

# Concept of *Smriti* (Memory), Influencing Factors and Enhancing Tools: A Review

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## ABSTRACT

Causes of diseases are well narrated in Ayurvedic texts. Intellectual error is identified as major cause of diseases and its role in the manifestation of psychosomatic diseases is well explained in Charaka Samhita. *Smriti* is the faculty of mind that plays an important role in perception of knowledge. It is one of the components of *Pragya* according to Ayurveda. It is the recalling capacity of the knowledge which is perceived by the brain from past experiences. The *Smriti* is determined by various factors like *Prakriti*, age, *Ahara-vihara*, repetition of events etc. The consideration of all the factors can provide better knowledge to improve *smriti*. If the person is not able to grasp or retain the present events or experiences, it is known as *Smritivibhransha*. Modern science considers various components of memory which includes recent & past concentration, recalling, retention and recognition. Memory is the ability of an individual to record sensory stimuli, events, information, etc., retain them over short or long periods of time and recall the same at a later date when needed. Poor memory, lower retention and slow recall are common problems in today's stressful life. Age, faulty diet, stress, emotions and other factors may lead mild cognitive impairment to memory loss.

Ayurvedic science deals with various Herbo-mineral preparations & procedures mentioned for excellence of memory.

**Keywords:** *Smriti*, *Smritivibhransha*, memory, *Pragya*, Ayurveda protocols

## INTRODUCTION

Cognitive disorders are mental disorders characterized by impaired cognitive abilities and daily functioning in which biological causation is either known or presumed. They involve disturbance in thinking or memory that represent a marked change from the individual's prior level of functioning.<sup>[1]</sup> Cognitive impairment is one of the common neuro-cognitive conditions among the elderly. Recent health and aging study reported that 34% of the elderly population suffers from cognitive impairment.<sup>[2]</sup> Cognitive impairment among the elderly varies from mild cognitive decline to a severe form of disease. The prevalence of cognitive

reduction among the elderly is reported to vary from 6.7% to 25.2%. It also contributes to poor mental health and increases the risk of psychological disorders etc. In current era all age groups suffer from neuro-cognitive conditions.<sup>[3]</sup>

Ayurveda and Yoga are ancient spiritual sciences which are effective in improving cognitive functions. Fundamental objective of Ayurveda is not limited only to prevention and cure of the diseases but to provide bliss for complete happiness by maintaining total health called *chaturvidha purushartha* i.e., *Dharma* (virtuous Acts), *Artha* (Possessing appropriately required wealth with judicious means), *Kama* (Gratification of Desires), *Moksha*

(Emancipation/Salvation).<sup>[4]</sup> It deals with the whole life of human being starting from birth to end of life because Ayurveda describes the art of living and it is a science of life that reveals what is appropriate as well as auspicious for a happy and long life. In Ayurvedic text, life is a combination of senses, mind, body and soul.<sup>[5]</sup> Ayurveda is not only limited to body or physical symptoms but also give comprehensive knowledge about spiritual, mental and social health. Thus, Ayurveda is a qualitative, holistic science of health and longevity, a philosophy and system of healing the whole person, body and mind.

The mind-body connection is very important in Ayurveda. Ayurveda gives prime importance to positive mental health. Physical imbalances can disturb the mental state while mental illness leads to disruption of body functions.<sup>[6]</sup>

According to Chakrapani, Prajna is the knowledge, which is having three faculties as Dhi, Dhriti and Smriti. Psychological disorders are directly connected to Dhi (intellect), Dhriti (processing information) and Smriti (memory).<sup>[7]</sup> The 'Dhi' is the intelligence which helps to learn, focus and understand. The Vata dosha should be balanced for the optimal functioning of Dhi. 'Dhriti' involves the chemical and electrical processing of information and is therefore related to Pitta dosha. 'Smriti' is the ability to remember. Kapha dosha should be balanced for proper functioning of Smriti. Prajna is to know, understand (especially a mode of action), discern, distinguish, be acquainted with, to find out, discover, perceive, learn, wisdom, intelligence, knowledge, discrimination and judgment. All these functions are the result of proper action of the three components of Prajna. When there is lack of co-ordination between these above factors, it leads to a condition called mental disorders.<sup>[8]</sup>

In modern era due to stress, disturbed emotion, unhealthy lifestyle there is increased incidence of psychosomatic

disease where Dhi, Dhriti and Smriti of person are affected.

## **Ayurveda aspect of Smriti (memory)**

### **Physical aspect**

The concept of Smriti has been discussed in various classical texts in many different aspects. The Smriti is the term used to denote a wide array of higher intellectual functions including memory, cognition, past sense perception, mastery in higher sciences. Smriti is related to Atma (soul) and Mana (mind). Smriti is discussed in one of the 8 aishwaryas. Smriti concept is more related with Atma, Mana, Medha and Buddhi. It is explained by Chakrapani that it is one of the functional components of Buddhi. It directs oneself by recollecting the past experiences and the ability to recognize the basic nature of all masters in Smriti. It helps the mind to recollect the references of any objects on the basis of concepts established through past experiences.<sup>[9]</sup>

Doshas are the functional representatives of our body. Different doshas are involved in Smriti utpatti.<sup>[10,11]</sup>

1. Prana Vayu - Control and Stimulation of Mana to analyse the entire perception and action projected to Karmendriyas
2. Udana Vayu - Responsible for Smriti
3. Vyana Vayu - Stability and Concentration of mana
4. Sadhaka pitta - Responsible for mental faculties like Buddhi, Medha
5. Tarpaka Kapha - Nourishes the Indriyas and helps in perception.

With respect to Sara, among the eight sara described, twak sara purusha is said to have a high intellect and sattva sara purusha is endowed with good memory.<sup>[12]</sup>

With respect to smriti in different deha prakriti Acharyas have mentioned different variations.<sup>[13]</sup>

1. Vata prakriti individuals are alpa-smriti and sruta-grahi and have chala smriti.
2. Pitta prakriti individuals are considered to be medhavi.
3. Kapha prakriti individuals are chiragrahi and smritimanta.

With respect to manasa prakriti it is stated that those possessing satvika prakriti are endowed with good memory. [14]

With respect to age, in Balyavastha, the Dhatu, Indriya, Bala is in aparipakvavastha and with the predominance of Kapha Dosha. In Madhyavastha Bala, Virya, Paurusha, Parakrama, Grahana, Dharana, and Smarana shakti will be in Pakvavatha with the predominance of Pitta Dosha. In Jaravastha there is a gradual depletion of Dhatu, Indriya and Bala with the predominance of Vata Dosha.

According to Acharya Sharangadhara, Balya, Vriddhi, Chhavi, Medha, Twak, Drushti, Shukra, Buddhi, Karmendriya, spiritual life-these get deteriorated in successive decades. [15] There is diminution of Grahana, Dharana and Smarana known as Smritihrasa (Diminished memory). Memory problems are very prevalent in the ageing population.

### **Pathological aspect** [16,17]

One among the three principal and fundamental causative agents in the manifestation of diseases in general as postulated in Ayurveda is prajnaparadha. In such circumstances, the memory will have to be nullified by diverting the mind with the desirable, variegated and surprising incidents. The memory goes astray due to the person being overcome by Rajas and Tamas; the two factors responsible for psychological disorders.

Smriti Vibhramsha-Smriti vibhramsha is the state in which the memory is altered from its normalcy; this means either reduced memory or selective memory or total loss of memory.

In various classics, scattered knowledge of Smritihrasa can be concluded as: Mana when hindered by Vata pradhana tridosha prakopa, leads to Rajo and Tamo Guna Vriddhi and causing Avarana of Manovaha srotasa (occlusion in channels of psychic activities) thereby finally leading to Dhi, Dhriti and Smriti Vibhramsa.

The mental illness is brought about essentially as a result of unwholesome interaction between the individual and his environment. This interaction operates through three fundamental factors viz. [18]

- Kala (time rhythm) i.e., the deficient or excessive aspects of seasons etc.
- Indriyarth (sensorial inputs) i.e., deficient or excessive use of senses.
- Buddhi (intellect) i.e., volitional transgression. When the intelligence, retaining and controlling powers and memory of an individual are distracted and, in that state, when he performs wrong actions, then it is called volitional transgression. It is the perverted use of mind and intelligence or faulty understanding (pragyaparadha).

Ayurveda also believes in the theory of Punarjanma (reincarnation) and Karma (actions of past life). They may be causative factors when no other etiology is present. Accordingly, the principal causative factors involved in mental illness are (1) genetic factors, (2) personality make up and (3) environmental factors.

Conditions that can impair memory tasks are faulty lifestyle & food habits, sleep deprivation, severe stress, and nutritional deficiency, prolonged high alcohol intake and drug abuse, heavy cigarette smoking. They can lead to many syndromes, which is a complex amnesic disorder with neuropsychological sequelae. In addition, other causes can also lead to memory disorders.

### **Psychiatric conditions in Ayurveda**

Several conditions are described in Ayurvedic literature like Unmada (psychosis), Apasmara (convulsive disorder), Bhrama (illusion), Atatvabhinivesham (Obsessive Disorders), Prajnaparadha (lack of coordination between dhi, dhriti and smriti), Tandra (drowsiness), Klama (neurasthenia), Mada (loss of perception), Apatantrakam (hysteria), Avasada (Depression), Cittodvega (Anxiety neurosis), Manasa

Mandata (Mental Retardation), Madatyaya (Intoxication) etc.

### Enhancing tools of smriti via Ayurveda

Memory impairment is a common progressive degeneration problem among the elderly contributing to significant disability. It affects the individual's quality of life and makes them dependent on others for their routine activities. [19] Conventional medicine has little role in improving cognitive impairment and preventing disability. Ayurveda is known for philosophical basis, and its approach to psychological ailments is quite different from conventional system of management.

- Minimise the damage to the brain and the natural deterioration of one's brain functions.
- Repair some of the damage already done.
- Enhance brain functions above usual levels.

Ayurvedic theory of mental health is based on combination of the three gunas and doshas. The dynamic balance of these above elements creates a good mental health. Jnana (knowledge), Vijnana (analytical knowledge), Dhairya (Courage for sensory control), Smriti (memory) and Samadhi (meditation) are the key approaches in Satvavajaya treatment to resolve psychological problems.

Daiva vyaprashraya, Yuktivyapashrya, Satvavajaya chikitsa, [20] Nidan parivarjana, Aachara Rasayana, Dinacharya and Yoga therapy are described for resolving these ailments. Dhi, Dhairya and Atmadi Vigyana are the best medicines for the disorders of mana.

**Nidan Parivarjan:** Nidan parivarjan is to avoid the known disease-causing factors in diet and lifestyle of the patient. It also encompasses the idea to refrain from precipitating or aggravating factors of the disease. It inhibits the prognosis of the disease. [21]

**Daiva Vyapashraya chikitsa:** Spiritual therapy that includes the use of mantra,

japa, other religious activities and wearing of precious stones etc.

**Yukti Vyapashraya chikitsa:** Biological therapy includes samshodhan (cleansing therapy), and shaman therapy (pacification). The patient is subjected to bio-cleansing therapy in order to cleanse the channels of the body followed by shaman therapy or palliative treatment with the help of drug, dietetics and life style.

Single and compound medhya (promoters of intellectual faculties) formulations are used in Ayurveda for the treatment of manas vyadhis.

Single Herbs (Medhya Drugs) - Brahmi, Mandukaparni, Yastimadhu, Guduchi, Ashwagandha, Jatamamsi, Shankapushpi etc.

Ghritas (medicated ghee) - Panchgavya ghrita, Brahmi ghrita, Maha kalyanaka ghrita etc. Herbomineral Preparations - Brahmi vati, Medhya vati, Brham rasayana, Chyawanprasha, Triphala rasayana, Indrokta rasayana, Smriti Sagar Rasa, Yogendra rasa, Manasamitra vatakam etc.

These are believed to act as brain tonics, cognitive enhancers and adaptogens. The medhya drugs are considered as specific molecular nutrients for the brain providing a better mental health leading in turn to alleviation of the behavioral alterations. They are also known as nootropic. Nootropics are believed to work by altering the availability of the brain's supply of neurochemicals (neurotransmitters, enzymes, and hormones), by improving the brain's oxygen supply, or by stimulating nerve growth. However, the efficacy of nootropic substances, in most cases, has not been conclusively determined. This is complicated by the difficulty of defining and quantifying cognition and intelligence. Memory enhancing herbs increase the level of neurotransmitters, particularly acetylcholine and improve blood flow to the brain, thereby increasing its oxygen and nutrient supply, which aids brain functions and memory.

Ayurvedic drugs have benefits on various cognitive measures such as executive functions, auditory-verbal learning, attention, processing speed, concentration, cognitive flexibility, verbal fluency, processing speed, and memory. [22,23]

**Satvaavajaya:** It aims to control the mind i.e., one should keep himself establish in his oneself after knowing real nature of soul and attaining height of spiritual wisdom. Jnana (spiritual knowledge), Vijnana (analytical knowledge), Dhairya (Courage for sensory control), Smriti (memory) and Samadhi (meditation) are the key approaches in Satvavajaya treatment to resolve psychological problems. [24]

**Yoga therapy:** Yogic procedures like Asana (yogic postures) and Pranayama (breathing exercises) increase circulation of blood to brain that helps to calm the mind and enhance concentration skills. Balancing Asana activates Ajna Cakra (site between the brows) that allows an individual to find life rhythm, which further aids to health of Manomaya Kosha (site of intellectual conducts). Yogic procedures regulate the movement of Vata that steers Manas and hence the memory gets improved. Sadrishya (similarity) is one of the causes for Smriti and hence the concentration and retention power for similar pair is increased. Yogic procedures control the Chanchalatva guna (mobility) of Vayu and diminish the Rajas and Tamas guna which in turn helps to remove Avarana (covering) over Buddhi by channelizing Vayu to Nadi (i.e., Ida, Pingala and Sushumna). All these procedures increase the Uhya Shakti (logic power) of a person to think with logic and proper reasoning. The Asana, Pranayama, meditation, om chanting together with notional correction based on philosophy of yoga was found to improve both cognitive functions i.e. visual perception and motor function. It improves Manasika Chanchalatva (unstable mind) and perks up the concentration of Manas. Shuddhi Prakriya (cleansing process) such as Kapalbhathi (a type of breathing exercise)

and Trataka (to concentrate on an object) eliminates the Mala (wastes) of the body and also activates Manas for proper Indriyabhigraha Karma (manoeuvring the acts of senses). Trataka helps to clear unwanted and negative thoughts and reduces excessive thinking to make one sharp and attentive by balancing Vata and thus Udana Vayu is controlled, which is responsible for Smriti. Yogic procedures help in regeneration of neural tissues beside producing anti-stress effect; therefore, attention, concentration power, retaining power and recall memory also get improved for longer time. [25]

**Aachara Rasayana-**It maintains total life process. One who speaks truth, is free from anger, abstains from alcohol and over indulgence, maintains hygiene, takes regular sleep and wholesome diet, has control over sense organs etc. enjoys physical, mental and spiritual wellbeing. [26]

#### **Natural memory enhancers**

**Dietary sources & supplements:** Sattwika ahara leads to attainment of excellent memory. It increases oxygen circulation to the brain, blocks free radicals and promotes neural growth and also increases and helps retain memory's capacity.

**Physical acts:** Simple brain exercise can also help memory according to some researches. Try showering and dressing with your eyes closed, play crosswords or Sudoku in the morning paper, or take a class on an activity or topic you are unfamiliar with. Alone or in combination, these natural memory enhancers may stem the tide of memory loss and may be even bring a little back.

#### **Current Scenario and Need for Indigenous Traditional Therapy**

In spite of great advancement in the science of psychiatry for decades, the problems with the management of a certain mental illness like anxiety, stress, mental retardation etc. remain unresolved. In addition to this, adverse effects of anti-psychotic, anxiolytic medications create considerable amount of discomfort to the

patient. At this juncture, there is a need for exposition and adaptation of such therapies that could effectively tackle such conditions without any adverse events. The entire Ayurvedic management is more health-oriented than disease-oriented. And as such, there is a big scope of utilizing Ayurvedic approach and therapeutics as an adjunct to the disease-oriented therapy of modern psychiatry to provide a full treatment.

## CONCLUSION

The human brain is one of the most sophisticated organs of body, nature has ever made. One of the most interesting aspects of the brain is its power to retain information, which we define as memory. Smriti is well understood through the concepts like dosha, sara, prakriti, deterioration of smriti, onset of diseases and in its treatment aspect. The entities like dosha, sara and prakriti can be related to physiological aspects and as the cause for diseases can be related to the pathological aspect. It is a result of collective action of Atma, Mana, Buddhi and Medha. So, disturbance or nourishment of any of its attribute can affect the memory power. In many of the diseases of brain, memory of the person gets affected and loss or diminished memory will be the major clinical symptom in such diseases. Hence understanding this concept will help us in proper application in clinical practice.

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