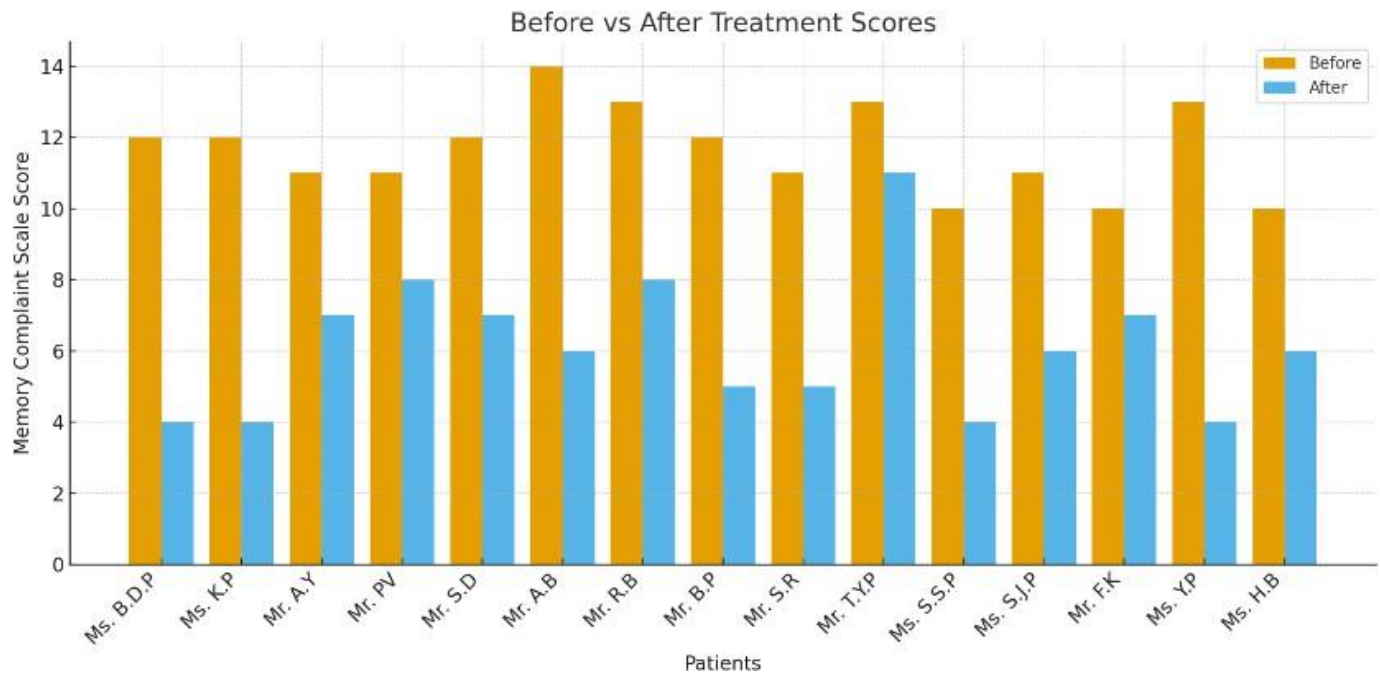
### **Materials and Methods**

The research utilized a case series design. Study Setting and Duration: The study was performed at the Outpatient and Inpatient Departments (OPD/IPD) of Motiwala National Homoeopathic Medical College and Hospital, Nashik, over a period of six months. Sample: 15 patients with memory complaints, aged above 15 years, were included. They had to score Moderate (7-10) or Severe (11-14) on the Memory Complaint Scale (MCS). Intervention (Rx): All participants were treated with Bacopa Monnieri mother tincture (Brahmi Q). Dosage: 10-15 drops in half a cup of water, twice a day (B.D.). Follow-up: Minimum of six follow-ups were taken, each within 15-30 days. Outcome Measurement: The Memory Complaint Scale (MCS), a patient-answered questionnaire, was applied at the beginning of the treatment and re-applied after the 6th follow-up. Data analysis used a paired *t*-test.

### **Results and Discussion**

The study demonstrated a strong positive effect of the Bacopa Monnieri mother tincture on memory

complaints.



Statistical Efficacy

The statistical analysis provided compelling evidence to support the alternative hypothesis:

Statistic	Value	Interpretation
t-statistic	10.0441	High t-value indicates a large difference between pre- and post-scores.
p-value	$8.8451 \times 10^{-8}$ ( $p < 0.001$ )	Highly statistically significant improvement. The Null Hypothesis was rejected.
Effect Size (Cohen's dz)	2.5934	Indicates a large and clinically meaningful improvement.
Mean % Improvement	47.15%	The average memory complaint score improved substantially.

### Secondary Finding: Sex Distribution

The secondary objective was to find which sex suffers more from memory complaints in the study sample:

Sex	Percentage of Sample with Complaints
Males	60%
Females	40%

The data indicated that, within this study's sample, males suffered more from memory complaints than females.

### Clinical Improvement (Beyond MCS)

In addition to memory, the remedy was observed to improve associated complaints in patients, including:

Lack of concentration, Anxiety, Confusion of mind, Irritability, Dullness, morose, and tired feeling, Restlessness, Aversion to study, Headache with a throbbing/pulsating sensation, Sleeplessness or disturbed sleep, Drowsiness, Generalized weakness, Palpitations with anxiety

### **Conclusion**

The research successfully demonstrated that Bacopa Monnieri (Brahmi Q) mother tincture is highly effective and statistically significant in improving memory complaint scores in individuals aged 15 and above. The substantial mean improvement of 47.15% and the large effect size confirm that this homoeopathic remedy provides a positive, meaningful, and non-conventional alternative for enhancing cognitive function and managing subjective memory complaints.

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