



Research Article

STUDY TO ASSESS RELATION BETWEEN ACADEMIC PERFORMANCE AND PRAKRITI (CONSTITUTION) IN CHILDREN

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ABSTRACT

Prakriti (Constitution) of a person are seven different types based on the dominance of *Doshas*. The *Prakriti* of a person is determined by the predominance of a particular *Doshas* at the time of conception and also influenced by the environmental factors. *Prakriti* has direct influence on the academic performance of the children as the memory and intelligence is governed by dominance of *Doshas* in our body. For identification of *Prakriti* we depend upon certain criteria's which are mostly based on physiological, anatomical and psychological factors. By knowing *Prakriti* of children we can apply useful guidelines on them which may help them to make a right judgment and attitude towards life. It will also help to form a useful frame work for future of children. With this preview present study was conducted to assess the correlation between academic performance and *Prakriti* childhood period. Healthy volunteers were selected randomly from the survey done and OPD of NIA, Jaipur. 140 children were selected for the study after taking informed consent. There *Prakriti* was assessed and digit span test was done to retest impact of *Prakriti* on memory of the children. The comparison between the memory counted from proformas and digit span test was done. It was found that out of seven types of *Prakriti* that the subjects which include *Vata* and *Pitta* dominance have good short term memory and subjects with *Vata* dominance have good short term memory.

KEYWORDS: *Prakriti, Vata, Pitta, Kapha, Memory, Children.*

INTRODUCTION

Prakriti (Constitution) means "Nature" or natural form of the build and constitution of human body. *Pra* means the "beginning" or "Source of Origin" and *Kriti* "to form". Combined together, *Prakriti* means "Natural form" or "Original form". Disease occurs when there is a change in the original form at the psychological or physiological level.¹

Prakriti of a person may be of seven different types based on the dominance of *Doshas*. The *Prakriti* of a person is determined by the predominance of a particular *Doshas* at the time of conception and also influenced by the environmental factors. *Prakriti* never aggravated nor does it suffer from any deterioration or abatement. It remains unchanged during the course of one's life time and is genetically determined. *Prakriti* represents the proportion of *Doshas* which represents the ideal state of balance and it serve as a goal for us to strive towards. It

will manifest in us throughout our life time through our physical characteristics, natural urges, likes and dislikes and psychological predilections (*Acharya Sushruta*).² Thus, if we recognized our *Prakriti* and try to follow life style according to it, we will be able to achieve better health with our optimal working. Knowledge of *Prakriti* will instruct effective means to prevent disease from arising; Prognosis of disease, effective treatment, help to compound medicinal formulation for the best advantages and improve recuperative capacity of an individual

Our ancient *Acharyas* have formulated a clear cut opinion about the educational status of the individuals of each *Prakriti* which is evident from the references available in various texts. To get an idea of the educational status in the *Prakriti* some of the indications in this regard for the three major *Prakriti* i.e., *Vata, Pitta* and *Kapha* are given.

As per text, *Vata Prakriti* children have poor memory, unstable mind and short memories. Qualities of *Rajo guna* are prominently found in the people having *Vata Prakriti*. These people have a confused state of mind and change their ideas and decision suddenly. They tend to have poor educational status.

Pitta Prakriti children are intelligent, of skillful mind and also as having mediocre knowledge and a prevalence of *Satvaguna*. The words used for indicating the educational status of *Pitta Prakriti* clearly indicate that children of *Pitta Prakriti* have sharp memories and brain but simultaneously, they have moderate knowledge and abilities. With these textual references it can be presumed that of *Pitta Prakriti* tends to have moderate educational status.

With regard to the educational status of *Kapha Prakriti* children, the ancient *Acharyas* have described that the *Kapha Prakriti* children are endowed with education, are stable minded, have *Shashtric* knowledge, have good memory and are endowed with intelligence. This indicates that the *Kapha Prakriti* are most learned highly qualified and have the best brain and memory. They also have deep and up-to-date knowledge on their subjects. They have prevalence of *Tamoguna*.^{3,4} With this preview present study was conducted to assess the correlation between psychological character and *Prakriti* for various stages of childhood period and was validated by digit span test.

MATERIAL AND METHOD

A cross-sectional survey based study was conducted in NIA, Jaipur on 140 subjects to assess the correlation between psychological character and *Prakriti* for various stages of childhood period and was validated by digit span test. After fulfilling inclusion criteria and after taking informed consent, the subjects were included in the study. The *Prakriti* of the subjects was assessed by a structured close ended questionnaire which was tested and pretested before use. The study was conducted in NIA OPD and subjects were also taken from the surveys conducted in New Delhi (west region).

Study Design

A total of 140 subjects were included in the study by convenient sampling technique, after taking informed consent *Prakriti* and academic performance of the subjects was assessed by close ended questionnaire based on five point scale. Then out of these subjects, digital span test was done on thirty subjects which were selected randomly from the sample. The comparison

between the memory counted from proformas and digit span test was done. The study was analyzed using standard statistical test. Details of assessments are given below:

The academic performance of the child was studied over four main characters like mind, memory, studies and academic performance and the five point scale was formed with regards to the characteristics mentioned in various texts and easy to judge at study level. Characters chosen for setting parameters: *Kshrutgrahi* (quick learning), *Alpasmriti* (Less memory), *Medhav* (intelligent), *Chirgrahi*, (Grasp slowly) *Avyavasthita mati* (Fickle mind), *Sighravismaranha* (Learn fast), *Nipunamati* (Decisive), *Madhyama Gyan-Vigyan* (Moderate knowledge), *Vidyavantah* (Studious), *Dridha-sashtra mati* (Shashtric knowledge), *Smritimana* (Good memory), *Budhya yukta* (Decisive) etc.

◆ Method chosen - question based

◆ Mode of setting scale - 5 point scale

DIGIT SPAN TEST

The test is used to assess the auditory memory (STM) and attention of a child. It consists of two parts, the digit span forward and digit span backward. For digit span forward the child repeats the numbers in the same order as presented aloud by examiner. For digit span backward the child repeats number in the reverse order of that presented by examiner. Each item is composed of 2 trials.

◆ Material - Administration and scoring manual Record form.

◆ Score - For each trial score '1' Point for correct response or '0' for an incorrect response or no response.

◆ The item score is the sum of the score on the two trials for that item.

◆ Total raw score - D.S. (Forward score + Backward Score)

◆ Maximum D.S. Score = Max. of forward score + Max. of Backward score 32 = 16 + 16.

INCLUSION CRITERIA

Group A 6-10 years and Group B 10-16 years and the study were done.

EXCLUSION CRITERIA: Emotional disturbance.

OBSERVATION AND RESULTS

A cross-sectional survey based study was conducted in NIA, Jaipur on 140 subjects to assess the correlation between academic performance and *Prakriti* for various stages of childhood period and was validated by digit span test. The main results of the study are described below:

Academic performance plays an important role in childhood period to build better opportunity and career in life. The effect of the *Prakriti* over one's performance was seen up to 33.57%. Academic performance of one depends upon its own ability to understand and experience the things. It also depends over the attitude of teacher, staff, parent's involvement and time involvement. It was proved by study that the child mostly posses the same performance in academic as their parents. The maximum correlation between academic performance and *Prakriti* was seen in "PK" type about 32.23% and "KP" type about 23.26% followed by "PV" type that is 16.28% followed "KV" type around 9.30%. (Table no.1).

The test performed and the scoring was noted. The comparison between the memory counted from proformas and digit span test was done. Table No. 1:

The result of digit span test was found good in VP and PV group maximally.

Digit span test was done to prove better auditory response, short term memory and less attention span of 'Vata' dominant *Prakriti*. The procedure was already explained in study material. It was done in 30 cases, the maximum scoring come on the digit span test was 18 and minimum was 11. Only one case was observed with scoring 5 and was excluded. The three categories were made based on this scoring ranging.

◆ Group-A : Very good. (Between 18-16 scoring)

◆ Group-B : Good (15-14 scoring)

◆ Group C : Fair (12-10 scoring)

Number of subject fall in Group A was 11, Group B was 8, and Group C was 9. The overall memory was calculated on the behalf of parameter made for memory. Total maximum scoring was 45.15 each for 'Vata', 'Pitta' and 'Kapha'. Comparison between the memory parameter and digit span scoring was done given in (Table no. OR 2) and the result was found that, the subjects with very good scoring maximally belongs to "VP" and "PV" group 36.36% followed by "VK+ KV" and "Vata" group about 18.18%. As the same was seen in Group B (Good group) that "VP+PV" stand with maximum 27.27% and "VK" + "KV" with 25% and "Pitta" with 12.5%. In Group C (Fair) again the better performance was seen in "VK + KV" 55.55% and "PV + VP". Overall the value suggest that out of seven types of *Prakriti* "VP", "VV", "PV", "VP" scoring highest in Group A and B and "KK", "PK", "KP", "KV" scoring maximum in Group C. Suggest that the subject which include *Vata* and *Pitta* dominance have good short term memory, same as suggested by various text books and some studies also establish the relationship between good short term memory, poor academic performance and Behavioral disorders like ADHD (Marshall RM et. al, 1999) Beiderman J.et.al, 2005) can be correlate with *Vata* type personality. Similar study conducted by Tawalare states that IQ of *Vata prakriti* is less as compare to *Pitta prakriti*. IQ of *Pitta prakriti* was less as compared to *Kapha prakriti*. *Prakriti* assessment is one of the guide lines in direction of career selection which is in accordance with present study⁵⁻⁸.

Table-1 Academic Performance & Prakriti N=140

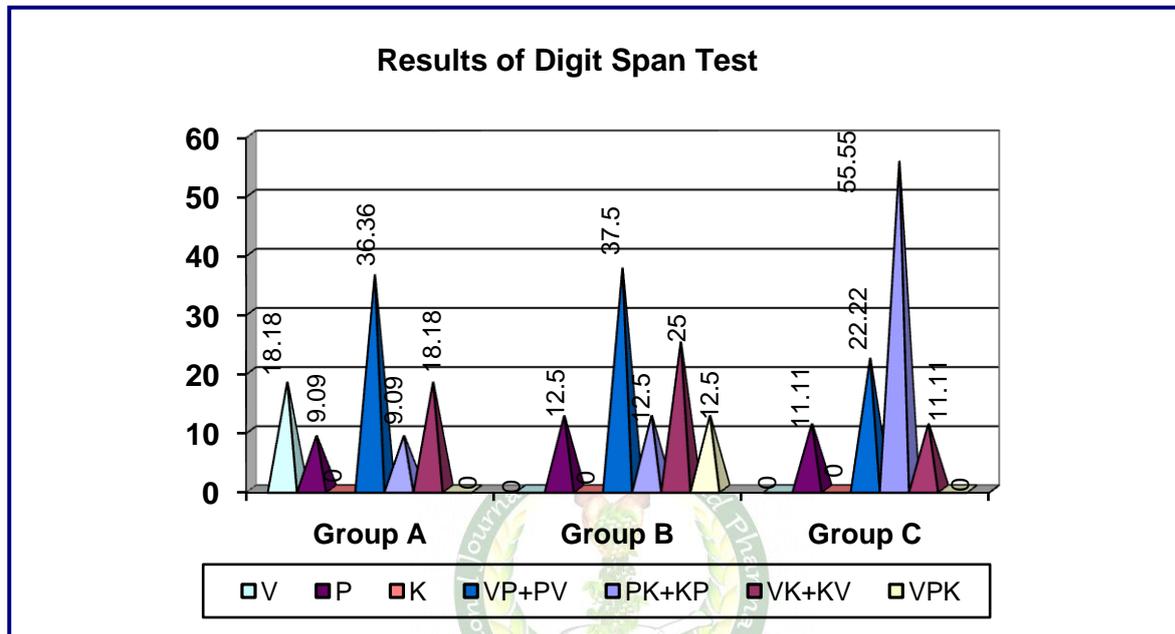
S.No.	Academic performance Pattern	Total	%	Match With Prakriti	Match %
1.	Vata	1	0.71%	1	2.33%
2.	Pitta	0	0%	0	0%
3.	Kapha	0	0%	0	5
4.	VataPitta	12	8.57%	1	2.33%
5.	PittaVata	20	14.25%	7	16.28%
6.	PittaKapha	30	21.42%	13	30.23%
7.	KaphaPitta	41	29.29%	10	23.26%
8.	KaphaVata	24	17.15%	4	9.30%
9.	VataKapha	8	5.71%	3	6.98%
10.	VataPittaKapha	4	2.86%	4	9.30%
Total		140		43	100

Though there are seven types of *Prakriti* mentioned in various contexts. That are *Vata*, *Pitta*, *Kapha*, *Vata pitta*, *Pitta kapha* and *Kapha vata*. In combination of two *Doshas* there may be chance of dominance of anyone of the *Dosha* like *Vata* dominant *Kapha prakriti* or *Kapha* dominant *Vata prakriti*. So, ten types of *Prakriti* according to the dominance of *Doshas* were studied.

Table 2: Results of Digit span test N=30

Prakriti	Group A	%	Group B	%	Group C	%
V	2	18.18	0	0	0	0
P	1	9.09	1	12.50	1	11.11
K	0	0	0	0	0	0
VP + PV	4	36.36	3	37.50	2	22.22
PK+KP	1	9.09	1	12.50	5	55.55
VK+KV	2	18.18	2	25	1	11.11
PVK	0	0	1	12.50	0	0

Figure 1: Results of Digit span test N=30



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