

STATUS OF SMRITI IN DIFFERENT PRAKRUTI

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ABSTRACT:

Memory plays a key role in the existence of an individual. The process of retaining and reproducing what has been learnt is known as remembering. The power of the mind to retain and reproduce is called memory. The efficiency of memory varies considerably between people and during the life time of an individual. According to Ayurvedic classics, recollecting the things which are seen, heard and experienced is called *Smriti*. Acharyas have graded efficiency of *Smriti* according to different *Prakruti*. *Prakruti* is the innate constitution of an individual based on his *Dosha* predominance determined at the time of conception which cannot be changed from birth till death. Therefore an effort is done to assess the status of *Smriti* in different *Prakruti*.

A survey was conducted on the students from SDM College of Ayurveda Hassan. 100 students pertaining to each *Vata*, *Pitta* and *Kapha Pradhana Prakruti* were selected randomly based on the standard questionnaire prepared and thereafter memory rating is done according to the PGI Memory Scale. Statistical analysis was done using Spss software 16 and One way anova was done as there are three groups and the sample size is 300, to find significance in mean score obtained by each student. Thereafter post hoc test (Tukey) was applied for the sub test which was significant for multiple comparison between the groups. The study establishes the relation of *Smriti* with *Prakruti*. *Pitta pradhana Prakruti* scored more in majority of the sub test compared to *Vata* and *Kapha pradhana Prakruti*.

Keywords: *Smriti*, *Prakruti*, PGI Memory Scale, memory

INTRODUCTION: *Prakruti* is a non-pathological *Doshik* status, which is inherent in the individual from birth to death¹. Ayurveda has an individualistic approach to consider each human separately; that is *Prakruti* is unique. Variations can be seen with respect to height, weight, built, skin, eyes etc. In the same way health-ill health, intelligence, food and other activities depends on the individual constitution. The analysis of the mind and intellect from different angles and their explanations are abundantly available in Ayurvedic classics which provide evidence of quantum of thoughts, crystal clear vision as well as experience of the ancient scholars. Now it

is the need of the era to interpret and conclude those ancient concepts of *Buddhi* and *Smriti* in terms of modern medical and psychological terms.

Acharyas have graded *Smriti* with respect to different *Prakruti* like, as per *Charaka* in *Vata Prakruti* they are *Alpa Smriti* and *Sruta Grahi*² and as per *Vagbhata* they have *Chala Smriti*³. As per *Susrutha*⁴ and *Vagbhata*⁵ in *Pitta Prakruti* individuals are *Medhavi*. In *Kapha Prakruti* individuals, as per *Acharya Susrutha*⁶ they are *Chiragrahi* and according to *Vagbhata* they are *Smrutiman*⁷.

MATERIALS AND METHODS:

The study was carried out with the main objectives

- To assess the status of *Smriti* in different *Prakruti*.
- To study in depth on *Smriti*.

Study design: Descriptive cross sectional study.

Sample size: 300

Sample frame:

Students from SDMCA Hassan.

Sampling Technique:

Convenient sampling technique.

Inclusion Criteria: Students irrespective of sex in the age group of 20-22yrs with same educational status.

Exclusion Criteria: Age group below 20yrs and above 22yrs.

Plan of the study: Prakruti was assessed as per the standard questionnaire prepared by Kishor Patwardhan and Rashmi Sharma. Modified by: Piyush Kumar Tripathi, Kishor Patwardhan and Girish Singh, Institute of Medical Sciences, Banaras Hindu University, Varanasi.

RESULTS:

Parameters	Sum of squares between the groups	Sum of squares within the groups	Mean square between the groups	Mean square within the groups	F value	Significance	Interpretation
Remote memory	2.220	75.950	1.110	0.256	4.341	0.014	Significant
Recent memory	1.167	52.020	0.583	0.175	3.330	0.037	Significant
Mental balance	1.147	111.450	0.573	0.375	1.528	0.219	Not significant
Attention and concentration	55.547	1988.44	27.773	6.695	4.148	0.017	Significant
Delayed recall	1.820	223.710	0.910	0.753	1.208	0.300	Not significant
Immediate recall	8.887	364.03	4.443	1.226	3.625	0.028	Significant
Verbal retention of similar pairs	0.320	28.600	0.160	0.096	1.662	0.192	Not significant
Verbal retention of dissimilar pairs	25.220	827.35	12.610	2.786	4.527	0.012	Significant
Visual retention	48.887	2010.5	24.443	6.769	3.611	0.028	Significant
Recognition	3.207	61.390	1.603	0.207	7.757	0.001	Significant

From the above results, recent memory is significant at p value 0.014, Remote

memory at the p value 0.037, attention and concentration at 0.017, immediate recall at

0.028, verbal retention of dissimilar pairs at 0.012, visual retention at 0.028 and recognition at 0.001 at the level 0.05 Having found statistically significant evidence that the mean scores of sub test-remote memory, recent memory, attention and concentration, immediate recall, verbal retention of similar pairs, visual retention

and recognition were not same for different Prakruti, the next step is to explore in which group the maximum score is obtained.

So to find out the pair wise comparison between the groups post hoc test (Tukey multiple comparison test was applied.

Parameter	Mean score		
	VPP	PPP	KPP
Remote memory	5.58	5.70	5.79
Recent memory	4.71	4.86	4.81
Mental balance	7.91	8.05	7.93
Attention and concentration	13.24	14.26	13.52
Delayed recall	9.66	9.91	9.82
Immediate recall	10.94	11.91	11.90
Verbal retention of similar pairs	4.90	4.94	4.98
Verbal retention of dissimilar pairs	13.21	13.82	13.20
Visual retention	9.96	10.87	10.08
Recognition	9.66	9.91	9.82

DISCUSSIONS: Selection of Age & Educational Status

The inclusion criteria for the study was selected between the age group of 20 -22yrs for the results to be more precise.

The significance in studying a small age group has been evidently studied and the results are shown below¹⁴³.

Test	Level of education	N(Sample size)	M(Mean)	SD(Standard deviation)	Source
PGI Memory scale	0-5	60	60.8	11.26	Preshad and Wig – PGI of Chandigarh
	6-9	60	74.25	9.01	
	10 +	60	82.17	8.37	

From the above results, it is evident that there is significant variation in memory in different age groups. So for the present study the age group 20-22 was selected. The result also signifies that education wise changes have an impact on variation in memory. For the present study students

from the same educational status were included for more precise result Reliability of the test¹⁴⁴ – Post Graduate Institute Memory test – As per the study conducted on the reliability and validity of a new battery of memory tests (PGI Memory Scale), the result highlights that this scale is satisfactorily reliable and valid

tool to measure memory in the population. The definition accepted for this test was that memory is an ability to retain and reproduce impressions once perceived with an intention to use it in future. The result of the study also highlights that mean scores obtained in elderly volunteers were significantly low as compared to normal.

Relation between the *Drusta*, *Shruta* and *Anubhootha* type of memory with different domains according to the PGI Memory Scale.

Drusta, *Shruta* and *Anubhootha* are the means by which one perceives and help in memorizing what has been perceived. PGI Memory Scale is a comprehensive tool to assess memory consisting 10 sub tests. The 10 domains can be classified under the three headings as explained by the *Acharya Charaka* as *Drusta*, *Shruta* and *Anubhootha*.

Drusta is the knowledge by means of direct perception. As *Cakrapani*¹⁴⁵ comments *Drusta* is attained through *Pratyaksha*. *Pratyaksha* means in front of eyes that is which is seen. But the word *Pratyaksha* is not only limited to *Chakshurendriya* but also *Pancha Indriya Pratyaksha*. But in the present context, *Drusta* is limited only to *Chakshurendriya*. So among the sub tests, visual retention and recognition can be included.

Sruta is that which is heard. This may be in the form of scriptures. Here it is limited to auditory senses. So the sub tests Delayed recall, Immediate recall, Verbal Retention of Similar Pairs, Verbal Retention of Dissimilar Pairs, Attention and concentration can be included.

Anubhootha is through previous experiences. So the sub test remote memory, recent memory and mental balance can be included.

From the results obtained, it can be seen that among the 10 sub tests remote memory, recent memory, attention and concentration, immediate recall, verbal retention of dissimilar pairs, visual retention and recognition are found to be significant with respect to *Prakruti*. To conclude Recognition and visual retention can be considered under *Drustha*. Immediate recall, Attention and concentration, verbal retention of dissimilar pairs can be considered under *Shruta*. Remote memory and recent memory can be considered under *Anubhootha*

Relation between prakruti gunas and smriti *Acharya Charaka* has explained *Prakruti Lakshanas* with *Gunas* of *Prakruti* and its specific manifestation in the body with respect to the attributes. With respect to *Smriti* and *Prakruti Gunas* it can be summarized as-

Vata prakruti individuals are endowed with features like *Alpa Smriti*, *Chala Smriti* and *Shruta Grahi*. Based on the results regarding *Prakruti* and *Chala Guna*, it can be inferred that maximum of *Vata Pradhana* individuals have scored higher. In relation to the memory tests, the sub test Immediate Recall which is significant between the *Prakruti*, the number of subjects who scored the maximum marks are less compared to other groups. So in *Vata Prakruti* individuals, because of *Sheegra Guna* the subjects may grasp easily but because of *Chala Guna* the subjects tends to forget it quickly. Therefore *Vata Pradhana Prakruti* individuals are considered as *Shruta Grahi* and *Alpa Smritaya*.

Pitta Prakruti individuals are endowed with the features like *Medhavi*, *Nipunamati* and *Panditha*. Based on the results regarding *Prakruti* and *Teekshna*

Guna , it can be inferred that maximum of *Pitta Pradhana* individuals have scored higher. In relation to the memory, the sub test Visual retention which is significant between the *Prakruti*, the number of subjects who scored the maximum marks are much higher compared to other groups. So in *Pitta Prakruti* individuals, because of *Teekshna Guna* the subjects grasp and retain it for a longer time. Therefore *Pitta Pradhana Prakruti* individuals can be considered as *Medhavi*, *Nipunamati* and *Panditha*.

Kapha Prakruti individuals are endowed with the features like *Smrutiman* and *Chira Grahi*. Based on the results regarding *Prakruti* and *Sthira Guna* , it can be inferred that maximum of *Kapha Pradhana* individuals have scored higher. In relation to the memory tests, the sub test Remote memory which is significant between the *Prakruti*, the number of subjects who scored the maximum marks are much higher compared to other groups. So in *Kapha Pradhana* individuals, because of *Sthira Guna* the subjects retain the knowledge gained for a longer time. Therefore *Kapha Prakruti* individuals can be considered as *Smrutiman*.

The predominance of *Doshas* in different *Vaya* has been explained as - in the *Balya Avastha* *Kapha* is predominant, in *Madhyama Avastha* *Pitta* is predominant and in *Vrudha Avastha*, *Vata* is predominant. While considering the variations in the predominance of *Dosha* , as *Kapha* is predominant in *Balya Avasta*, whatever learned or experienced will be retained for longer time. In *Madhyama Vaya*, due to the predominance of *Pitta* , the capacity of retaining and reproducing what has been learnt will be sharp. As *Vata* is predominant in the *Vrudhaavastha*, there is decreased response of retaining

and reproducing. This can be substantiated with the results in the study. In the subtest remote memory, those with *Kapha Prakruti* has the highest score compared to other *Prakruti*. The reason may be in *Kapha Prakruti* individuals, as there is a predominance of *Kapha* in *Balya Avastha* whatever learned or experienced is retained for a longer time. So in the sub test remote memory *Kapha Prakruti* individuals showed higher response. Whereas in majority of other sub tests the maximum score obtained is by *Pitta Prakruti* individuals as they are in the *Madhyama Vaya* and has an excellent power of retaining and memorizing due to the predominance of *Pitta* in the *Madhyama Vaya*.

DISCUSSION OF RESULTS ON SIGNIFICANCE: Among the 10 sub test, remote memory, recent memory, attention and concentration, immediate recall, verbal retention of dissimilar pairs, visual retention and recognition are statistically significant. Remote and recent memory subtests have to be relied on the subject's response.

Remote memory is about reproducing the facts that has happened long back. Among the three *Pradhana Prakruti*, *Kapha Pradhana Prakruti* has maximum individuals who scored the maximum marks compared to other two. The mean score for *Kapha Pradhana* individuals in remote memory is 5.79 compared to 5.70 in *Pitta Pradhana* and 5.58 in *Vata Pradhana*. Significance is seen only between *Kapha Pradhana Prakruti* and *Vata Pradhana Prakruti* which signifies that *Pitta Pradhana* and *Vata Pradhana Prakruti* are in the same line. The reason for this may be due to the *Sthira Guna* of *Kapha* that enable one to retain the experiences for long time compared to

Vata Prakruti where the score obtained is less due to the *Sheegra Guna* that enable the individual to forget easily about the experiences.

Recent memory is the subtest on the immediate past. Among the three *Prakruti*, *Pitta Pradhana Prakruti* has maximum individuals who scored the maximum marks compared to other two. The mean score for *Pitta Pradhana* individuals in recent memory is 4.86 compared to 4.81 in *Kapha Pradhana* and 4.71 in *Vata Pradhana Prakruti*. Significance is observed only between *Vata* and *Pitta Prakruti* that signifies *Kapha Prakruti* and *Vata Prakruti* are in the same line. The *Teekshna Guna* of *Pitta* along with *Sthira* may be responsible for retaining the experience and the *Chala Guna* of *Vata* makes the individual to forget the incidents at a faster rate.

Attention and concentration is the subtest on digit counting that requires both attention and concentration to reproduce the digits. Among the three *Prakruti*, *Pitta pradhana Prakruti* has maximum individuals who scored the maximum marks compared to other two. The mean score for *Pitta Pradhana* individuals in recent memory is 14.26 compared to 13.52 in *Kapha Pradhana* and 13.24 in *Vata Pradhana Prakruti*. Significance is observed only between *Vata* and *Pitta Pradhana Prakruti* and there is major variation between other mean difference that indicates among the three, *Pitta Pradhana* individuals has a much better score. The *Teekshna Guna* and *Sthira Guna* may be responsible for retaining and recalling with more attention and concentration.

In the subtest Verbal retention of dissimilar pairs, significance is observed between *Vata* and *Pitta Pradhana Prakruti*

and between *Pitta* and *Kapha Pradhana Prakruti*. Between *Vata* and *Pitta*, *Pitta Pradhana* has a higher score and between *Pitta* and *Kapha Prakruti*, *Pitta Pradhana* has a higher score. So among the three *Pitta Pradhana Prakruti* is significant. The mean difference between *Vata* and *Kapha Pradhana Prakruti* is very less which signifies both are almost the same.

In the subtest visual retention and recognition, perception is attained through eyes and retained and then reproduced. The mean score for *Pitta Pradhana Prakruti* in visual retention is 10.87 as compared to 10.08 in *Kapha pradhana Prakruti* and 9.96 in *Vata Pradhana Prakruti*. The mean score for *Pitta pradhana Prakruti* in recognition is 9.91 as compared to 9.82 in *Kapha Pradhana Prakruti* and 9.66 in *Vata Pradhana Prakruti*.

In both the tests, high mean score has been obtained by *Pitta Pradhana Prakruti* followed by *Kapha Pradhana Prakruti* followed by *Vata Pradhana Prakruti* with significant difference among them. The significant difference in *Pitta Pradhana Prakruti* may be due to *Alochaka Pitta* with the *Sthana* in *Druk* that plays a major role in vision and the *Buddhivaisheshika Pitta* in the *Sringataka* helps in retaining and remembering with the experience through vision. The mean score obtained for *Vata Pradhana* individuals are comparatively less that may be due to the *Chanchala Guna* of *Vata* that hinders the proper retention. The mean score for *Kapha Pradhana* individuals are in between the both but more towards the score obtained by *Pitta Pradhana* individuals. This may be due to the *Manda Guna* of *Kapha* that takes more time for them to retain but the objects retained are reproduced quickly.

The subtest immediate recall is found to be significant but considering the mean score for *Pitta Pradhana* and *Kapha Pradhana Prakruti* which are 11.91 and 11.90 respectively with only marginal difference between them. But in *Vata Pradhana Prakruti* the mean score obtained is 10.94 which is comparatively low. This may be due to *Chala Guna* of *Vata* that is responsible for *Shruta Grahi* and *Alpa Smrutaya*.

The sub test mental balance, delayed recall and verbal retention of similar pairs are not significant. The reason for this may be for the subtest mental balance which consists of questions that have been learned in the primary classes such as repetition of alphabets and numbers which are easily answerable by most of the subjects. Similarly the sub test delayed recall consists of reproducing the objects name asked in order and verbal retention of similar pairs consists of easily understandable items.

Variations in the scores obtained by the subjects

Ayurvedic approach towards this difference in scoring can be related to process of *Manas*. Information is grasped according to the impression made on *Manas*. When a student starts learning some topic, *Indriyabuddhi* is produced on account of the combination of *Indriya* and *Artha* which is transient in nature. Some students grasp the subject during this phase and also retain it. They are the fast learners. But majority of the students come under the second type. They cannot get the knowledge but by frequent repetition as it makes an impression on *Manas* and thus cognition takes place. They are normal learners. The third type of student is not able to make an impression on *Manas* even after frequent repetition. They have

difficulty in remembering the subject and they become slow learners. This may be due to the *Chanchala Guna* of *Manas*. Naturally, by virtue of these qualities *Manas* cannot be concentrated on any subject but can be controlled by constant *Abhyāsa* which is method that aids good memory.

Various other factors that can distract the *Manas* during the assessment are any external stimuli in form of sound, tension, fear and anxious about the questions that are to be asked.

CONCLUSION: The study establishes the relation of *Smriti* with *Prakruti*. Among the 10 subtests, domains relating to remote memory, recent memory, attention and concentration, immediate recall, Verbal retention of dissimilar pairs, visual retention and recognition have shown significance with respect to prakruti. *Kapha Pradhana Prakruti* has obtained high score in remote memory. *Pitta Pradhana Prakruti* has obtained high score in multiple domains like recent memory, attention and concentration, immediate recall, verbal retention of similar pairs, visual retention and recognition. This rationality between *Smriti* and *Prakruti* can be better understood by relating with the specific *Guna* of the *Prakruti*. The *Sheegra* and *Chala Guna* of *Vata* is responsible for the quick grasping and short memory in *Vata Pradhana Prakruti*. The *Teekshna Guna* of *Pitta* is responsible for sharp intellect in *Pitta Pradhana* individuals. The *Sthira Guna* of *Kapha* is responsible for good memory in *Kapha Pradhana* individuals.

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